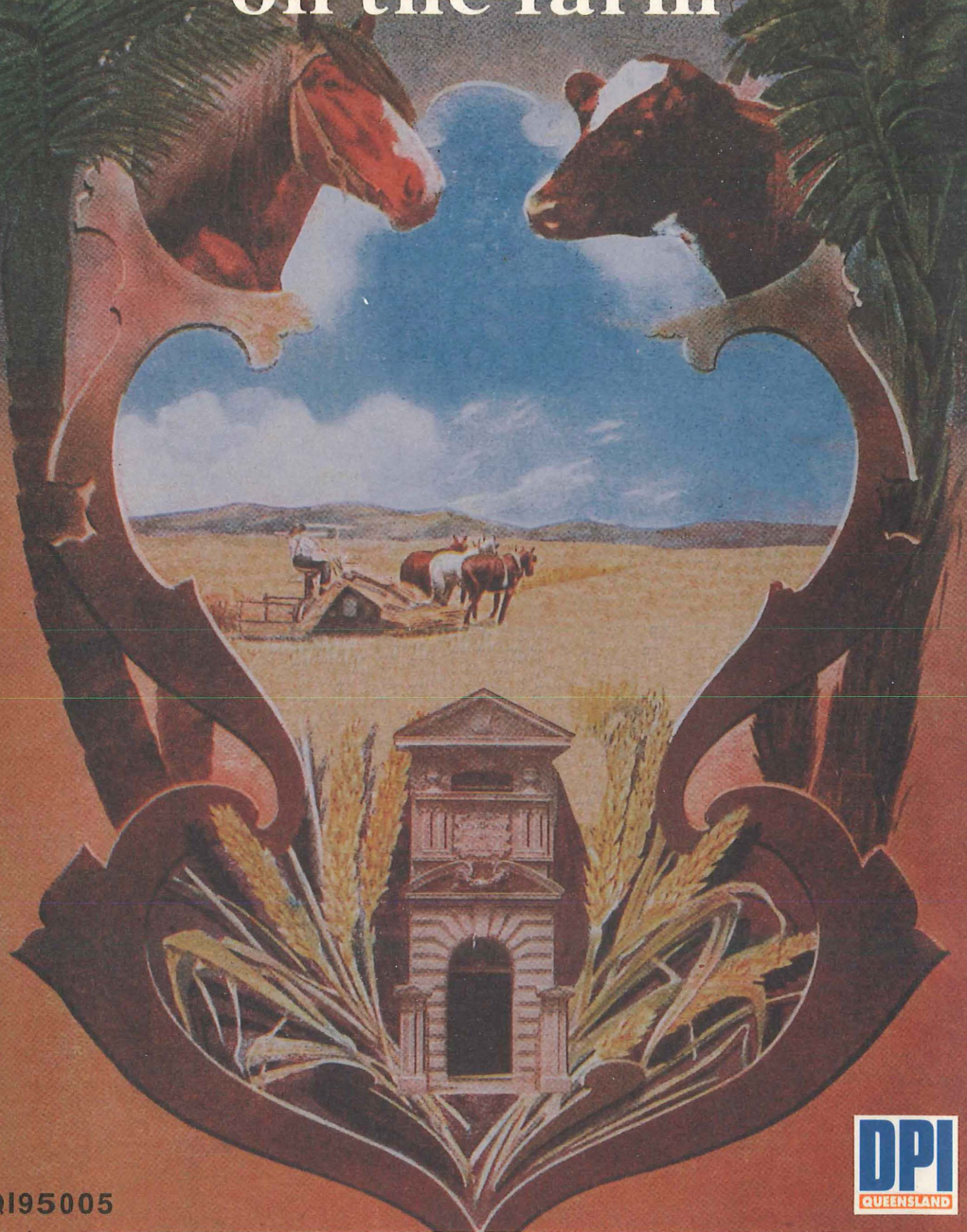


# OLD WAYS

on the farm



QI95005



selected articles from the *Queensland Agricultural Journal* 1897–1940

Information Series Q195005

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selected articles from the *Queensland Agricultural Journal* 1897-1940

compiled by  
**Pat Abbott**  
Library Services

Department of Primary Industries  
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# The QUEENSLAND AGRICULTURAL JOURNAL

**T**HE *Queensland Agricultural Journal* (QAJ) came into being because of a need to spread knowledge.

Queensland had been declared a colony on 10 December 1859. By 1887, pressure from settlers wishing to take up selections was such that a Department of Agriculture was gazetted to control land settlement. Ten years later, the government of the day recognised a need for accurate information about agriculture. A way to provide this was 'the establishment of a departmental journal through which current information on the science and practice of agriculture would be conveyed directly to farmers and others interested at nominal cost'. Accordingly, the *Queensland Agricultural Journal* began in July 1897.

QAJ continued to be issued as a monthly journal until December 1941, when publication was suspended due to World War II. Publication recommenced in July 1943, when the demand for agricultural information (this time to help the war effort) more than balanced the uncertainty of the period. The journal continued to be published monthly until 1974, and thereafter bi-monthly until 1989, when publication ceased.

Major A. J. (Alexander) Boyd was appointed foundation editor of QAJ in May 1897, and continued to serve in that role until he retired in 1921. His place was taken by J. F. F. (John) Reid in 1922, who remained editor until 1948.

'In the first issue, Boyd stated that it was the aim of the Department of Agriculture to give every possible assistance to those engaged in agriculture and that a journal seemed a more effective way of disseminating information than the spasmodic publication of special bulletins. His introductory remarks were followed by specialist articles on sweet potatoes, dairying, fruit, insects, rubber and beekeeping.'

By 1902, QAJ's annual circulation was about 67 000 copies, with subscribers from all over the continent, as well as overseas. It was provided free to people residing in Queensland whose main source of income was

from agricultural, pastoral or horticultural pursuits, at a reduced rate of 5 shillings per annum to members of agricultural, pastoral or horticultural societies of Queensland (other than the above), and for 10 shillings per annum to all other persons.

Boyd wrote a series of lessons, 'First Steps in Agriculture', aimed at school children because there were no suitable textbooks on agriculture in state schools in Queensland. Within six months, he had received several letters expressing approval. The journal *Tropical Agriculture of Ceylon* (now Sri Lanka) published the lessons as soon as they appeared.

Material likely to interest the subscribers was gleaned out of agricultural and stock journals from around the world. Articles were written by departmental officers. Subscribers asked questions of the editor, and answered them for others. It was a journal for the property—not just the farmer. Cooking and preserving food was also covered, as were hints on health, cleaning, mending and repairing, farming, gardening, livestock, tools, and even alcoholic beverages—*QAJ* included it all.

The idea for this book came from requests for 'the old ways' of preserving meat. *QAJ* provided some answers to these requests, and contained much more for those wanting to know about the 'old ways' for doing all sorts of things. The information is still there, just as it was under the editorial control of Alexander Boyd and John Reid. It just needed to be made available.

The period 1897–1940 was chosen for the selection of items and articles because, until 1940, a lot of the old ways still applied. After the second World War, technology was all the go, and the old ways were replaced by the new and the more efficient—or so it seemed.

For your education and entertainment, here is a biased selection from the first 43 years of the *Queensland Agricultural Journal*. I hope it gives you some joy.



# MARES' TAILS and MACKEREL SKIES

**T**HE saying goes ... 'mares' tails and mackerel sky, never long wet, never long dry'—'mares' tails' being the high wispy clouds and 'mackerel sky' referring to small white fleecy clouds. According to the saying, the appearance of either of these two types of clouds heralds a change in weather—and the weather has always been of vital interest to farmers. It is a perennial conversation piece for people on the land. Everyone has a pet theory on what causes it and how to predict it.

## Weather wisdom (Feb. 1940)

**I**T is undoubtedly true that certain animals can foretell rain when humans cannot. For example, the Aborigines have a saying that it will rain when the porcupines take to the hills. Even the city-dweller has several reliable rain signs; firstly, the domestic cat, which invariably seeks some sheltered spot in the house or under a shed when the sky looks threatening.

Then, of course, one may find one or more huntsmen spiders, or triantelopes, as they are sometimes called (they often measure as much as 6 inches across the span of the outstretched legs) on the wall of a room.

Birds are fairly reliable rain guides. When, for instance, the domestic fowl starts to preen its feathers, rain is imminent. Also, seagulls fly towards the land and keep up a chorus of deafening cries when a storm is approaching.

By the same token, frogs will always croak at the first sign of a downpour. Apropos of which there is a story of an outback publican, who, in order to increase trade in times of drought, caught some frogs and put them in a tin under the bar. He then filled a can with water, and occasionally poured some over the frogs slyly, which caused an outbreak of joyous croaking. At this stage he would fill a glass with beer, and remark: 'Well, gens, the frogs are croaking, so let's drink to the breaking of the drought.'

This procedure always had the desired effect upon sales.

R.B.M., *The Sydney Morning Herald*.

### **A simple method of forecasting the weather (Jun. 1904)**

**A**T such a season as the present, when the question is so often asked, 'How's the glass?', I thought, writes a correspondent of the *Australian Field*, that it would not be out of place to mention how easy it is to make a reliable weather glass, and to become an authority on the weather. Get a common glass pickle-bottle, and fill with water to within about 2 inches of the top. Next obtain a salad oil flask, and, after taking off the wicker and well cleaning, place the oil flask mouth downwards into the pickle-bottle.

The water in the neck of the oil flask will rise or fall according to the weather. Should the water in the flask rise, it will indicate fine; when the water is entirely out of the flask, one may look for very wet weather; and, when the water in the neck of the flask rises above the water in the pickle-bottle, it indicates 'set fair'.

I have during the past summer placed two of these glasses by the side of my barometer, and have carefully compared them; and while the barometer has been cutting lively capers, my water glasses have been far more sedate, and on the whole more reliable. When a decided change has been coming, the water has gone either up or down steadily.

I believe most town dwellers are ignorant of the existence of this simple contrivance, although it is a very old idea, and is largely used in this district.

### **A temperature tail—the curl of the pig's appendage (Nov. 1929)**

**O**WNERS of Berkshire pigs in the United States declare that they can tell when it is going to be a cold windy month by the curl of the pigs' tails. One farmer avers he has forecast weather for years by simply watching the pigs' tails. This is what he says:

When the tail straightens out, you may depend on colder weather, because the Berkshire is reaching out for the heat. In other words, the Berkshire figures that the longer his tail the more radiation he gets, whereas a tightly curled tail gets the sun only a few hours a day. Naturally when a pig's tail is curled up he is not getting, nor does he need, the warming rays of the sun. I suppose this is the same with other breeds. Take it from me, says the writer, a Berkshire tail works the same as a thermostat. It contracts and expands according to the temperature.

## Influence of the moon (Feb. 1898)

**I**N an article on forestry by D. E. Hutchins, F.R.M.S., in the *Agricultural Journal* of the Cape of Good Hope (11 November), Mr Vederman, missionary of Genadendal, is reported as stating that the practice there is to cut cluster-pines all the year round, but always when the moon is down. On this point Mr Vederman is emphatic, and says that he has amply proved by experience that wood felled when the moon is down is better to work, lasts longer, and is less liable to get worm-eaten. We must still profess scepticism on the belief in the moon's influence. How far some enthusiasts will carry their pet theory is evidenced by an article in the *Australian Field* by Agar Zariel—a nom de plume apparently.

This writer gives advice for November agricultural operations, most of which is solid sense, and which could be taken with advantage; but we fail to see why planting on the 3rd of the month should only be carried on from 3 to 4 p.m., and on the 4th and 5th from 5.30 to 7.15 a.m., 9.15 to 11 a.m., 1 to 3 p.m., and 5.15 to 6 p.m. Nor do we think that a busy farmer would till, weed, and harvest on only the 16th and 17th of the month, on the ground that the month is weak in special days for these operations, and consequently only the last quarter of the moon (i.e. during the week before the new moon) may be utilised. So far as we know, the only influence exerted by the moon on this planet is on the great waters, which are attracted by her, and rise immediately beneath her in the form of a high tide, which follows the moon in its course round the world. We are informed that many German farmers will not sow annuals, beans, peas, carrots etc. on a waning moon. They assert that if seeds are sown at new moon, up to full moon, the resulting crops are greatly increased. This would be very easy to prove, and we shall be glad to hear of the result of any experiments in this direction.

## Weather observation (Nov. 1906)

**S**OME rules for predicting the weather.

*A rising barometer*

Rapid rise indicates unsettled weather.

Gradual rise indicates settled weather.

Rise, with dry air, and increasing cold in summer, indicates wind; and if rain is falling better weather may be expected.

Rise, with moist air and low temperature, will indicate wind and rain.  
Rise, with westerly wind, indicates probably fine weather.

*A steady barometer*

With dry air and a seasonable temperature indicates a continuance of fine weather.

*A falling barometer*

Rapid fall indicates coming stormy weather.

Fall, with increased moisture in the air and heat increasing, indicates probably rain.

Fall, with dry cold air, indicates cold winds probably from the west.

Fall, after calm and warm weather, indicates rain with gusty winds.

*Some weather proverbs*

When the sun rises with dim murky clouds, with black beams and clouds in the west, expect rain.

If the sun rises pale, there will be rain during the day.

Red skies in the evening precede fine mornings.

A red sun indicates fair weather.

A very red sky in the east at sunset indicates wind.

If the sun sets pale, it will soon rain.

A halo round the sun indicates the approach of an early storm.

Haze and a purple western sky indicate fair weather.

If the sun burns more than usual, or there be a halo around it in fine weather, expect rain.

A blur of haziness about the sun indicates coming storm.

In conclusion, it might be stated that some practical knowledge of meteorology is a necessary brick in the edifice of scientific agriculture.

## **Influence of the moon on weather and crops (Jan. 1898)**

**A** correspondent asks us if the moon has any influence on the weather in connection with agricultural operations. The days have long since gone by when the planets Jupiter and Saturn were supposed to influence our destinies, but the faith of people in general in the influence of the moon on the weather has never been shaken, and even now, when knowledge is so widely diffused, and physical science brought,

as it were, to the doors of all who have the slightest pretension to education, this belief is almost universal.

Virgil, in his *Bucolics*, says: *Jupiter descendit plurimus laeto imbri*—which, being interpreted, means: Jupiter shall descend most abundant in a joyful shower.

And again: If you will work the ground for a crop of wheat and stout corn, and will be eager for ears of corn alone, let the Eastern Atlantides be hidden beneath the horizon before you trust the seeds to the furrows (Georgics I).

If the moon acts upon our atmosphere as it acts on the waters of the ocean, it will produce atmospheric tides. But without going deeply into the subject we may state that from thousands of observations carried out by Arago, Laplace, and others, the effect of the lunar attraction on atmospheric tides is within  $1/600$  inch—a quantity such as could produce no conceivable affect on the weather. The opinion that the changes of the moon are attended with changes of the weather, is unsupported by facts. Dr. Horsley, so far back as 1774–5, published two papers in the *Philosophical Transactions*, with a view to dispel the popular prejudice on the subject of lunar influences. In the first year he found there were only two changes of weather corresponding with the new moon, and none with the full moon; and in the second year, only four changes corresponded with the new moon, and only three with full moon. Neither theory nor experience leads to the conclusion that the effects which the attraction, or the light, or the presence, or any other physical influence of the moon may be supposed to produce on the weather or on the sowing, growing or gathering of crops, are in accordance with observed phenomena.

Of course it is not impossible that future scientists may discover some connection between the moon and the vegetation of the earth, for the wisdom of today is the ignorance of tomorrow. The celebrated astronomer, Arago, who in 1832 published a most valuable report on the subject of comets said: 'Whatever may be the progress of the sciences, never will observers, who are trustworthy and careful of their reputation, venture to foretell the state of the weather.' Sixty-five years later we find the weather accurately forecast for a certain time ahead by the Queensland Government meteorologist, Mr Clement L. Wragge.

In matters of science, therefore, the word 'impossible' can never be accepted. At present we are told by eminent scientists that the moon has no effect on weather or crops. We may find this fallacious some day, but meanwhile we present our correspondent with the opinion of the scientists of the day.

# In a COUNTRY GARDEN

**I**F you had a bit of spare dirt, you grew a fruit and/or vegetable garden. The harvest helped to feed the family, and any money thus saved could be spent on other items. The garden also helped to keep the children busy and useful.

A wide range of advice to help the amateur as well as the professional horticulturist was offered over the years.

## A tree pruning device (Nov. 1898)

**T**O horticulturists and arboriculturists who desire to have their trees, shrubs, or hedges cut to a uniform or particular shape, the following described instrument (says the *Australasian*) will be found useful, and is termed a 'dendroscope'. The tree requiring pruning should be carefully studied from the ground, so that the operator may be able to judge intelligently which branches should be removed or shortened in order to reduce it to the desired shape. This at first may seem difficult to beginners in the art of pruning; and a dendroscope is the name suggested for a simple contrivance, which may be here used to advantage. A dendroscope may be made from a piece of thin board or cardboard—an ordinary playing card answers the purpose—in which a hole the shape it is desired to reduce the tree to has been cut. Across the middle of the hole, from the top to the bottom, a piece of wire is stretched to serve as a guide to the eye.

Holding the card at the level of the eye, with the wire opposite the centre of the trunk of the tree to be studied, the operator approaches the tree until the bottom of the cut falls on the trunk at the ground line. It is easy to see at a glance with the aid of this contrivance what operations should be performed in order to reduce the tree to the desired shape. Ordinarily a vigorous, handsome tree must have a straight, vertical trunk and evenly balanced head, and the first object should be to produce these conditions. By placing the instrument on a stick at the required height and in an upright position, the pruner can move to and from the tree without an assistant to help in the work.

### **To stimulate decomposition (Feb. 1935)**

**I**F a compost heap of garden refuse is being formed, a mixture of ammonium sulphate (two parts), ground rock phosphate (one part), and ground limestone (one part) is a good decomposing mixture. Use about 2 cwt per ton of refuse.

### **How to choose oranges (May 1899)**

**T**HE sweetest oranges generally have rusty looking coats. An English expert says: 'Pick out the dingiest in the box, and you will have the best.' Another test is weight. The heaviest oranges have the thinnest rinds. Thick-skinned fruit is apt to be dry inside. A slight freezing on the tree causes this condition in otherwise fine fruit. The 'kid-glove' oranges are the two varieties grown in Florida from stocks respectively brought from China and Tangier. The Glen Retreat orange of Queensland is a very fine-skinned heavy orange, and is among the best, if not the best, of our mandarins.

### **To destroy boring insects in trees (Aug. 1918)**

**I**NSERT a flexible wire into the burrows and inject a small quantity of turpentine or kerosene into the latter, plugging the holes with soft wood or clay. Spraying with a lime sulphur and salt wash is a good preventive, as it acts as a deterrent to the mature insects depositing their eggs (from which the borers are evolved) on the parts sprayed.

### **When to pick tomatoes (Dec. 1918)**

**I**T is not generally known that tomatoes ripen and colour from within outward. The fruits will acquire a perfect colour if they are picked as soon as they have grown to full size. They should be spread out in the sunshine for a time. When the surface colour begins to change from a dark green to a distinctly lighter shade with a very little tinge of pink, the fruit may be picked. Such fruit, if wrapped carefully in paper, will carry long distances, and ripen during the journey, opening up almost perfect.

One who has only a few plants may secure beautiful fruits free from cracks and of splendid colour by enclosing the fruits in paper bags some weeks before they ripen.

Tomatoes only acquire their most perfect flavour when ripened on the vine in full sunlight. No fruit artificially ripened is equal to that ripened by the sun.

It requires a great deal of experience to know exactly when to pick tomatoes. Fruit that has to be sent on a long journey must be gathered before that which has only a short distance to travel. Generally speaking, the fruit should be left on the vine no longer than will permit of its becoming fully ripe by the time it reaches its destination, where it is exposed for sale. When the fruit is to be shipped any distance frequent pickings are necessary to secure the fruit in the right condition. When markets are close it is always an advantage not to gather until the fruit is well coloured and is beginning to soften. Great care must be taken not to mark or bruise the fruit. Care should be taken to grade the fruit and so make it more attractive for sale. It should be graded as to size, shape, and colour. It will always pay to grade the fruit carefully. In our State very little care is taken with tomatoes. We see fruit exposed for sale in the barrows, hand carts, and elsewhere, no attempt being made to make the fruit attractive.

When ripe, tomatoes require most careful handling, as they are easily bruised when roughly treated. It is not uncommon to see boxes of fruit most roughly handled in the market, and emptied from case to case as if they were as hard as stones. No wonder they have lost their flavour before reaching the consumer. Australians have a lot to learn about marketing fruit.

### **How to make dwarf trees (Sep. 1919)**

**S**OME years ago there were to be seen on the upper veranda of a Chinese or Japanese business house in Warwick Street, Fortitude Valley, three or four dwarfed orange trees in pots, which have fruited freely. From what we could gather as to the method adopted in dwarfing orange and other fruit trees, it appeared that the following method was employed: Take an orange, and, having cut a small hole in the peel, remove all pulp and juice. Fill the skin thus emptied with some cocoon fibre, fine moss, and charcoal, just stiffened with a little loam. In the centre of this place the seed or kernel of any tree that it is proposed to get a dwarf from. Place



this peel in a vase or tumbler in a window, and moisten the contents occasionally with a little water through the hole in the peel, and sprinkle the surface with fine wood ashes. In due time the seed will push up a stem through the compost, and its roots through the orange peel. The roots must then be cut flush with the peel, and the process repeated frequently for some time. The stem of the tree will assume a stunted, gnarled appearance, making it look like an old tree. When the ends of the roots are cut for the last time, the orange peel which, curiously enough, does not rot, may be painted black and varnished, or the tree may be transferred to a pot.

### **Training tomatoes to one stem (Nov. 1916)**

**A**S soon as the young tomatoes are planted out, drive in stakes alongside them, to stand 5 feet above the surface. As the plants grow, pinch off all side shoots as they appear, allowing only the leading shoot to grow. As the plants increase in height, tie them closely to the stakes, but in such a manner that the ties cannot cut into the stems (raffia fibre is the best).

After a good few bunches have formed along the stem, pinch off the tops of the plants, say, after they are 4 or 5 feet in height. The plants will then make efforts to send out more side shoots, but keep on removing them as long as any appear. Plants may be allowed to grow with two stems, which is a good plan, but not so easy to manage as the single stem. The object of removing the lateral shoots is to secure larger fruit, and heavier and earlier crops. The side shoots absorb nourishment needed by the fruit, and are of no use to the plant. Wherever tomatoes are grown on a large scale, the single stem plan is adopted, especially in America, where over 8 tons of tomatoes are produced on one acre.

### **Training tomatoes (Jan. 1902)**

**T**HE accompanying illustration shows a very simple and effective way of training tomatoes. The dog legs may be placed at any convenient distance from each other, and either wires or thin saplings may be used to connect them, and to act as a support to the tomato vines.

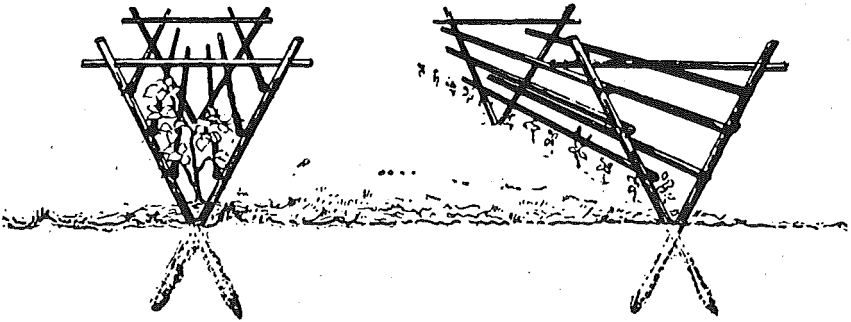


Figure 1 Training tomatoes.

### Growing mangoes from seed (Apr. 1902)

**A** correspondent, writing from Warren, Rockhampton, suggests a rather unusual method of sprouting mango seeds, a method which has perfectly succeeded with him, and which he discovered by mere accident.

Take an empty glass pickle bottle, place two or three mango seeds inside, cork the bottle up and put it away in the storeroom. In less than four weeks the bottle will be nearly full of beautiful shoots and roots. When well shot, take them out and plant them in the ordinary way.

### Ripening persimmons (Mar. 1904)

**A**N American farmer has, according to his statement to the *Florida Agriculturist*, discovered a method of hastening the ripening of the Japanese persimmon which may not be known to many fruit growers. It hastens the long period and the excessive irregularity of the ripening, so much so that, of a dozen pulled in October, when red, and seemingly on the eve of ripening, some will ripen in a few days, and the last one in from one to two months.

Last autumn his attention was called to the incident that the few earliest ripening had a hole poked into them, until he finally began to smell a rat, but neglected to make a test. Next autumn the same thing was noticed again, till the query came up—did the hole cause the ripening, or did the ripening cause the hole? He then began a hunt for the proverbial bug, and took the big blade of his pocket knife and ran it to the centre of twenty red persimmons on a tree

of forty, about the middle of October. In eight or ten days all the punctured ones were ripe, while the other twenty were still on the tree, red and hard. This incident did not in the least affect the taste or the transportation. The incisions closed up. He had not tried pulling them from the tree before cutting to see how that would affect the ripening. To those who do not know this peculiarity of the persimmon this discovery is of value, as proving that it causes the ripening of them in quantities at once.

### **Pruning custard apples (Aug. 1915)**

**M**R C. Ross, F.R.H.S., instructor in fruit culture, gives the following advice: 'Nearly all trees of the custard apple family have a spreading or pendulous habit, and the lower branches will soon sweep the ground if allowed to do so. It is necessary that the superstructure of the tree be established on a fairly high stem, i.e. the framework of the main limbs should start at a point not less than 3 feet from the ground. The method of pruning found most satisfactory is as follows:

'Lift the head of the tree by cutting away all portions of the under branches within 12 or 18 inches of the ground. As the higher branches continue their downward tendency, this will be an annual operation. Be careful not to thin out the head of the tree too much, as the habit of growth provides for sufficient light and air; but, as the fruit is borne on the old wood, a modified system of long spur pruning is advisable. Side shoots, laterals, and some of the strong leaders may be shortened back to one-half or two-thirds of their length. It should be remembered that severe top pruning produces more wood and less fruit. Judicious pruning is always beneficial, but be more sparing with the knife on extra vigorous trees.'

### **Pruning of mulberry trees (Mar. 1915)**

**T**HE fruit is produced on the young wood of the previous summer's growth. About one-third of each shoot should be pruned off during winter. The remaining wood will produce finer fruit. Prune out crossing or crowded wood and keep your tree in good shape. Judicious pruning improves all trees.

## Notes from the Daintree (Jan. 1904)

**F**ROM a correspondent from Daintree River, we learn that the young saplings of the Herbert River cherry tree (*Antidesma dallachyanum*), so common in all the northern scrubs, are very suitable for making fences, which quickly form a living hedge. The green saplings are pointed and driven into the ground, as shown in the illustration, and, if the ground is moist, they soon sprout and form an excellent live hedge.

He also sends us the accompanying illustration of a device for planting trees. The hole (a) having been prepared, the stake (b) is driven into the ground near it. The stem of the young tree slips into the groove in the horizontal piece (c), which is keyed on to the perpendicular stake, and which can be raised or lowered, if necessary, to suit the height of the tree. He claims for the apparatus that it saves one hand, and leaves the gardener free to spread out the rootlets and fill in the hole with prepared soil.

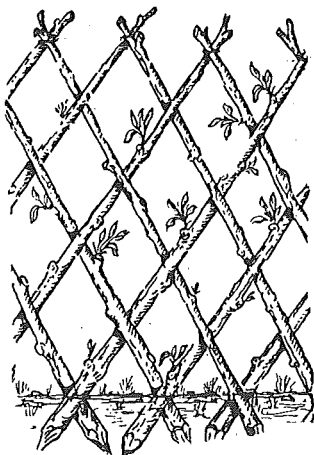


Figure 2 Live fence.

## Watering plants (Mar. 1906)

**I**T is customary with amateur gardeners to wash the dust off garden plants by watering overhead. The idea is to clean the leaves, open the pores, and so give the poor plants a new lease of life. But this overhead watering is a great mistake. Mr Jas. Biggs, in a paper read at the Adelaide School of Mines, said:

When the flowers are out, care should be taken that too much water does not get on them, or they will be bleached by the sun, especially if watering is done in the morning. At any time water on the flowers is not good. Give the plants water at the roots—as much as they will take up, and the tops will look after themselves. If annuals were, like vegetables, planted in rows, then a small trench could be made with a hoe, and the water run down. This is one form of irrigation, another is to flood the whole surface. The trench should be filled in when the water has soaked away, or the surface should be broken up if open irrigation is done. This prevents the sun having the same power it otherwise would on a flat surface; the sun's rays are more divided and less evaporation takes place. The more water you give plants the more they require. This is especially so with annuals. Take two of the same kind, stand one in water, and just keep the soil of the other moist; the one in the water will flag more in the sun than the other.'

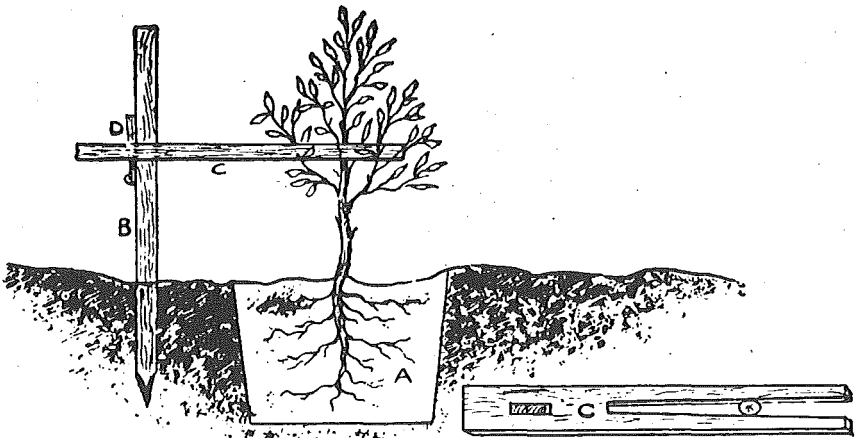


Figure 3 Tree planting device.

### The planting and care of hedges (Feb. 1928)

**W**HEN properly planted and kept in good order, a hedge is a great shelter and a lasting ornament to any place, and will add considerably to the value of a property.

It is advisable in this State to plant hedges on the level ground, on account of the long spells of dry weather and the hot winds which

prevail during the summer. Where the ground is swampy, however, it is necessary to form a bank or what is generally called a turf wall, two or three feet above the ground level, tapering on both sides, and about two feet broad on top. A line is run along the centre of the bank, and a little trench cut out, and the rooted cuttings are planted against the back of the trench, where the line is set. Where the turf has been removed to form the bank will now act as a drain.

The trench should be about 18 inches wide and a good spade deep. Some manure should be put in the bottom, and covered with a light layer of soil, and the plants placed up against the straight solid wall. The roots are covered with a little soil and watered well, and the trench filled up with the remainder of the soil. When this is done it is advisable to look along the line of plants to see if any are out of place. When the plants are made firm, cut them each to six or eight inches from the ground, and dig the ground for about three feet on each side of the hedge.

Hedges that are exposed to cattle must be fenced as soon as planted, either with a temporary stake and bush hedge, with hurdles, or with a light post and wire fence for four or five years, till the hedge grows up, care being taken not to place the fence too close to the hedge. The hedges must also be duly weeded while young, especially during the first two years.

In order to preserve hedges in proper form, they must be clipped on the sides and tops at least once a year, and, if possible, more often. The best time for the first cut is midsummer, with the second cut in April or May. The shoots should always be cut the same season while in leaf, and before they become hard. The work may thus be performed more expeditiously and with greater exactness, as the cutting should be as even as a wall on the sides, and the top as straight as a line. After the hedge is formed to its proper width, the growth should be cut as nearly as possible to the former cut, particularly on the sides. It should never be allowed to grow more than a foot or 18 inches wide, or too much on the top. When the cutting cannot be carried out more than once in a year, the clipping should not be performed until the end of April or May in this State, for if cut sooner it will shoot again, and appear almost as rough all the winter as if it had not been touched. High hedges are very troublesome and expensive to keep in proper order.

### Propping bananas (Dec. 1939)

**L**OSS of promising and superior fruit as the result of uprooting and breaking down caused during cyclonic weather in the Mons Marie variety shows the necessity for a system of propping that will reduce loss to an absolute minimum.

The method giving the best results is double propping, and it is carried out as follows: 2 stakes, 2 inches by 2 inches and approximately 12 foot long, are tied together about 1 foot from the end, and the tie wire left about 2 foot in length.

The two stakes are opened and the small fork or crotch formed by the union of the two stakes is placed at the correct height on the plant, and the length of wire is drawn round the stem and joined on the props.

When the two legs are firmly placed, and with the aid of the wire tie, it will be apparent that the plant will withstand a great amount of buffeting from the weather.

It is wise to place the props in position as soon as the plants have bunched, as it is noted that at this stage quite a large number are affected.

Another advantage of this method is that the bunch hangs between the two props, thus practically eliminating damage through rubbing.

For Cavendish bananas this method is just as practical, as the one-stake system causes an appreciable loss through rubbing, but for this variety the length may be reduced to 9 feet.

### Keeping pot plants alive when absent from home (Apr. 1917)

**T**AKE a large tub or pan and as many common bricks as there are plants. Place the bricks in the tub and just cover them with water; then stand the plants on them. Being porous, the bricks will absorb the water, and the plants will draw up all the moisture they require and keep in good condition for some time. *African Gardening and Home Life.*

### Budding the mango (Feb. 1899)

**T**HE *Journal of the Jamaica Agricultural Society* for October remarks: 'Budding the mango has been generally considered an impossibility, but this is a mistake, because it is done by experts in Florida, and it can be done by others when understood. The secret lies in taking the buds from

about the middle of the growing shoot where they are well developed and yet not too tender. The right time is when the colour of the bark is just turning from green to purple and just before a vigorous stage or growth in the tree to be budded. The shield method has been used, but the ring or plate style would be better.'

### Changing the sex of the papaw (Jun. 1916)

**T**HE method of changing the sex of the male papaw tree by cutting it down to about three feet off the ground was accidentally proved in a garden at Milton this season. The owner cut down three male trees and inserted a female shoot on top of each. Owing, probably, to the very dry weather all these shoots died, and two of the trees were rooted out. The third was left, and it sent out two strong shoots about a foot below the top. These shoots bore female flowers, and three fruits matured, one of them remaining on the tree last May, as shown in the accompanying illustration.

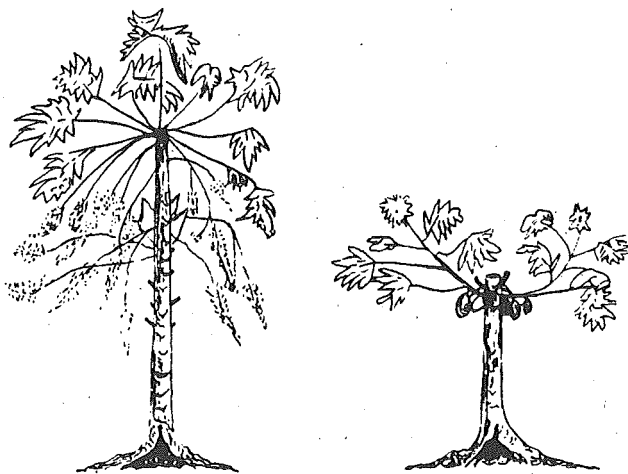


Figure 4 Changing the sex of a papaw.



## **Granadilla growing (Mar. 1937)**

**I**N the growing of granadillas it is most essential that suitable trellising be erected to carry these plants.

The most successful method noted is to plant cuttings (decidedly preferable to planting seed) in the field at a distance of 16 feet between each cutting in the rows, and 6 to 8 feet between each row. A wise plan is to plant a greater number of cuttings in each row than are actually required, the grower removing any surplus after a reasonable period has elapsed, such period being long enough for these young vines to take root, and thus establish their certainty of growth. It is necessary for these vines to be trained up on to a trellis and a trellis is erected above them in the following method.

Two straining posts, one at each end, are very securely erected. Supporting posts are placed between these two posts at intervals of from 12 to 14 feet. The main wire is strained through the middle of these posts at approximately 5 foot from the ground. At the top of each of these posts an arm is fastened (a piece of 3 x 2 timber 3 foot long is ideal for this purpose). Two holes are bored, one in each end, and two additional wires are strained through these holes, thus making a 3-wire trellis to carry the vines.

It is imperative that these vines be trained so that the main leader grows along each of these wires, and it is preferable to have all vines running in the one direction.

Under tropical conditions these vines should come into fruit in approximately eight months. The first crop would be somewhat light; the second crop should be much heavier, and from then on these vines should produce two crops per annum.

The amount of fruit produced is greatly increased if hand pollination is adopted, and although this is quite a tiresome and difficult procedure it gives results that easily repay the grower.

It is particularly hard to estimate the actual weight of fruit produced per acre per annum, as so many factors are responsible. The best granadillas produced in Queensland are from vines growing on the rich alluvial lands just north of Cairns, and fully considering this fact it would appear that in districts as far south as Mackay similar returns would be obtained.

### **Raking a lawn (Nov. 1930)**

**I**T is difficult to rake up leaves, grass, and hedge clippings from a lawn, especially when it is composed of buffalo grass. There is a contrivance which will prevent the teeth of the rake catching in the grass. Two cotton reels are placed one on each end tooth of the rake, and wedged there so that the bottom end of each reel is a little below the line of the teeth. The rake then rides easily over the grass, and collects the rubbish.

### **Chinese method of cultivating ginger (Nov. 1911)**

**T**HE method adopted by the Chinese in cultivating this plant, I am informed, is as follows.

The rhizomes are planted in the spring in ridges about 1 foot high and 2 feet apart. The rhizomes are set in the ridges about 6 inches apart. Low-lying ground is generally selected, and water is kept continually between the ridges.

When the young shoots are from 6 inches to 1 foot above the ground, the plants are heavily manured. This is repeated at frequent intervals. About three months after planting, the first crop of ginger is ready. This is known as 'young ginger', and is the least pungent and most expensive. If the rhizomes are allowed to mature, which will be between October and December, they become more pungent, but nothing like the Jamaican. Old rhizomes are used for replanting in the spring. A light sandy loam is considered the most suitable for ginger.

### **Ginger (Nov. 1915)**

**G**INGER may be planted from August to November, or as late as December, putting the sets about one foot apart each way. The white varieties do better if planted twenty inches apart, and eight inches apart in the rows, the yellow requiring more space. When planting, the sets should be merely covered with soil, or, better still, with old cow manure. The shoots will come above ground in twelve or fourteen days. The only cultivation needed is to keep the surface soil loose and clear, but not more than an inch of soil should be stirred. During the process the plants are all the better for a few shovelfuls of rich, old compost added to the surface; the yield is proportional to the richness of the soil. The roots are ripe in

about seven months from the time of planting. The white sorts are the richest in flavour. The smaller, or narrow-leaved, variety is that used for the dry ginger of commerce. For this purpose the roots are allowed to lie in the ground until the leaf stalks have withered. They are then dug up and washed, the outside skin is scraped off, and the roots are dried in the sun.

# PRESERVING the SPOILS

**T**HE spoils of the garden could be eaten fresh or preserved for future use—dried, pickled, roasted or sewn together on twine and hung up for later. Some of the offerings sound almost explosive, with the Indian chutnee having to be put into a stone jar, closed well and placed in the sun for a month or two.

## Sun-drying of bananas (May 1922)

**T**HIS is a very simple matter. The fruit should be allowed to become thoroughly ripe, the skin should then be removed and the fruit placed on wooden trays 3 foot long and 2 foot wide, made by nailing four pieces of timber 6 inches wide and 3 foot long to a cleat at each end, the cleats to be 2 inches by 1 inch. The trays are then exposed to the direct rays of the sun, and when the fruit is dry on the one side it should be turned over so as to dry on the other side. The fruit—when sufficiently dried which is known by its consistency, that is to say, there must be no moisture—is then placed in a sweat box to even up. The sweat box consists of a light case of any desired size in which the fruit is placed loosely. Whilst in the sweat box the fruit that is over dried absorbs the moisture from the fruit that is under dried and the sample then becomes of even quality. After the fruit is removed from the sweat box it should be placed in a wire bucket and dipped for about five seconds into boiling water. This is to kill any eggs that may have been laid by moths or other insects on the fruit during the process of drying or sweating. After dipping, the fruit is placed on the trays which are put out in the sun and the fruit thus rapidly dried. It is then ready to pack. The finished product should be packed in any size boxes that are desired, the boxes being lined with clean paper and the fruit evenly and firmly packed.

### **The Australian nut—method of roasting (Nov. 1934)**

**T**HE Australian nut is becoming deservedly popular, but with some types there is a difficulty in breaking the tough shell, and an even greater demand may be anticipated for this nut when the shelled kernels are more widely marketed, either fresh or roasted.

When roasting, the nuts must be fully matured if the best results are to be obtained. The kernels containing the highest oil content give a better-flavoured product than those with a low percentage of oil. The latter are liable to darken or char during the roasting process.

To determine which nuts are suitable for roasting, the specific gravity of the kernels is roughly tested. The dividing line is around the specific gravity of 1; kernels with a specific gravity of less than this have a higher oil content, and contain less sugar. The fresh flavour of the two types is quite distinct. Generally speaking, the smooth-shelled nut has more oil and less sugar than the rough-shelled nut, and is a more desirable type to grow.

The kernels are air-dried in the shell before the nuts are cracked; they are then dried at a temperature of 175 degrees Fahrenheit for four hours in an oven through which a fair draught of air is continually passing. The kernels are then roasted for forty-five minutes at a temperature of 270 degrees Fahrenheit, and allowed to cool, and gum arabic (10 grammes to 100 cc water) is applied. Salt is sprinkled over the kernels, which are then finally dried for a short while at 150 degrees Fahrenheit.

To cook the kernels in vegetable oils, first dry as described, and then cook in the vegetable oil for fifteen minutes at 280 degrees Fahrenheit.

A. and P. Notes, NSW Department of Agriculture.

### **Indian chutnee (Aug. 1909)**

**T**HE *Encyclopaedia of India* gives the following recipe for making mango chutnee:

Take of green mangoes, raisins, mustard seed, salt, green ginger, and garlic, one seer (2  $\frac{1}{7}$  lb) of each; onions (none, or, if used), half a seer (say 1 lb); dried red chillies, a half to one seer (1 lb to 2  $\frac{1}{7}$  lb); moist sugar, one to two seers (2  $\frac{1}{7}$  to 4  $\frac{1}{3}$  lb); white wine vinegar, 4 bottles. The ginger, garlic, and onions are to be peeled, and, together with the chillies, are to be cut into thin slices previously to be pounded. The mustard seed is to be

washed and dried, then gently bruised and winnowed; the raisins to be washed and freed from the stones; and the sugar to be made into a thick syrup. The mangoes should have the rind removed, cut into thin slices (some boil them in three bottles of the vinegar, adding the fourth when mixing them up with the other ingredients) and pounded; the remaining articles are to be separately pounded; then the whole is to be incorporated, put into a stone jar, well closed, and placed in the sun for a month or two. If put into a glass bottle, it should occasionally be put out in the sun. It will keep good for years.

### **Curry powder (Feb. 1901)**

**M**ANY excellent Indian curry powders can now be bought, but a moderate and very good one can be made from the accompanying authentic recipe.

1¼ lb turmeric	10 oz coriander seed
8 oz cumin seed	1 oz dried chillies
1 oz fenugreek	2 oz dried ginger

All the ingredients to be pounded and well mixed. Store in tins, and keep in a dry place.

### **Dried mushrooms (Oct. 1911)**

**T**O prepare dried mushrooms, wipe clean and peel off the skin. Cover the bottom of shallow tins with white paper and stand the mushrooms on this to dry in a cool oven. When dry and shrivelled, take them out and put them in paper bags in a cool, dry place. When wanted, put them into cold water or milk and bring slowly to a simmer. In this way they will regain nearly their full size and flavour.

### **Preserving sweet chillie peppers (Nov. 1901)**

**D**URING the winter chillie peppers are not plentiful, but with very little trouble a constant supply may be maintained. A correspondent gives the following directions for stringing chillies:

When the chillies are ripening go over the field once a week, picking all the ripe ones. Leave a long stem on the pod. Expose them to the sun for a day to toughen the skin and stems. Then with a long slim needle, sling them through the stem on strong twine eight or nine feet long. When the twine is full, hang it up in a dry cool shed where there is plenty of ventilation. Be careful not to string any poor or damaged pods. When dry, store them in a dry, cool room, hanging them on poles or nails. These dry chillies are used in making beef stews with boiled beans.'

### **Honey vinegar (Sep. 1899)**

**P**UT in a cask 1½ lb of honey to each gallon of water; add vinous ferment or common yeast. Set in a warm place; two months and three weeks from first mixing clarify with isinglass or skimmed milk, and in two weeks it is ready for market.

### **Red pickled cabbage (Nov. 1901)**

**C**UT the cabbage into slices on a chopping board. Set it upon a dish in layers with a sprinkling of salt over each layer. Let it stand for one night, then put it into a stone jar. To every 4 quarts of vinegar add 1 oz of sugar and 2 oz of mixed spice; heat this mixture almost to boiling point, and when cold pour over the cabbage, which must be well covered by the liquor. It is fit to be eaten in seven days, although it improves with keeping, and should be of a lovely colour.

### **Drying mangoes (May 1910)**

**T**HE drying of mangoes is a very simple process, given favourable climatic conditions. In reply to an inquiry by the Department of Agriculture and Stock, as to the process adopted in Hawaii, the following information was courteously supplied by Mr R. S. Hosmer, Superintendent of Forestry, Honolulu. That gentleman forwarded two letters on the subject, one from Mr Roberts of Palama, Honolulu, the other from Mr W. E. Rowell of Honolulu. The former writes:

'Regarding the drying of mangoes, the process is very simple, but only applies to a hot, dry climate; some summers even in Oaku are not hot

enough. Ripe mangoes are peeled and sliced into five pieces, and laid on wirework slats in the sun for three or four days. Each day they are turned over so as to dry thoroughly and prevent curling. I put them in double paper bags and in 10 lb tin cans, they kept good for six months. Put up in wooden boxes, a maggot got at them, the same way as prunes are attacked'. Mr Roberts further says:

'Another article of food made from mangoes is called Amsath. This is an Indian delicacy. Ripe mangoes are peeled and put in a stout canvas bag, and the juice is squeezed out. The juice is then poured into shallow pans (coated with butter or lard), about one-sixteenth of an inch thick or a little more. In a few hours (being placed in the sun) it becomes dry, and can be taken off, rolled up, when it makes a delicious preserve or candy. I cannot state how long this will keep, as it was all eaten in less than two months after making, but I can recommend it.'

Mr Rowell writes: 'I dry mangoes in the sun under a glass roof to protect them from showers. There is no patent on the process. The difficulty is to keep the moths from laying eggs on the fruit while drying. With artificial heat that trouble would be eliminated. When the drying and packing problems are solved the market will have to be worked up.'

### **A cheap way of making homemade vinegar (Aug. 1902)**

**S**CALD a pinch of hops with a quart of boiling water. When lukewarm pour on to  $\frac{3}{4}$  lb of treacle; then bottle; as it runs over fill up to let any bits run out; then when it has done working tie over with muslin to keep out flies; then keep as long as you like. The great secret of vinegar-making is to put in plenty of treacle, honey, or sugar. The sweeter you start it the more acid it becomes.

### **Guava vinegar (Feb. 1916)**

**I**N November last we were asked to give a recipe for making mango vinegar. We were not able to answer this question at the time, but we have now found a recipe given in the *Journal of the Jamaica Agricultural Society* for making guava vinegar. Possibly this might be applicable to mangoes. The fruit should be well ripened. Wash, and cut in halves, cover with plenty of water and simmer for two hours, strain through a colander,



and then strain the juice through a bag. Bottle, and then tie muslin over the tops of the bottles. It requires about five months to turn into strong vinegar. In filling jars or bottles with juice which is to make vinegar, remember that it is well to leave space for plenty of air and only fill the receptacles about two-thirds.

### **Preserved ginger (Nov. 1915)**

**T**O make preserves, the roots are dug as soon as they are fully grown and before the leaves begin to wither; they are then washed and scraped, cut into slices, and put into jars with salt and water for a few hours, or just sufficiently long to take away any earthy flavour. Then the slices are rinsed in clean water, and are put into a jar with a thin syrup made from white sugar. Change the syrup in three or four days, or as soon as it shows signs of fermenting. Reboil it, adding more sugar, and pour it upon the ginger again. This may have to be done three or four times, until the ginger has lost all its wild flavour, and is perfectly sweet and aromatic. It can then be covered up for future use.

# JAMS and JELLIES

**J**AMS, jellies and preserved fruit made the excesses of the good seasons available for longer. They reduced the waste and helped to bring a little sweetness into life. A great variety of fruits were turned into jam or jelly—including plantains, tomatoes, bananas, loquats and passionfruit.

## Preserving fruit on the farm (Feb. 1911)

**I** have often been appealed to, when visiting the various shows where bottled fruits have been exhibited, as to the best and most economical methods of preserving fruits. In preparing the following article, in as concise a form as possible without marring its clearness, I have endeavoured to help those who are desirous of preparing the fruit products of the farm for home use.

Preserving is nothing more than sterilising the fruit in vessels that can be hermetically air-sealed. Each glass jar (if such be used), with its contents, is submitted to the action of heat for a sufficient length of time to permit the necessary temperature to penetrate the receptacles and the heart of the fruit. Every particle of the contents to the very centre must be heated at a temperature of 170 degrees Fahrenheit, at which temperature all ferments are killed. Some products are more easily penetrated than others; and the operator, by a little experience, will easily determine this and 'process' accordingly, i.e. the vessels must be left in the hot bath for a longer or shorter time. It is not only necessary that the liquid contained in the jars should reach 170 degrees Fahrenheit, but it must become heated to such a degree as to transmit this temperature to the fruit; consequently, it will take more time for the heat to reach the inside of large fruit than that of the smaller ones. The processing will be increased if the fruit contains stones or the texture of the fruit is very firm. Should the liquid be a heavy syrup, the processing will be further increased.

All fresh fruit contains the germs of decomposition, but the application of the necessary heat kills the germs and arrests decomposition. Not only is the fruit and liquid sterilised, but a vacuum is formed in consequence of the air being driven out or absorbed. So long as this vacuum is effectively maintained, the fruit will retain its natural freshness and flavour.

On the State farms where the writer was manager, Mrs Ross attained a high degree of success in preserving fruits both in light and heavy syrups as well as in pure water. After much experimenting, the following mode of procedure was adopted.

The appliances used were: a good-sized cooking kettle or copper with a flat bottom, a suitable basket or tray made with a wooden bottom and wire netting sides, to fit the boiler; a bath thermometer registering up to 240 degrees Fahrenheit: a small centigrade saccharometer for testing the density of syrups: an enamelled pan for boiling syrup; a wooden spoon for stirring; and a pitting spoon. The latter may be made by sharpening the edge of an ordinary teaspoon.

### *Preparing the fruit*

#### *Apricots*

As apricots are bottled with their skins on, no specked or imperfect fruit must be used. Make a clean cut, all round, down to the stone, and with both hands give the fruit a firm twist without bruising, and it will divide in two halves. Remove the stone, paring off any loose or ragged pieces, and pack immediately, with the skin side uppermost, into sterilised jars. Shake the fruit down by striking the bottle on the table. Fill fairly tight, and pour in the syrup to the brim.

#### *Pears*

Pears should be full flavoured (but not soft or over-ripe) and evenly graded. Peel them lengthwise, remove the stalks, cut in halves, and take out the cores with a pitting spoon. Carefully pack into the bottles round side uppermost, and fill up with syrup. If the cores are not removed, the flat sides may face the glass, which gives a pretty effect.

#### *Peaches*

The fruit should be even in size, fully developed, but firm. Halve the fruit in the same manner as apricots, remove the stone (if cling-stone) with a pitting spoon, and pare away the ragged fibre in the cavity. Each half is peeled with a sharp, thin knife separately.

### *Plums*

Choose the best varieties; grade into sizes, avoiding underdeveloped and overripe fruit. Prick each fruit with a copper needle (steel will discolour) to prevent cracking, wipe dry, and pack close without crushing. Then fill the bottles with syrup. In the case of freestone plums, the pricking should penetrate to the stone to allow the air to escape from the surrounding cavity.

The following precautions should be observed. Avoid exposing the fruit to the air after it is cut or peeled, and handle as little as possible to prevent discolouring. If peeled fruit is to remain long before bottling, immerse it in a brine bath strong enough to float a potato. The brine will not affect the flavour, so the fruit need not be washed or wiped after brining, but it should be drained.

Cherries, as well as some varieties of plums, are liable to crack when processing, and should be punctured with copper pins.

Any of the above fruit may be preserved whole for exhibition, but for household purposes dissected fruit is more economical.

### *Syrup*

A syrup of 30 per cent density was generally used on the State farms for all fruits, i.e. 3 lb of sugar to the gallon of water. An extra heavy syrup of 60 per cent or 6 lb to the gallon, may be used for those who prefer highly sweetened foods or a 10 per cent syrup—1 lb to the gallon—for pie fruits. The strength of the syrup does not materially matter for preserving. The saccharometer should be used to ensure a regular density.

A little more water than is required is poured into an enamelled pan and brought to a boil. The sugar is then added and gently stirred, whilst the simmering is kept up for about 7 minutes. Care must be taken not to let it scorch, and that the scum be removed as it appears. When the syrup is cooked, strain it through muslin and allow it to cool. If the syrup is not used the same day, it should be again sterilised.

### *To process the fruit*

When everything is ready, put sufficient water to completely cover the bottles into the copper, boiler, or whatever vessel is used for the bath, and suspend the thermometer in the water. Whilst the water is heating, place the rings and lids on the bottles. If the rings are good, they will not be injured by the heat. The bottles are now packed in the basket; and when the thermometer in the bath reaches 130 degrees Fahrenheit-

heit, immerse the basket and its contents in the water. At this heat the water will not enter the bottles (the latter being quite full) and mix with the syrup, or vice versa, as would happen if the water was cold; neither are the jars likely to crack. When the temperature reaches 160 degrees Fahrenheit, begin to note the time for the necessary processing.

No hard-and-fast rule can be laid down for times and temperatures, which must be left to the discretion of the preserver. Conditions of ripeness, variety, and size of the fruit are to be taken into consideration. The following directions may be taken as reliable.

Immerse the bottles in the water at a temperature of 130 degrees Fahrenheit. Count the time in every case from 160 degrees Fahrenheit, and preserve small fruits for 10 to 12 minutes, the thermometer not registering at any time more than 180 degrees or 190 degrees Fahrenheit. Process large fruits for 10 to 17 minutes. Hard fruits, such as cooking pears or quinces, require somewhat more heat and longer 'process'. Apples, on the other hand, require less. The softer the condition of the fruit, the less heat and a longer process are required. A little practical experience will determine the right temperature. The basket is then lifted from the bath, and the lids should at once be screwed or clamped down very tightly. The jars are then stood on a wooden floor with a piece of hessian spread over it, and the whole is covered with another cloth to prevent the bottles cooling too quickly. A cold floor or cold draught of air might have the effect of cracking them. When cold, the jars are cleaned, labelled, and stored in a dark, cool place.

When homemade bottled fruit are to be supplied to the stores for retailing, the syrup should be made of a higher density than for home use. The stores will take large quantities of these home-bottled fruits at remunerative rates; and the more attractively they are put up, the greater will be the demand.

### **Candied peel (Oct. 1901)**

**T**O candy orange and lemon peel, cut the fruit lengthwise and remove the pulp. Soak the peels in salt and water for three or four days, then boil in fresh water till soft. Place on a sieve to drain. Make a syrup of 1 lb of sugar to 1 quart of water, and in this boil the peels again till clear. Then make a very strong syrup by mixing sugar with just sufficient water to melt it. Boil the peels in this slowly till the sugar candies, then take them

out, strew powdered sugar over them, and dry either before the fire or in a cool room.

### **Candied peel (Feb. 1903)**

**C**UT your fruit in halves or quarters, and take out the pulp. Soak the peel in salt and water until the bitterness is drawn out, then in fresh water for some hours to take out the excess of salt. Then boil gently until the peel is quite tender. This is the preparatory work. It now remains to replace the water in the peel with sugar, and this is done by boiling several times in syrup. For the first boiling make the syrup fairly weak, using white crystal sugar—say 2 lb to the gallon. Take out the peel and let it drain, and add sugar to double the strength of the syrup, and boil gently again. Repeat the operation, making the syrup strong. Take out the peel and place cup-side up, on a board or wire to drain and dry, partly filling the cup with strong syrup, which when dry will form a cake of sugar.

### **To preserve oranges (Aug. 1932)**

**O**RANGES can be preserved whole, and make a very handsome product in glass jars for purely spectacular display, but their flavour is quite insipid. Cut fruit gives a far better flavoured article. The ripe oranges are cut into V-shaped sections, with a width of about  $\frac{3}{4}$  inch at the rind. After packing the cut fruit in jars, fill with cool strained syrup made with 5 lb to 6 lb sugar to 1 gallon water. Place the jars in a cool bath, which is brought to the boil and kept boiling for five minutes. Then remove the jars. An alternative method is to cook for thirty-five minutes at a temperature of 190 degrees Fahrenheit.

Oranges so preserved can be used in salad, or if served with cream they make a very palatable sweet.

### **Crystallised bananas (Oct. 1911)**

**T**HE following method of preparing crystallised bananas at San Domingo is given in an American Consular Report:

Peel the bananas, which must be fully ripe; then cut the fruit in slices, or in thin sections, about  $\frac{1}{4}$  inch thick. Cover these with fine sugar, and expose to the sun on small boards or wooden platters. Turn the slices over as often as is needful, and at each turning, powder them again with sugar. In a very few days, the sections are sufficiently dried, and form a crystallised conserve of exquisite flavour.

### Preserved kumquats (Aug. 1913)

**P**RICK fruit with darning needle, and boil gently in plenty of water till quite tender; strain water off, and add syrup which has been previously made of 1  $\frac{1}{4}$  lb sugar and  $\frac{1}{2}$  pint water to every pound of fruit (which should be weighed before boiling). Boil syrup 20 minutes. Add fruit to syrup, and boil all for 10 minutes.

### Fruit canning without sugar (Aug. 1917)

**A** correspondent of the *Farm Journal*, Sydney, writes: 'I came across a very good way of canning small fruits without sugar, and as I have been very successful with it, I thought someone else might like to try it. Warm your bottle well in the oven, then fill with fruit. Pour in boiling water till it is as full as it can be. Put back in oven and leave until the bottle begins to boil again. Take out and put on rubber ring and screw top, previously well warmed. Stand jar on its head until cold, give an extra 'screw' if necessary—and the thing is done. I did plums and nectarines early in the season, and they look lovely and are keeping well. I intend to do gooseberries and other materials now.'

### To preserve limes (Sep. 1909)

**M**ANY people have lime trees growing either in gardens or orchards, but there appears to be no great demand in the Brisbane markets for the fruit, lemons being preferred. They can however be preserved in the following manner:

Use small limes, not over  $\frac{3}{4}$  inch in diameter. Prepare brine by dissolving salt in water till an egg will float in it. Into this, place the limes and

leave them there for from ten to fourteen days; then cut them in halves and scoop out the pulp. Boil the skins in two or more waters until the salt and essential oil are removed; stew them in a syrup made with white granulated sugar. If crystallised limes are required, after they are stewed, dry them and dip them several times in thick syrup, drying them after each dipping.

### **Strawberries preserved whole (Oct. 1902)**

**T**HIS is a very delicate and uncommon preserve, but one that, with proper care and attention, is just as easy to make as the ordinary strawberry jam. There are two methods of preparing it, the first of which is as follows:

Take equal weights of fruit and loaf sugar, say, 12 lb of each, and allow for this quantity a teacupful of strained lemon juice and a quart of red currant juice. Put the sugar, which should be of fine quality and broken up into small pieces, into a scrupulously clean enamelled preserving pan with the lemon juice and red currant juice, and boil to a syrup. Then, as soon as little beads form all over the surface, add the fruit, which has been carefully picked with as little handling as possible, the berries being perfectly sound but not overripe, and fairly even in size. Let all boil together gently for about twenty minutes, or just until the fruit looks nice and clear and is soft without being at all broken. Take up the strawberries with a large perforated spoon, so as to free them entirely from the syrup, and place them very lightly in small, thoroughly dry, hot jars; boil the syrup for about ten minutes longer, then pour it over the fruit, and set the jars in a cool, dry place overnight, after which cover with prepared parchments, and store as directed in my last paper. Strawberries preserved in this way are most delicious in flavour and lovely in colour, but they will not keep good for very long: therefore, when the preserve is intended to be stored for twelve months or more the following method should be adopted.

#### *A German method*

The German method is to allow a pint of red currant juice and a pound and a half of loaf sugar to each pound of strawberries, and crush half the quantity of sugar that is being used to a powder; then, after the fruit has been carefully picked, arrange it in layers in the preserving pan with the crushed sugar well sprinkled between each layer, and leave it in a cool



place for twenty-four hours. In the meantime the red currant juice can be obtained in the following manner.

Take the requisite quantity of very ripe but perfectly sound currants, and, after stripping them from their stalks and washing them, if absolutely necessary, put them into a jar with a close-fitting lid, then set the jar in a saucepan of cold water, bring the latter slowly to the boil, and simmer gently until the juice begins to flow freely. About every half hour after this, remove the jar from the water, carefully strain off the juice which has been extracted, cover the jar again and return it to the saucepan, and continue this process until no more juice can be drawn out. Next day put the remainder of the sugar into the preserving pan with the red currant juice, and boil until a clear syrup is formed, after which add the strawberries very carefully and boil slowly for ten or fifteen minutes, stirring gently and taking great care not to break the fruit; as soon as the latter looks clear and is quite soft remove it in the way already indicated, boil the syrup again—this time quickly—for about ten minutes, then pour it over, and when quite cold, finish off and store according to former directions. *Note:* Various other fruit, such as raspberries, cherries and blackberries, may all be preserved in precisely the same way, and it is wise to always have a few jars on hand, as they prove exceedingly useful on special occasions, being generally regarded as an extra treat.

Red currants are not procurable in Queensland, but there should surely, in these enlightened times, be some means of importing the fruit or the juice from the southern states, New Zealand or Tasmania. Possibly experiments might show that a substitute may be employed.

### **Canning and crystallising pineapples and cumquats (Nov. 1902)**

**T**HE canning of pineapples is practically the same as that of any other fruit. Peel, slice, or cut into dice, pack in cans, and add syrup. The density of the syrup depends on your trade, and will average about 4 lb sugar to 1 gallon rainwater. Cook from 15 to 20 minutes. To put up cumquats in heavy syrup, first boil in fresh water until the fruit is soft but still firm enough to keep its shape. Throw away the water, which is very bitter. Put the fruit in a heavy syrup, and boil till ready, but slowly, so as not to break the fruit, as it should be whole.

To crystallise pineapples and cumquats first bleach the fruit by placing it in boiling water. Next put it into a low strength syrup, and heat to boiling point. Let it remain in this syrup for 24 hours. Then increase the density of the syrup by 10 per cent, and again heat to boiling point, leaving it as before for 24 hours. Increase the density of the syrup daily by 10 per cent, always bringing the fruit to boiling point till it is strong enough to crystallise in cooling. When in this state, the fruit is taken out and dried slowly in iron trays. Pack in air-tight tins. Tins are the best for this climate. The crystallising of cumquats and pineapples is very similar to the crystallising of lemon and citron-peel. In bleaching the fruit, care must be taken not to allow it to become too soft. In fact, the bleaching is the most difficult part of the work.

### **Preservation of plums (Apr. 1928)**

**T**HOUGH plums will not, perhaps, blend in quite so many combinations in cooking as apples, they are an excellent fruit for winter use. They make good pies, and are very suitable for steamed suet puddings, and in the warmer weather they make nice chilled sweets. The plum season is not a long one, therefore it is well to have this fruit stored in the larder for winter use.

All plums for bottling are better for being on the firm side. The filling syrup should not be made too strong, as a very strong syrup will sometimes cause the skins to toughen. Extra sugar can always be added to them at the time of making the pie or pudding. The usual allowance of sugar when bottling the plums is 4 oz to each pint of water. This is boiled for ten minutes, then strained, and it is ready for use.

The raw plums should be packed into the preserving jars, with about a tablespoon of cold syrup, the jars then placed on the rack inside the steriliser, with sufficient water to barely reach the top of the rack, and this brought gradually to boiling heat. This heat is maintained for ten to fifteen minutes, according to size of jar. The jars are then filled with the boiling syrup from the kettle, and sealed air-tight at once.

Spiced plums suitable for serving with hot meats are appreciated by many. For spicing, firm-fleshed plums are the best to use. They should be heated through slowly by steam (but not softened too much), and the sweet spiced dressing poured over them while they are still hot. The dressing could be of any desired flavouring. The average fancy is some-

thing like this: 2 pints of vinegar; 1 oz of cloves  $\frac{1}{2}$  oz of nutmeg; 1 oz of cinnamon; 1 lb or  $1\frac{1}{4}$  lb of sugar.

To make it, simmer the vinegar for a few minutes with the ingredients added. The latter, with the exception of the sugar, should be tied in a muslin bag and suspended in the vinegar. When sufficiently flavoured, remove the bag of spices. The vinegar is then ready to be poured over the plums. They should then be sealed and stored.

### Homemade jams (Oct. 1903)

**A**S the mango season will arrive before long, and tomatoes and bananas are always with us, the following recipes for utilising them, as given in the *Tropical Agriculturist*, Ceylon, last year, may be useful to our readers:

#### *Green mango jelly*

Peel, cut, and stone the fruit. Put each piece, as cut, into water slightly acidulated with limejuice or it will discolour. When all is cut up fairly small, drain, dry, and put into preserving pan, with just enough water to cover it. Put on the lid, and let it simmer, as for guava jelly, but the fruit being green takes much longer to get soft and squashy. When quite pulpy, let it drip through flannel, but do not squeeze it at all. Weigh the juice, allow  $1\frac{1}{2}$  lb of sugar to every pound of juice and boil together till it jellies.

If made from ripe mangoes only use  $\frac{3}{4}$  lb of sugar to each pound of juice, and the first boiling will not take very long. When cutting the ripe fruit, do so over the preserving pan, to save all the juice, and do not put the pieces into water until you are going to boil them.

#### *Jam from green or ripe mangoes*

These are made alike, only the green wants more sugar. Grate or cut up the fruit after peeling and stoning it. Boil gently till quite soft or pulpy, and all in a mash; if preferred, it can be put through a sieve. Weigh, and to every pound of green mango pulp allow  $1\frac{1}{2}$  lb of sugar. If ripe fruit is used allow only  $\frac{3}{4}$  lb. Simmer gently till thick.

#### *Plantain jam*

This is much liked by children, and is easy to make. The fruit soon softens with boiling. I always sieve it. Add  $\frac{3}{4}$  lb of sugar and the juice of two limes to every pound of pulp. Boil together till firm; it often turns quite a pretty pink.

*Plantain jelly*

Take about thirty large, coarse, very ripe plantains; wash them well; add four pints of water, and boil for two hours; uncover; strain, but do not squeeze. To eight cups of the juice allow five cups of sugar and the juice of three limes; boil until it jellies. It is not clear, but a nice red colour. If a few guavas, about six big ones, are added to the plantains and all boiled and strained together, it makes a nice variety.

*Tomato jelly*

To each pound of tomatoes, allow 2 oz sugar. Melt the sugar, stirring all the time, taking care it does not burn. Into this put two or three Bombay onions cut up very fine for each pound of fruit, and boil up nicely. Add the tomatoes cut up fine, a little pepper and salt, and, if liked, some spice. Boil all to a pulp, strain, and then boil up the juice till it jellies. Put into small pots, as it does not keep well when once opened. This is a savoury for use with meat which is not much known.

**To make rosella jam (Mar. 1898)**

**P**ICK the red calyx from the seed pods; boil the latter in sufficient water to quite cover them until the jelly is extracted, and they look dry. Strain them, and weigh the liquor and the red fruit. Then boil the fruit in the liquor until it is tender. Add as much weight of sugar as there was of liquor and red fruit before the second boiling, and boil again until it becomes jelly.

This is a milder jam than when the seed pods are not used, but not so good a colour.

Boil the red fruit in sufficient water to cover it. When tender, weigh it. Add equal weight of fine white sugar, and boil till it sets.

**Banana jelly (Mar. 1899)**

**O**NE correspondent has been rather surprised that nobody to whom she has spoken has ever heard of or tried to make banana jelly. She attempted it, and, after two failures, managed on her third trial to get a very nice jelly, which should prove a boon to those living in the bush, where bananas are, as a rule, plentiful. The following was the method she adopted:

Peel the fruit, cut into pieces, add three cups of water to each lb of bananas, and boil for 1 hour or till quite soft enough to admit of being strained through

a net. After straining, add the sugar (which should be the same weight as the fruit when peeled and cut up) and some citric or tartaric acid to taste (dissolved in a little water before adding). Boil all for at least 1 hour, when the jelly will assume a nice colour and consistency. Such has been the experience of the writer, who hopes others will also find it a success.

## Fruit preserving (Oct. 1931)

### *Cape gooseberry jam*

Use the following method:

- 1 wash fruit; pick it over carefully; drain and dry fruit
- 2 bruise some ripe berries in the bottom of the preserving pan
- 3 boil for fifteen minutes; add remainder of fruit
- 4 add sugar; boil for one hour
- 5 let jam stand in preserving pan till it is cool
- 6 bottle and cover.

*Note:* utensils—bowl, sieve, cloth, preserving pan, wooden spoons, jars; materials—1 cup sugar to each cup of fruit.

### *Loquat jam*

Use the following method:

- 1 cut off tops of loquats, remove seeds, and put seeds into a bowl
- 2 cover with boiling water, allow to stand for half an hour
- 3 strain liquid over the fruit
- 4 boil gently thirty minutes or until fruit is tender
- 5 add sugar and boil twenty minutes or until the jam jellies from the spoon
- 6 put jam into jars while hot.

*Note:* Utensils—preserving pan, bowl, cup, wooden spoon, preserving pan; materials—loquats; 1 cup sugar to 1 cup pulp.

### *Crystallised pineapple*

Use the following method:

- 1 remove skin and eyes from pineapple
- 2 cut into thick slices; divide slices into quarters
- 3 boil sugar and water together for ten minutes

- 4 add pineapple; cook till tender
- 5 pour out into a basin; cover; stand overnight
- 6 return syrup to preserving pan; bring to the boil
- 7 pour reduced sugar over pineapple; cover; stand for three days
- 8 repeat 6 and 7
- 9 lift pineapple out of syrup; place on sieve
- 10 dry in warm oven until the pineapple does not stick to fingers; sprinkle with dry sugar.

*Note:* utensils—knife, preserving pan, basin, sieve; materials—1 large pineapple, 4 cups sugar, 2 cups water.

### **In the farm kitchen (Mar. 1936)**

#### *Rosella jam*

Use the following:

- 1 materials—rosellas, 1 cup of sugar to each cup of pulp.
- 2 utensils—saucepan, knife, wooden skewer or blunt stick, cheese cloth strainer, preserving pan, wooden spoon, cup and jars.
- 3 method—cut off stalks; with a blunt stick push seeds out of the husks. Put stalks and half of seeds into a saucepan; cover them with water. Boil for 1 hour; strain through cheese cloth into a preserving pan. Add the rosella husks; boil for 20 minutes. Measure; add 1 cup of sugar for each cup of pulp. Boil rapidly for 20 minutes, stirring continually. Bottle and seal.

### **Fruit preserving (Dec. 1931)**

#### *Dried plums*

Use the following method:

- 1 wipe plums, split them lengthwise, remove seeds
- 2 place fruit on flat tins with skins downwards
- 3 dry in warm oven or in the sun; if the latter course is followed, cover the fruit with muslin to keep away the insects
- 4 turn frequently; keep the fruit exposed to moderate warmth till the moisture is evaporated

5 pack in boxes with white paper between layers

*Note:* utensils—knife, tins, boxes, white paper, muslin (if required); materials—plums.

*Passionfruit jam*

Use the following method:

- 1 wipe fruit well, cut each into halves
- 2 scoop out seeds and juice; put skins into a saucepan; add sufficient water to cover skins
- 3 boil till the skins are quite tender; remove pith from skins
- 4 put it into a preserving pan
- 5 add seeds, juice, lemon juice, and sugar
- 6 boil slowly till jam sets
- 7 bottle while hot; cover down closely.

*Note:* utensils—cloth, knife, teaspoon, bowl, saucepan, preserving pan, mincer, cup, jars; materials—passionfruit;  $\frac{1}{2}$  teaspoonful lemon-juice, 1 cup sugar, to each cup of pulp.

*Preserved mangoes*

Use the following method:

- 1 peel firm mangoes, cut them into thick slices
- 2 make a syrup of 1 lb sugar to 1 quart of water
- 3 lay mango slices in the syrup, bring to boiling point
- 4 lift fruit out, pack into jars
- 5 boil up syrup for 20 minutes; remove scum
- 6 strain syrup over mangoes in jars till jars overflow
- 7 seal down and test.

*Note:* utensils—knife, preserving pan, strainer, flannel, bowl, jug, cup, jars; materials—mangoes; 1 lb sugar and 1 quart water.

# HOMEBREWS and OTHER HEADACHES

**I**N the days before easy and rapid transportation, before stubbies and tinnies and eskies, when dropping down to the pub was not as easy as it may be now, and working from before dawn to after dark was more the norm than the exception, the people on the land still liked their drop of brew. If you were far from the 'joys of civilisation', the only option could well be to make your own out of what was at hand. *QAJ*, in serving the primary producers of earlier times, and in response to questions posed by readers, provided recipes for a wide variety of beers, fruit wines and meads.

## **Pineapple wine (Oct. 1901)**

**A** small quantity is made as follows: over the peelings of two pineapples pour 1 quart of boiling water; allow it to steep until cold, then sweeten to taste, strain and bottle. Tie down the cork, and place the bottle on its side; if put in a warm place, it will be ripe in twenty-fours. A small piece of ginger placed in each bottle will improve the flavour. If made in large quantities, the whole pineapple chopped should be used.

## **Tying in a cork (Jun. 1899)**

**T**HE accompanying illustration shows how a cork may be fastened securely in a bottle and prevent it from leaking when carried about. In the upper part of the illustration the cork is shown securely tied. In the lower part it is shown in outline. After a little experience the tying can be done with no difficulty. Cut the string about the desired length, place the middle of it on top of the cork, disposing of the ends as indicated in the lower half of the sketch. Use a stout string and you will have no difficulty with leaky bottles. *Australian Field*.



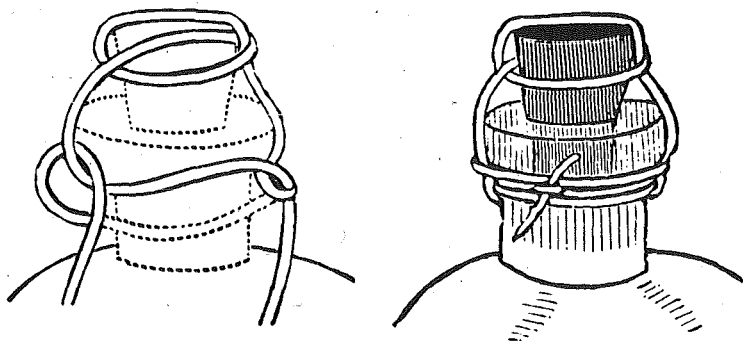


Figure 5 Tying in a cork.

### Rhubarb wine (Dec. 1901)

**I**NGREDIENTS for 1 gallon of wine: to 6 lb of rhubarb stalks cut into lengths of 2 inches, add 1 gallon of cold water. Place in a tub or vessel for six days, stir it up well two or three times each day, then strain it off into another tub or vessel, and add 1 lemon, sliced very thinly, and 4 lb of loaf sugar. Stir the mixture altogether until the sugar is quite dissolved. Allow it to remain undisturbed for ten days.

Do not disturb the sediment; strain off the liquor through a piece of muslin doubled. Pour all into a clean cask and add  $\frac{1}{4}$  oz of isinglass—not gelatine—which has been previously dissolved in a tablespoonful of boiling water.

When it has been kept for six months, pour the liquor gently from the cask through a wine funnel—an ordinary funnel, however, will do—place a piece of muslin over the mouth of the funnel to prevent any substance passing. Draw off into bottles, in which a lump of sugar has previously been placed. After allowing the wine to keep for twelve months, it will be found to be quite equal to many of the imported wines. If by choice it is required the wine should sparkle, lay the bottle down, and when drawn, the wine will pour out like champagne; if placed upright, the wine will be still. Great care must be taken when bottling off the wine that there shall be no isinglass or any other sediment from the cask.

## Ginger beer (Apr. 1902)

**T**HAT most refreshing drink, ginger beer, should be made in every farmhouse. When we ran a farm, we were never without it and hop beer. Both are easy to make and cheap, and are an agreeable change from the everlasting tea during the summer.

### *First Recipe*

5 lb white sugar	1 gill lemon juice
¼ lb honey	5 oz ginger (bruised)
4 ½ gallons water	

Boil the ginger 30 minutes in 3 quarts of water; then add the other ingredients and strain. When cold, put in the white of an egg well beaten with 1 teaspoon of lemon essence. Let stand for 4 days and bottle. It will keep for months—much longer than if yeast were used. The honey, however, operates mildly in place of yeast.

### *Second Recipe*

20 gallons water	20 lb brown sugar
1¼ lb ginger (bruised)	3 oz bicarbonate of soda
2 oz hops	1 quart yeast

Also put in a little alcohol (1 teaspoonful), oil of lemon, whites of ten eggs well beaten. The ginger root and hops should be boiled 20 or 30 minutes in enough of the water to make all milk-warm; then strain into the rest and add the yeast; let work overnight; skim and bottle in beer bottles.

## To make ginger beer (Mar. 1900)

3 gallons of boiling water	2 ¼ lb sugar
1 egg	1½ oz ground ginger
1½ oz cream of tartar	rind and juice of 2 lemons
2 large tablespoonsful of yeast	

Put the lemon, cream of tartar, sugar and ginger into the boiling water; let it stand until just warm; then add the yeast and shells of an egg, also the

white, well beaten. Stir well, and cover with a cloth. Next day skim, and pour the liquid off into another vessel, leaving the sediment behind. Bottle immediately and cork well.

### **Cottage beer (Dec. 1901)**

**T**AKE a quarter of good sweet wheat bran, and put it into 10 gallons of water, with three handfuls of Mathon hops. Boil all together in the copper until the hops and the bran sink to the bottom, then strain the liquid through a hair-sieve or linen bag into a cooler; when lukewarm, add to it 3 pints of very thick treacle and about  $\frac{1}{2}$  lb of honey. When all is dissolved, pour the whole into a 9-gallon cask, then stir in two tablespoons of brewer's barm. When the fermentation has subsided, bung up the cask. In four days the beer will be fit to drink.

### **Rosella wine (Apr. 1903)**

**P**UT your fruit into a cask that has one head out. Pour boiling water over the fruit, rather more than enough to cover it. Let this stand for about three days—stir now and then.

At the end of three days, strain the liquor into another cask—this cask to have both heads in. Then for every gallon of liquor, take 3 lb of sugar, and make a good thick syrup of same. Pour this syrup while hot into the liquor, and stir well. Leave the cask with the bung out until fermentation starts. Should this not occur, say, in 24 hours, add a bottle of yeast. Keep the cask in as even a temperature as possible, as this will help the fermentation.

In the process of fermentation you will lose some of your liquor. Should it ferment thoroughly, save the liquor that overflows from the bung-hole, and put it back into the cask; but should you find this not enough to keep your cask full, add a little warm water. When the liquor has almost finished fermenting—say, when it stands at 3 degrees density by the saccharometer (Beaume)—bung up the cask and leave for three months. Then bottle.

### **Ginger wine (Oct. 1902)**

**B**OIL 20 lb of sugar in 7 gallons of water for half-an-hour, skimming it well. Then put 9 oz bruised ginger in a portion of the liquor, and mix all together. When nearly cold, put 9 lb of raisins, chopped very small, into a cask capable of holding 9 gallons. Add 4 lemons (sliced), after taking out the seeds, and pour the liquor over all, with a half pint of yeast. Leave the cask open for three weeks, keeping it filled up with some of the reserved liquor, and bottle it from six to nine months.

### **Chilli wine (May 1919)**

**T**AKE 2 quarts of water, 10 small bruised chillies,  $\frac{1}{4}$  ounce of citric acid, 2 tablespoonsful of white sugar (burnt black), 1 teaspoonful essence of lemon, and 3 lb of sugar. Pour boiling water on the ingredients; colour with the burnt sugar; then when cool, bottle and cork well.

Another method is to take 1 lb of brown sugar, 2 quarts of water, 8 small chillies,  $\frac{1}{4}$  ounce of citric acid, a teaspoonful of sugar (burnt black), and a teaspoonful of essence of lemon. Pour boiling water on the chillies, acid and sugar. When cold, mix the burnt sugar to colour the mixture; add the essence; strain when cold and bottle.

### **Honey beer or mead (Mar. 1904)**

**T**HIS old fashioned drink is becoming more popular, probably owing to the fact that it is made to suit the palate of most people who can drink a glass of wine, and do not mind dreaming of honey and the honeybee at the same time. The strength is regulated by the amount of honey per gallon of water used. Three pounds will produce a wine suitable for general use; while 4 lb will give one that is certainly better and will keep longer.

Take 3 or 4 lb of honey per gallon according to the quantity required. Mix it with water and then boil it, removing the scum until none is left. Now add  $\frac{1}{2}$  oz of hops for each gallon of liquid, and boil for a quarter to half an hour. Drain the liquor while hot into a clean barrel, and when lukewarm, stir in half a cupful of yeast. Let it work, but fill up as the froth runs over, and bung down when fermentation has ceased.

*Another recipe*

Use 3 lb of honey and 2 lemon peels to each gallon of water, boil for half an hour and skim well; put in lemon peel just before boiling ceases, work with yeast, and then put it into a cask, leaving the bung out till fermentation is over. It is also made without the addition of yeast. After boiling and skimming, add the hops to taste; strain and put into the cask, when cool. Keep it in a cool dry place and put in the bung in a few days.

The late Mr Abbott said that honey not properly ripened had a faculty for making itself into mead; and the mead so made, without fuss or admixture of any kind, is of the choicest flavour, uncontaminated by yeast or other aid to fermentation, and if bottled at the right time is a 'nectar fit for the gods'.

### **To make hop beer (Aug. 1913)**

**T**AKE ten gallons of water, 2 quarts maize or wheat, 10 cups of sugar, 2 handfuls of hops, 1 or 2 rhizome of ginger bruised and a few chillies according to taste.

Boil the maize or wheat in water for 2 hours. Boil the sugar, ginger, chillies and hops in water for 20 minutes in an enamelled pan. Strain all through fine cloth into a 10-gallon keg. Wash all the strainings left on the cloth with tepid water in a separate vessel, strain off the liquor, and pour it into the cask. Next day fill the cask up with liquor or water, allowing the scum to float away. Then bung tightly.

### **Mead (Jun. 1899)**

**L**ARGE quantities of this beverage were drunk by our British forefathers. Nowadays we never hear of it, probably owing to the large consumption of cheap beer.

A writer in a home journal recommends the utilisation of low-grade honey, by turning it into this wholesome and refreshing beverage. There are many elaborate recipes given for its manufacture in bee and other books, but all recommend the use of spices, which almost destroy the taste of the honey. The simple recipe is as follows:

Soak the cappings or pieces of comb, after extracting, in water, and when they have yielded up their sweetness, drain the water away, and test it to ascertain the quantity of honey it contains. The proper strength will be found to allow an egg to float and about half to remain submerged. If there is too much honey in, add water; if too little, add honey. When there is a fair amount of liquid it is somewhat difficult to make an accurate test. The work will be simplified by taking out, say, a quart, and adding to it water and honey, according to requirements. It is easy then, knowing the quantity of liquid in the barrel, to add a like proportion of either water or honey. When the proper degree of strength has been obtained in the manner described, boil the liquor for 20 minutes, skimming all the time. Then pour it into a cask and leave it. Slight fermentation will take place, after which bung tightly, and leave the barrel unmolested for 6 to 12 months.

### Cider making (Jun. 1911)

**H**OW to make cider is explained simply in the following article in the *Farmer and Settler*:

Cider can be made from any kind of good, sound, ripe apples, but the fruit must be ripe—neither rotten nor unripe. When an apple is ripe enough to eat, it is ripe enough to grind for cider, but not until then.

A great mistake is often made by would-be cider makers in mixing all sorts and conditions of apples together, as though quality and quantity were matters of no importance. Bitter, sweet and sour can all be converted into cider, but bitter apples are the best; years of experience teaches this—the juice is the richest in sugar, it ferments more freely, it clarifies quickest, and it keeps best after fermentation.

It is always better to core apples before grinding, as the cider will not only taste and look better, but it will keep better. The extraction of the juice is the next step in the process. The apples are crushed or ground in mills, and the pulp sprinkled with one-sixth or one-fourth of its weight in spring or river water. Then allow it to remain in tubs for twelve to fourteen hours, during which time fermentation commences.

The pulp should then be placed on a kind of wicker frame or in coarse canvas bags, and after draining into suitable receivers, should be subjected to pressure in the cider press. The liquor which runs off first is the best,

and should be kept separate; that which follows as the result of extreme pressure usually tastes of the pips and skins.

The extracted juice should next be put into casks with large bungholes, and freely exposed to the air, but not to the sun, the casks being placed on 'stillions', with flat tubs under them to catch the waste. They must be constantly watched, and kept full, so that the barm or yeast, as it forms, may froth over and be carried off from the surface. As soon as the sediment has subsided—which will take two or three days for weak, and eight or ten days for strong cider—the liquor should be racked off into clean casks previously sulphured with a cooper's match.

The casks containing the racked cider must be stored in a cellar or in a cool shed, and left there for some months to mature, when they can be re-racked for sale or for home use.

### **Wines from tropical fruits (Mar. 1936)**

**A**T times, every orchardist has a quantity of fruit which, owing to some slight superficial blemish, or perhaps because it is too ripe to pack, is unfit for market. Such fruit is usually discarded and goes to waste. Some, at least, of this could be turned into a profitable commodity by converting it to wine. The process is a simple one, but to be assured of success the producer must not be impatient to achieve monetary results. The secret lies in proper fermentation and lengthy maturing. Although some of the recipes given below stipulate a few weeks or months in the wood, an improvement in quality would be obtained by allowing twelve months for maturing before bottling off.

The process is essentially the same with all fruits. Variations in the process with any one kind of fruit are largely a matter of individual fancy as, for example, the adding of brandy or rum after fermentation. Whilst it is my opinion that this definitely improves the wine, some may hold a contrary opinion and prefer to omit it. Indeed, many of the recipes do omit it. Before proceeding to detail a few recipes, the following general remarks, which apply to all winemaking, may be made.

- Use only wood or earthenware vessels. Wood is preferable. Under no circumstances should a vessel of iron or any other metal be used.
- The vessels used must be perfectly clean.
- During fermentation the cask must be filled daily almost to the bunghole from a small quantity retained for this purpose. If this

should be exhausted before fermentation is complete, clean cold water must be used. Fermentation usually takes about three weeks.

- Throughout the whole process and while the wine is maturing in the wood the temperature should be as even as possible, and around 60 degrees Fahrenheit.

The following recipes have been collected from various sources. Several are personally known to the writer to produce good wine, whilst all are reputed to be good. Quantities may be increased or reduced in proportion, according as it is desired to make a greater or less quantity.

*Orange wine no. 1*

Squeeze sufficient oranges to make 2 ½ gallons of juice. Add 25 lb of sugar. Put the orange pulp into a separate tub and cover with cold water, allowing it to stand for twenty-four hours. Then strain mixture and add the liquid to the juice and sugar. Add more water, if necessary, to make the quantity up to 10 gallons of liquor, and let stand for twenty-four hours. Then strain it off and fill the cask. Keep cask filled with additional liquor or cold water, and when fermentation is complete, bung up and set aside for twelve months.

*Orange wine no. 2*

Put 40 lb of sound, peeled oranges into a well-cleaned wooden tub or vat. Bruise the fruit and pour over it 4 gallons of water. Stir the whole thoroughly and work the fruit with the hands until the juice and pulp are separated from the pith and rag. Then allow it to stand for twenty-four hours. Strain through a coarse cloth with gentle pressure. Wash the mash with a gallon of clean water to remove any remaining soluble matter and strain it through into the other juice. Dissolve 25 to 30 lb of sugar into the liquor and then add sufficient water to make up to 10 ½ gallons. Cover the vat with a blanket and board, and allow to stand twelve to twenty-four hours, according to the state of the fermentative process. Draw off into a cask, filling almost to the bung hole, so that the scum may overflow as fermentation goes on. Add a little liquor daily to keep the level just below the bung hole. When fermentation is almost complete, knock the bung in tightly and bore a small gimlet hole in the side, pegging it lightly. Remove the peg from time to time to allow the gas to escape. When the gas escape is so feeble that it will not extinguish a lighted match, the peg may be knocked home. Then add a tablespoon of isinglass to fine the wine, and in a few weeks it will be fit for bottling.



*Mango wine no. 1*

Choose the very ripe fruit. Put them in an earthenware vessel or cask without removing either the skins or seeds. Cover with water and allow to stand for three days. Stir or squeeze the fruit three times a day until the flesh leaves the seeds. At the end of this period, strain the mash through a fine cloth and measure it. To every gallon of juice allow 3 ½ lb sugar. When this is dissolved pour the wine into bottles, but do not cork them. Allow to ferment, each day filling the bottles with liquor retained for the purpose. When fermentation stops cork the bottles and put them away. The longer this is kept the better it becomes.

*Mango wine no. 2*

Select ripe fruit and place them in a wooden tub or cask with one end knocked out. Bruise the fruit well and pour in 1 gallon water for every 10 lb to 12 lb of fruit. Let stand for forty-eight hours, then strain and measure into a cask. For every gallon of liquor add 2 to 2 ½ lb of white sugar according to the sweetness of the fruit used. Set aside to ferment, and when this is complete add ½ pint of rum or brandy for each gallon of wine and bung down tightly. After nine to twelve months bottle it off. The wine will be fit to drink in about six months, but if kept longer it will be better.

*Granadilla wine*

To make 5 gallons of wine, mash ten medium-sized granadillas, fully ripe, and well cover with water in an earthenware or wooden vessel. Let stand forty-eight hours, then strain off liquor. Dissolve 10 to 12 lb sugar in hot water, and add to the juice while warm, and add sufficient more warm water to make up 5 ½ gallons of liquor. Pour into a cask and keep the extra ½ gallon aside for filling as the fermentative process reduces the level of the wine each day. When fermentation is finished, which should be in about three weeks, 2 pints of brandy may be added and the bung driven in. The wine may be bottled off in nine to twelve months.

*Pineapple wine*

Mash 10 lb ripe pineapples, including the skins, and cover with 2 gallons water. Let stand twenty-four to forty-eight hours, then strain off. Add 6 lb sugar and stir till dissolved, then strain off into a keg or earthenware demijohn. When fermentation is completed seal down. The wine may be bottled off after six months.

*Mulberry wine*

Use quite ripe fruit, and to every pound of mulberries add 1 gallon of water. Stir well, and leave for twenty-four hours. Strain liquor, and to every gallon of juice add 3 ½ lb sugar. When dissolved put the liquor into a cask. When fermentation has ceased bung tightly. Three months later the wine may be bottled off, adding three cloves and a lump of sugar to each bottle. It should then be stored away for a year.

*Strawberry wine no. 1*

To 1 quart of strawberry juice add 1 quart of water and 1 lb sugar, and stir well. Strain liquor and allow to ferment in an open jar. When fermentation is complete, draw off and bottle. Set the bottles aside for at least six months.

*Strawberry wine no. 2*

Take 3 ½ gallons cold water, 3 gallons cider, and 3 gallons strawberry juice. Ferment, then add 8 lb sugar, juice and rind of one lemon, and 1 quart of brandy. This will make 9 gallons of wine. For strawberry wine the fruit should be picked in fine weather after several fine days.

*Raspberry wine*

Gather the fruit when quite ripe, bruise and strain the fruit through a bag. Boil the juice in an enamel pan and for every gallon add 1 ½ lb sugar. Also add the whites of one to three eggs, according to the quantity to be made. Let this boil for fifteen minutes, skimming it as the froth rises. When cold and settled, decant into a cask, adding a bottle of yeast to aid fermentation. When this is complete add 1 pint of white wine or ½ pint of proof spirits to each gallon, and hang in the cask a bag containing 1 oz of bruised mace. Keep the cask in a cool place. The wine should be fit for use after three months. This wine may be made from the wild raspberries which grow prolifically throughout Queensland.

*Rosella wine no. 1*

Put the fruit into a wooden tub and pour over it boiling water rather more than sufficient to cover it. Let stand for three days, stirring now and then. Strain off and measure. For every gallon of juice take 3 lb of sugar and make into a thick syrup with boiling water. Pour this into the juice while still hot and stir well. Pour into a cask, filling almost to the bung-hole, and allow to ferment. If fermentation does not start within twenty-four hours add a bottle of yeast. When fermentation is complete, bung up and leave for three months, when it will be ready to draw off and bottle.

*Rosella wine no. 2*

To 1 gallon of rosellas add 1 gallon of water. Let stand twenty-four hours, then add 4 lb sugar,  $\frac{1}{2}$  oz allspice,  $\frac{1}{2}$  oz whole ginger,  $\frac{1}{2}$  oz cloves tied in a muslin bag. Boil steadily for one hour, then strain off. When cold, bottle, seal, and put away in a dark place for six months.

*Raisin wine*

Take 10 lb raisins and 1 lb sugar. Pick the raisins clean and chop them fine. Pour one gallon of hot water on them and press the juice through a bag. Let stand for twelve hours, then add the sugar and leave to ferment. When fermentation is complete, cask and bung up. After three months draw off into another cask and bung it closely. Bottle off in ten months, and it will be fit to drink in a year.

# GOOD for WHAT AILS YOU

**I**N the country, doctors were in short supply, and patent medicines and home remedies were popular. People with infallible remedies were usually only too pleased to share their cures with fellow sufferers—then, as now, often in gory detail. Some home cures obviously came from observation, some from common sense and some from trial and error.

## Value of onions (Jul. 1903)

**A** contemporary writer on onions describes them as being a valuable medicine in many diseases. They will, he says, serve (being eaten raw) to keep off disease if used as here stated:

To cure spasms rub them on the spine; to cure typhoid fever bruise with a hammer and bind on the feet; to cure chills bind around the waist and to the pulse; for diphtheria bind to the throat; for a burn wet with raw juice; to cure a cold, boil and eat with butter; for croupy babies slice onions and sprinkle with butter and cover closely, and when the juice runs out give a spoonful every hour.

We have frequently stated that apples and lemons are better than any drugs to cure or ward off many of the ailments flesh is heir to. We know of a case in which a seafarer completely cured himself of what the doctors said was chronic, incurable rheumatism, by taking nothing liquid but pure or diluted limejuice squeezed from fresh limes. In six months, during which time he was exposed to constant rain and salt water wetting, the rheumatism entirely disappeared. These three remedies, to which may be added celery, will entirely dispel the acids which give rise to rheumatic affections. They are simple, cheap, and effective, pleasant to take, and, what is certain, they effect a cure if persevered in.

### Onions for nerves (Jul. 1903)

**T**HERE is nothing, medically speaking, so useful in cases of nervous prostration as the poor and humble onion, says *What to Eat*. They are almost the best nervine known, and may be used in coughs, colds, and influenza, in consumption, scurvy, and kindred diseases. White onions overcome sleeplessness, while red ones are an excellent diuretic. Eaten every day they soon have whitening effect upon the complexion.

### Onions — a remedy for sleeplessness (Jan. 1899)

**N**OT many people are aware that the onion contains a principle which acts on the nerves in a manner similar to the action of opium.

Unfortunately, the persistent odour of the vegetable makes sensitive persons disinclined to use them, at all events in the raw state. Now, an onion taken at night is one of the best sleep-inducers. The element above mentioned has the effect of calming the nerves, and consequently of lulling the brain to rest.

Onions with salt are much used in the old country for the reduction of chilblains. They are also efficacious, used as a poultice, in the matter of sprains, boils etc.

In fact, they are generally excellent both as a medicine and as a vegetable. Onions, apples, and grapes are amongst the best vegetable medicines.

### Wet earth — a bee-sting cure (Apr. 1899)

**A**LTHOUGH wet earth has long been known as a cure for bee and wasp stings, very few persons seem aware of its value as such. The following example may interest some of the readers:

Four summers ago, at a picnic in the country, one of my boys found a wasps' nest, and must needs amuse himself pelting it with stones, resulting in his getting very badly stung in the face. Fortunately, I remembered having read of the wet-earth cure, and at once daubed his face with some mud from the road, with the happy result that in about 15 or 20 minutes all the painful effects had ceased, and very little swelling remained.

I have since then used this remedy when stung whilst manipulating my bees, and find it infinitely better than spirits of ammonia or other popular remedies, and the best of it is that it is always ready at hand.  
*British Bee Journal.*

### **Some uses of olive oil (Jul. 1904)**

**A** tablespoon of olive oil a day, taken internally, will help liver trouble and indigestion. It is also healing for throat and stomach catarrh. Serve it frequently in salad dressings, where it will be both appetiser and medicine. For severe internal disorders or emaciated and run-down condition of the body, rub the patient every morning for twenty minutes with the oil, then with a bath towel; at night rub the spine for ten minutes, and in two months you will see great improvement. Heated and applied to the bowels, it helps constipation. Try it for chapped hands and for roughened or burned skin. Before putting away the stove, rub the nickel parts with the oil, also the gasoline oven or other sheet iron, and you will see no rust. Use it on shoes instead of blacking. It is especially good on patent leather; apply at night, rub off and polish in the morning.

### **To extract a splinter (May 1906)\***

**W**HEN a splinter has been driven into the hand, it can be extracted by steam. Fill a wide-mouthed bottle nearly full of hot water, place the injured part over the mouth and press it slightly. The action thus produced will draw the flesh down, and in a minute or two the steam will extract the splinter as well as the inflammation.

**\*Warning:** Take care that the water is not hot enough to cause burns.

### **Cure for rheumatism (May 1906)**

**F**ROM an exchange we take the following simple remedy for rheumatism, which is vouched for by a lady who was a martyr to rheumatism and sciatica. The remedy is 'cotton-batting' or cotton wool in sheets. For weeks she had suffered sciatica, and, remembering that she had seen cotton wool used for rheumatism successfully, swathed her leg in it from

hip to toe. In less than a week she was up and about the house. The pain left entirely, and did not recur. Acute rheumatism and obstinate neuralgia will yield to the same treatment. When the pain has ceased, the wrapping should not be removed too suddenly, as the parts which were covered are very sensitive to cold. Therefore, something less bulky should be worn for a little time after removing the cotton batting.

### **Cooked celery for rheumatism (Sep. 1903)**

**T**HE *Science News* magazine says that celery is a cure for rheumatism. Indeed, it is asserted that the disease is impossible if the vegetable be cooked and freely eaten. The celery should be cut into pieces and boiled in water until soft, and the water drunk by the patient. Put new milk, with a little flour and nutmeg, into a saucepan with the boiled celery, serve it warm with pieces of toast, eat it with potatoes, and the painful ailment will soon yield.

Such is the declaration of a physician who has again and again tried the experiment, and with uniform success. He adds that cold or damp never produces, but simply develops the disease of which acid blood is the primary and sustaining cause and that, while the blood is alkaline, there can be neither rheumatism nor gout.

### **To cure corns (Feb. 1903)**

**T**O cure corns, try the following methods:

- 1 Place on the corn a piece of cold, moist linen folded several times, wrap it up in dry linen, then go to bed. With this treatment the hard epidermis swells up, and after six or eight hours the outer covering of the corn can be removed with a dull knife. When this treatment has been followed for three or four days, a small needle-like growth (the corn) can be extracted without pain or bleeding. By washing the feet often in cold water the tender place will heal rapidly. After getting rid of this corn it is well to wear shoes which are neither too large nor too small, so as to avoid excessive pressure or friction.
- 2 In place of the linen a crust of bread soaked in vinegar may be applied.

- 3 The best application is to soak a whole onion twenty-four hours in vinegar, then apply one of the layers of the onion to the corn and keep it in place by a bandage through the night. After repeating this procedure a few times, the corn can be removed without any trouble. By either of these simple applications this troublesome agent can be removed without any danger of blood poison, and 'free of charge'.

### **A wonderful remedy for sprains (Jun. 1907)**

**T**HE white of one egg beaten stiff and stirred with salt (it should be the consistency of frosting for cake). Bind it on to the affected part and renew as often as it becomes dry. It works like a charm.

### **To cure hiccoughs (Mar. 1914)**

**T**HE *Wealth of India* gives the following remarkable cure for this annoying trouble: 'Fill a glass tumbler with clear, cold water, and place on a table. Then have the patient stand where he or she can look directly into the glass, and fix the attention about the centre of the bottom of the glass for about a minute, when the patient will find the hiccoughs have entirely disappeared. This had been known to cure the most violent cases of this disorder when all other remedies have failed.'

### **The benefit of apple eating (Nov. 1912)**

**A**PPLÉ eating is very beneficial to health. Apples are very nutritious, for they contain more phosphoric acid than any other fruit or vegetable. If apples are eaten before retiring, the brain and liver are benefited; undisturbed sleep is promoted; the odour of the mouth is disinfected; the superfluous acids of the stomach are restrained; haemorrhoidal disturbances are paralysed; secretion of the kidneys is accelerated, and the formation of stone is prevented.



## The food and medicinal value of fruit (Aug. 1921)

**A**LL fruits are of great value, not only as food, but in many cases on account of their medicinal properties.

In brief, fruit may be said to be nature's greatest remedy. Taken as a whole, fruits tend to purify the blood, and thus keep the body in a healthy state, but individual fruits have specific medicinal properties. For instance, grapes are valuable in the convalescent stage of many diseases, as they supply nourishment in a readily available form, and act as a cooling medium that has the effect of counteracting any slight feverish tendencies.

All fruits of the citrus family are valuable medicinally, as they act as a febrifuge in the case of mild fevers, and also as a cooling agent when used as a beverage. They also have strong anti-scorbutic properties, and are therefore very valuable in cases of scurvy, barcoo rot, and other diseases due to impure blood.

Apples are extremely valuable as a food, being easily digested, and therefore suitable for everyone. They are also valuable for their corrective properties, in that they act as an antacid, and are frequently very beneficial in cases of rheumatism and similar diseases.

Bananas are valuable as a food, both in the green and ripe stage. In the former they can be used as a vegetable, or dried and ground into flour, and in the latter they can be used either as fresh fruit or dried and used when required. As a food, their value is high, owing to their being rich in starch and fruit sugars, both of which are valuable food products. Medicinally, bananas have no very great effect other than that possessed by all fruit—namely, that of tending to keep the body generally healthy.

The food value of pineapples consists mainly in the fruit sugar-content in the juice, but medicinally the juice is very valuable as a remedy in cases of throat affections, and it also acts as a good blood purifier.

All commercial fruits are valuable adjuncts to our daily food, and, did we depend more on their use and less on that of proprietary medicines, it would be better for the health of the community generally.

## Some uses of honey (Mar. 1909)

**I**T is but rarely that we see honey on the table as regularly as jam; yet it is a far healthier food than the latter. Take the following from the *British Beekeepers' Review* on 'Honey as a food and medicine':

The wisest man that ever lived advised his son to eat honey, 'because it is good'; and Democritus, who lived to be a centenarian, attributed his freedom from illness and his prolonged life to partaking of honey as a regular part of every meal. Just lately we heard of a young lady, whose life was despaired of by the doctors, being spared, and recovering by the regular use of honey as a food. Scientists inform us that honey contains almost all the requirements of life-supporting food, added to which it requires little or no digestion. We are also informed that its use helps the intestines and kidneys perform their special functions. For growing children who crave for sweets, nothing better than honey could be given. Mahomet discovered this important truth before he wrote the Koran, where he speaks of honey as 'this sweet wholesome substance, which sustains and strengthens the body, which cures all maladies, a thousand times preferable to the poisons administered by the doctor to the human race.'

Recently a doctor declared that he cured several stubborn cases of constipation by the steady use of honey, prescribing no other medicine. In cases of nervous disorders it has been long recognised as an excellent tonic. Cuts, scratches, small wounds, chips, scalds, burns, and many similar small ills have been cured by an application of honey or of a salve in which honey formed the chief ingredient. Colds, coughs, sore throats, and asthmatic irritation are frequently treated with honey. Bronchitis has been, if not cured, at least greatly relieved by its free use. Many very palatable drinks can be made from honey, and in hot summer weather no better use can be found for honey than converting some of it into a cooling and refreshing drink. Honey biscuits are pleasant eating, and should find a place on every tea table. Honey sweets have an agreeable and appetising effect on the palate. Honey vinegar is the best and most pleasant form in which this bitter relish can be found.

# CHEESE PLEASE

**T**HOSE with house cows, or failing that, house goats, sometimes had more than enough milk to drink. Butter and cheeses were made for the table or, along with spare eggs and milk, sold to supplement the budget. After the separating of the whole milk, the cream was turned into butter and the rest was fed to the pigs, calves, chooks and cats. The cream was churned to the butter stage, the buttermilk was taken off and salt added to the taste of the poor unfortunate doing the work. And there, basically, you had butter.

Cheese also had its procedures, though one of the articles says that, from an economic viewpoint, an equal amount of cheese of guaranteed quality could be purchased much cheaper than it could be produced.

*Important note:* All the recipes and suggestions below would have referred to the use of raw milk and cream. Pasteurised milk and cream should now be used. Commercially available starter cultures would be needed to make cheese from pasteurised milk and/or cream.

If raw milk or cream is used, it must have been produced by the best and most hygienic methods. Raw milk or cream contaminated by bacteria can cause fatal food poisoning.

## Home butter-making points (Jun. 1932)

- C**REAM may not churn because of the following reasons.
- It may be too thick. Add clean cold water sufficient to bring the cream to a consistency of well-mixed paint.
  - It may be too fresh. Develop slight acid flavour in the cream at churning time.
  - The temperature may be too low. Raise temperature to 50 degrees (Fahrenheit)—54 degrees (Fahrenheit) in summer and to 62 degrees (Fahrenheit) in winter.

- The cream may be gaseous due to action of undesirable organisms (gas-forming species). Thoroughly cleanse and scald with near boiling water all utensils that come in contact with the milk and cream.

*Note:* Do not mix hot cream with the cold cream from a previous separation. Keep separate until creams are at the same temperature. Stir cream daily during the ripening process.

### **Cocoanut butter (Jul. 1917)**

**O**WING to the high price of butter, we have had more than the usual inquiries as to how to make cocoanut butter. Everyone knows how to make cocoanut oil, but the making of cocoanut butter is quite a different process, and requires some skill. Cocoanut butter is being very largely used in the place of dairy butter in the United Kingdom and France, and before the war it was largely used in Germany. It can be used wherever dairy butter is used. Here is the process:

Grate or grind in a mill the meat of the nut as fine as it can be ground, and for the meat of each average nut add a pint of boiling water. Put this in a press, so that the milk can be squeezed out separate from the pulp. This milk can be used in place of cow's milk for any purpose, and is especially good with stewed fruit. To make butter, this milk can be separated in a separator or let stand in a pan to let the cream rise, which it should do in about the same time as the cream in cow's milk. This can be set to ripen, and be churned in the usual way. The whole process is in every respect the same as in making dairy butter. Wash out the butter milk; add salt to taste. As a rule, this butter is white, and annatto colouring can be added. According to the size of the nuts, it should take from 6 to 10 nuts to make 1 lb of butter. The churning should be done in a cool temperature, say between 60 to 70 degrees (Fahrenheit). *Journal of the Jamaica Agricultural Society.*

### **How to use hand separators (Oct. 1902)**

**P**ROFESSOR H.H. Dean of Canada gives the following good advice: 'A great many who use hand separators take the warm cream from the separator and put it in with the cream that has been skimmed in the morning or the previous day. That practice will result in a poor quality of

butter every time. Cream from the separator should always be cooled at once to a temperature of 60 degrees (Fahrenheit), or lower, otherwise it will be worse for butter making than that obtained in the old way without separators. Neglecting to wash the machine properly and neglecting to cool the cream properly are the two great evils to guard against in the use of a hand separator. If these two points are very carefully observed, we shall have a better quality of cream, but not otherwise.

### **Importance of stirring cream (Apr. 1933)**

**S**TIRRING of cream two or three times daily helps to maintain it in good physical condition and to liberate any gas which may form. If the cream is left standing for hours before stirring there is a tendency for the heavy portion (casein, etc.) to gradually settle towards the bottom and for the fat to rise to the top, especially if the cream is inclined to be thinly separated. This is not desirable, and stirring will prevent it.

A tinned steel or tinned copper stirrer should be used; on no account should a wooden stirrer be employed for this purpose.

### **To prevent milk from creaming (Oct. 1915)**

**T**HE natural tendency for the minute fat globules is to rise to the surface of the milk, and this will happen to a greater or less degree irrespective as to whether the creams are stirred up by a rotary or semi-rotary movement of the stirring apparatus. The most effectual method of keeping the fat globules intermingled with the milk in anything approximating even proportion is to be attained by stirring the milk by means of a plunger. The adoption of this method is effectual in carrying the fat globules down amongst the lower milk strata.

### **Goats' milk cheese (Aug. 1915)**

**A**NOTHER use for the superabundant produce of the goat is the manufacture of cheese, which, by the use of rennet, is an extremely easy operation, and yields a very excellent result nearly resembling Stilton. The cheese will, however, not keep more than four or five weeks. The recipe is as follows:

The milk having been warmed to about the temperature it was when fresh drawn, the rennet is added, and quickly stirred in, and the milk allowed to stand for an hour, when it will have cooled, and set into a firm curd. This curd having been broken up with a fork, a kettle of water, rather hotter than the hand can bear, is added, and the whole well stirred. In a few minutes, the washed curd will have settled, and the whey and water may be strained off. The curd is then put into a butter cloth under pressure, the cloth being changed, the pressure increased, and the curd turned over every day. In three or four days the cheese will be made, and only requires to be ripened for ten to fifteen days on a shelf, being turned over daily.

The curd may be produced by the judicious application of heat, without the use of rennet at all, and this method, being inexpensive, is most desirable. In Switzerland, no rennet seems to be used, the peasants turning the milk by placing it in huge cauldrons upon the fire.

### **Goats' milk cheese (Nov. 1916)**

**I**T often happens where several goats are kept that they are all in full milk at about the same time. This is not good management, but it is not easy to prevent it. Under such conditions there is generally more milk supplied than can be consumed in its natural state, and the goat's owner thinks of making it into butter or cheese. Goats milk, however, seldom makes good butter; it is as white as lard, and generally as soft and greasy; but for cheese making this milk is well adapted, and on the Continent—especially in France—goats' milk cheese is in great demand, and forms a commercial industry. The most famous of these—of the hard variety—is Roquefort, though it is said to contain a certain proportion of cows' milk on account of the scarcity of the other milk.

Most of the cheeses sold in France that are made from goats' milk are of the 'soft' variety, and quite small. The best known of these are the Mont d'Or, Levroux, and St. Marcelin. The following is an American recipe for making cheese of this character, which is said to be of very good quality:

Heat the fresh milk to about 90 degrees Fahrenheit, and add one teaspoonful of extract of rennet to each quart of milk, stirring it well for three to five minutes; the rennet, however, should first be diluted by twenty times its equal of cold water. Set the milk aside and leave until thoroughly coagulated. Let it stand for twelve hours, when it should be cut into small cubes with curd knives, or sliced at right angles with an

ordinary knife, and stirred with the handle for ten or fifteen minutes, after which it should be strained through a cheesecloth and the curd packed in perforated tin moulds placed on straw matting. The perforated cups used in small fruit presses are very good for the purpose if lined with cheesecloth. The moulds should be turned every half hour for several hours until all free whey has drained off and the cheese is firm; slight pressure will be helpful. When firm, the cheese is removed from the cloth and sprinkled freely with salt over the upper surface. After twelve hours turn the cheese and slat the other surface and edges. These cheeses should then be ripened for about three weeks in a cool cellar (temperature about 60 degrees Fahrenheit), when they become mellow in texture, with a flavour resembling schweitzer. Four quarts of milk will make two cheeses  $3\frac{1}{2}$  inches in diameter and about 2 inches thick, weighing about 10 oz each. *Livestock Journal*.

### A simple cheese press (Dec. 1900)

**B**ECAUSE of the fancied difficulty in the cheese-making process, few people think of attempting it. When a certain routine is followed, it is easy enough, and the plant required is so simple and inexpensive that none need be deterred on that score, says a writer in the *American Agriculturist*. The requisites are a good boiler, a dairy thermometer, a triplex or quadruple chopper, a chopping board, a couple of colanders, a homemade cheese press (which can be made from a large can, a 3 foot board, and

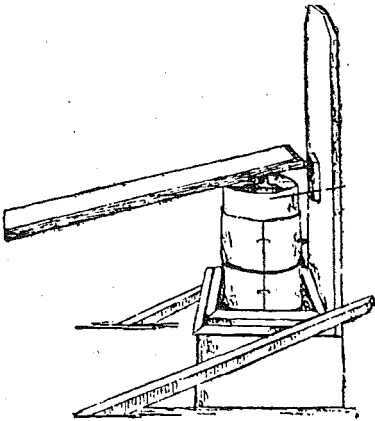


Figure 6 A simple cheese press.

a 2 inches by 4 inches scantling 5 feet long), a bottle of cheese colouring fluid, some liquid rennet and cheese cloth.

I have made an occasional cheese throughout the year, and enough in the spring and summer to go a great way towards paying the grocery bill. Three milkings may be used in winter, and two in summer. Care must be taken to cool the fresh milk before adding it to the other.

Place your double boiler on the back of the stove, the inner one resting on something, and put in the milk. Pour warm water into the outer boiler and bring the milk to 82 degrees Fahrenheit. For 5 to 7 gallons of milk, add about half a teaspoonful of the colouring fluid and half that quantity of rennet, previously mixed with a little water. Stir thoroughly and leave it to coagulate at the same temperature.

When the curd will break off clean from the bottom of your finger it is time to cut. A long carving knife, or anything that will reach down to the bottom of the pan, will do. Cut each way, leaving about 1 inch between the cuts. The heat may now be raised gradually about 2 degrees Fahrenheit every five minutes to 98 degrees Fahrenheit. Begin in a few minutes by shaking the boiler to help the flying off of the whey, but gently, so that the fat does not escape. Presently stir, and repeat the stirring every two or three minutes.

In about an hour the desired temperature ought to be reached. The curd will soon be half its size, and when pressed between the finger and thumb the clots do not stick together. It is now time to take off half of the whey. The approved vat has a tap, but it is quite easy to take off part with a dipper when the curd has settled. Leave it covered an inch or two, that it may develop more lactic acid, and the curd mat together, after which remove it from the remaining whey.

At this point, I take up the inner boiler and place the curd in the two colanders, leaving it there to drip into the large boiler. This, the cheddaring process, goes on at 90 degrees Fahrenheit. Occasionally change the bottom of the curd to the top. When cheddared, instead of a tough, spongy mass, the curd is the texture of cooked, lean meat—elastic and fibrous.

Curd mills are used for preparing the curd for salting, but in small quantities it is quite quickly cut with one of the new choppers and chopping board. It should not be cut fine, but of as uniform a size as possible, so as to receive the salt evenly, and as near the temperature of 90 degrees Fahrenheit as possible. About the same quantity of salt is required for cheese as for butter.



When the heat is lowered to 78 degrees Fahrenheit it is ready for the press. At a higher point the fat is liable to escape, and if too cold the curd particles do not adhere. Bandages are easy to make of cheese cloth. Sew a strip, the circumference and height of your tin, to a round piece the required size. Another round piece will be needed to lay on the top of the cheese, folding the wall piece down on it.

### **Homemade cheese (Nov. 1919)**

**T**AKE, say, 10 gallons of milk, which should not be sour, but should have developed sufficient sourness or lactic acid necessarily to be present in milk intended for conversion into cheese. Milk drawn from the cow at evening and kept overnight, when mixed with equal quantities of the morning's milk (freshly milked), and providing the evening's milk has not gone sour generally, meets the requirements.

This milk should be put into a clean, tinned vessel, about 2 foot long by 1 foot wide by 1 foot deep, which should stand in another vessel 2 foot 6 inches by 1 foot 6 inches by 1 foot 3 inches deep, and should rest on three pieces of wood laid on the bottom of the larger vessel, which will bring the top edge of the inside vessel a little higher than the outside edge.

Hot water is then poured into the outside vessel, and the milk in the inside vessel should be stirred with a wooden pat till it reaches a temperature of 86 degrees Fahrenheit. Should the water used at this period be of sufficient warmth to further heat the milk, it should be drawn off by a water cock inserted in the bottom of the outside vessel, and this water can be put back into the heating boiler if desired. When the milk is 86 degrees Fahrenheit add about 15 drops of cheese colour and stir thoroughly. Then add about  $\frac{1}{2}$  oz of rennet, and stir for two minutes. Cover with a cloth (a piece of calico answers), and let the milk rest until coagulated and it is of such firmness that, when you insert the finger into it and raise the finger to the surface bent forward, the junket will make a clean break in front of the finger. This stage usually takes from 25 to 60 minutes from the time of adding the rennet, according to the sourness of the milk and the strength of the rennet. This stage of the process requires careful attention. When the junket reaches the condition above described, it should be cut into cubes about  $\frac{1}{2}$  inch square. For this purpose a vertical and horizontal curd knife are used.

The curd is first cut lengthwise with the horizontal knife; then crosswise and lengthwise with the vertical knife. The curd is then stirred for a minute with the hands or a pat. Then more boiling water is run into the outside jacket, and the curds and whey brought up to a temperature of 100 degrees Fahrenheit. This should take about 20 minutes. By this time the curd should be firm to the touch. A small piece (about the size of a walnut) of the curd should then be taken and squeezed dry in the hand, and placed on an iron which has been heated to an almost red heat. The curd should be firmly placed on the iron, on a part that is just hot enough to hold the curd but not burn it; then draw the curd gently away from the iron. If sufficient acid has developed, it will be noticed that small threads about  $\frac{1}{4}$  inch long adhere to the iron.

If the curd has not developed an adequate amount of acidity, these threads will break away, or, if very sweet, the curd will not show any threads at all. In the latter cases, the curd must be kept at the above temperature or not allowed to fall below 98 degrees Fahr. until the curd shows thickly populated threads,  $\frac{1}{4}$  inch long, on the hot iron. When this is accomplished, the whey should be drawn from the curd. This can be done by shifting the curd to one end of the vessel, and dipping the whey out at the other. The end of the vessel should then be raised to allow the whey to drain away from the curd. After the whey is drawn off, the curd will readily become matted, and it should then be cut into blocks about the size of bricks, and turned over.

The turning should be repeated about every 10 to 15 minutes to allow the whey to drain off. In the course of about 40 minutes, the hot-iron test is again brought into requisition, and a piece of curd applied as before; and when the curd shows fine threads about 1 inches long, the correct acidity for cheese purposes has been attained. This usually takes from about an hour to an hour and a half, after drawing off the whey. The curd is next cut into pieces about the size of broad beans. There is a mill for this purpose, but a small quantity of curd can be cut with an ordinary butcher's knife. This completed, the curd is stirred with the hands just sufficiently to separate any pieces that may have united. Then add 4 oz of fine salt (or at that rate); and mix thoroughly. In 7 to 10 minutes the curd is ready for hooping and pressing into cheese. For this amount of curd you would require two 5 lb, 7 inch cheese hoops and six yards of 7 inch binder. The half dozen yards of binder are sufficient for 100 cheeses of the weight above mentioned. After the curd is put into the hoops, it should be pressed 20 to 24 hours under a ton pressure. If the milk is too sweet at the onset, it

takes a long time to get the required acid (hot-iron test), or, if too sour, the acid is developed too rapidly, and the cheese will be sour and probably leak on the shelves. Try and strike the medium. A nice time for completion of the process is about 4 hours from the time the rennet is added to the milk until the curd is in the hoops preparatory to the application of pressure.

### How to make small cheese (Mar. 1902)

**H**ERE are a few principles and rules says H. E. Cook, in the *Rural New Yorker* that may be given, and, if good judgement is used, may prove satisfactory:

We will assume the quantity of milk to be 500 lb of 4 per cent milk; and if more or less, the amount of rennet and salt may be changed accordingly. The night's milk should be kept at a temperature of 65 degrees Fahrenheit, after being exposed to the air after milking. In the morning, mix the two milkings together in a vat or tub not exceeding 20 inches deep—15 inches would be better; the curd would cook more thoroughly, with less danger of packing in the bottom.

A very simple and effective way of heating will be to use two small cans; 7 inches in diameter, and high enough to come above the milk. Fill these cans with hot water, moving the cans and agitating the milk until warmed to 84 degrees Fahrenheit. If one desires coloured cheese, then add ½ oz of some standard cheese colour, mixed with ½ pint of water; mix thoroughly. Provide yourself also with 1 ½ oz of rennet extract. Put the extract into ½ pint of cold water; do not use warm water or keep it where it is warm, and add to the milk, stirring for 2 minutes. In about 25 minutes the coagulated mass will be ready to cut. Put a finger gently into the curd, and when it breaks clean over the finger it is ready. If no cheese knife is at hand, previously provide yourself with a piece of galvanised-iron woven wire with a ½ inch mesh—about 6 by 15 inches; draw it through the mass lengthwise, crosswise, and from top to bottom. Of course it is a crude way of cutting, but will serve the purpose of breaking the mass and starting the whey. Keep the mass stirred so each particle will remain independent of another. In 10 minutes the heating cans should be brought on again, filled with hot water. Keep them moving as well as the curd, to prevent overheating any portion of it. When the thermometer registers 98 degrees Fahrenheit, rake out the cans and keep the mass stirred until the curd

particles do not readily adhere; then stir occasionally until—well, let's see. This point is not so easily told.

'The old, old way was to take off the whey when the curd squeezed between the teeth—that's not bad. I should, of course, rather depend upon the feeling and by smelling, but the beginners would better use the first rule mentioned aided by the feeling. Take a handful of curd, squeeze it hard, let go. If it has an elastic feeling, showing it to be well dried out, then take off the whey. Keep the curd well stirred until it is free from moisture and cool, which will require about half-an-hour. It may be more convenient, after removing the whey, to take the curd into some other receptacle where the moisture will drain out more easily and quickly, either by a slanting bottom or a rack with a cloth over it, through which the moisture can drip.

'One pound of clean salt will be sufficient; add and thoroughly mix, and allow to remain before pressing for 15 minutes. Two hoops 11 inches in diameter and 14 inches deep, or one hoop 14 inches in diameter and 14 inches deep, will be needed, or, if small, 12 lb cheeses are wanted, get four 7 inch hoops 1 foot deep. The amount of cheese produced from the milk will depend on its fat content. One can safely figure 2.65 lb cured cheese to each 1 lb fat in the milk, if the milk contains anywhere from 3 ½ to 4 ½ per cent butter fat. Take a cheese bandage to fit, and long enough to project past each end 1 inch or even 2 inches—it can be cut off. The bandage may be placed in before cutting in curd, and turned over the top edge of the hoop to hold in while filling; use a round piece of cotton cloth at each end of the cheese. I would not advise any cheap, uncertain method of pressing; a 1 ½ inch screw set in a frame, with means of turning; or send to a dairy supply house and get a press. If sufficient pressure is not applied the rind will not form, and the whole job will be a failure. After pressing an hour, take out, adjust the bandage smooth and cover the edges nicely, put on cap cloths of same material, with the cotton press cloths on top, and at bottom the same; put on a closely fitting follower, put to press again, and keep it there until the following day. Then take it out and cure in a room from 60 to 65 degrees Fahrenheit for three weeks. If you have not slipped a cog somewhere, the cheese will be presentable and edible. From an economic standpoint, however, the job will be a failure. An equal amount of cheese can be purchased much cheaper of some reliable manufacturer or dealer—quality guaranteed.'

# BULLS and COWS

**I**F the space was available, there tended to be at least one house cow providing milk for drinking, making into butter and cheese, and for selling any excess. Before artificial insemination became available, the only way to keep the cows producing milk involved the actual use of a bull. From the big placid cow to the toey Jersey bull, there were techniques for handling them.

## How old is the cow? (Dec. 1929)

**W**HEN a cow is over five years old her age can only be roughly guessed from the condition of the teeth (incisors) and the rings on the horns. But in the case of polled and dishorned stock there are only the teeth and the general appearance of the animals to indicate the age. A horned cow will be found to have a ring on her horns representing the birth of a calf yearly, and two years must generally be added to the number of rings because heifers are generally from two to two-and-a-half or three years old at the birth of their first calf. Thus a cow with four rings on her horns may be reckoned as six or seven years old.

But the condition of the teeth in reality determines the potential life service of the cow. The cow's molars may or may not be quite serviceable, but if her incisors are worn short or broken, she may be accepted as ageing. Some cows have really good teeth at ten or twelve years old, but usually the teeth begin to show signs of wear at six or seven years old. It depends a great deal upon the character of the soil, the crops, and the general feeding of the cows. On short, closely gnawed pastures, especially on stony ground, the teeth of grazing cows wear fast. Fed on whole turnips, in a stone or concrete trough, having a rough, uneven bottom, the cow's teeth wear down much faster than when she is fed on sliced turnips. The feeding of treacle and soft mashes hastens the decay of the teeth. The quality of the drinking water also affects the wearing qualities of the teeth.

Only the best milkers are, of course, retained till their teeth wear short. Occasionally a superior milch cow will be found with but a few rusty stumps where white ivories once were. Many an aged cow is reluctantly parted with, if she has been both superior at the pail and at the production of young stock. Many a good cow will well maintain her milk yield beyond twelve years old, but as a general rule cows are at their best after the birth of their third or fourth calf, say five or six years old, and when they arrive at the age of nine years their milk yield generally falls off gradually. Indifferent milkers are generally got rid of before they are five years old. Thus, if a buyer is in quest of a good cow at a market he or she is generally quite safe to buy a cow over six years, provided the cow is healthy, correct in the teats, and has fairly good teeth. But don't pay a stiff price for a cow that is past her prime. *The Livestock Journal* (England).

### **Estimating an animal's age (Nov. 1935)**

**I**T is usual to count all of the horn beyond the first groove or ring as representing three years of age; then add one year to the age for each ring present towards the base of the horn. The rings are best noted on the concave side of the horn. The growth of the horn is as follows:

Two small, hard, rounded buttons or points emerge from the skin when the calf is eight or ten days old. At three weeks a little flexible horn has appeared. At five or six months the horn commences to curve and assumes the shape it will eventually have. Up to this time and during the first year the horn is covered with an epidermic prolongation of the skin, similar to that seen on a foal's hoof at birth. This covering dries and scales off by the twelfth or fifteenth month, and the horn has then its permanent natural, shining, tough surface. In the second year the horns start a fresh growth and a small groove is seen encircling it between the substance secreted the first year and that developed in the second. A second ring appears during the third year. These two grooves or furrows around the horn are not well marked, and all traces of them disappear as the animal becomes older. From three years on the growth of the horn is marked by a groove that is much deeper and so distinct that it shows as a plain elevation or ring of horny substance, which forms an accurate basis for estimating the age of the animal. The teeth should also be taken into account when estimating an animal's age.

### Drying-off a cow (Feb. 1915)

**T**HE usual method of drying-off a dairy cow is to gradually reduce the number of milkings, commencing at milking the animal once daily for a short period, then extending the interval between the times of milking by milking the beast once in two or three days until ultimately the flow of milk has practically ceased. Occasionally there is considerable difficulty in bringing about the required reduction in the column of the flow of milk, particularly when the animal has access to abundant and succulent pastures, and in such cases it is advisable to diminish the supply of food, either by turning the cow out into a scantily grassed enclosure or restricting her to the stockyard for several hours each day. Care must be exercised in drying-off a dairy cow, otherwise, upon freshening, the cow will be found to have one or more of the quarters of her udder permanently damaged, the injury being attributable to turning the beast out into a grazing paddock before the flow of milk was sufficiently reduced.

### Tethering cows (Jan. 1927)

**T**YING and untying the tether rope is rather troublesome, and can be eliminated by using the method shown in the illustration. The rope is tied to an old motor-tyre casing which is simply thrown over one of several posts driven into the ground in the grazing field. Another advantage of

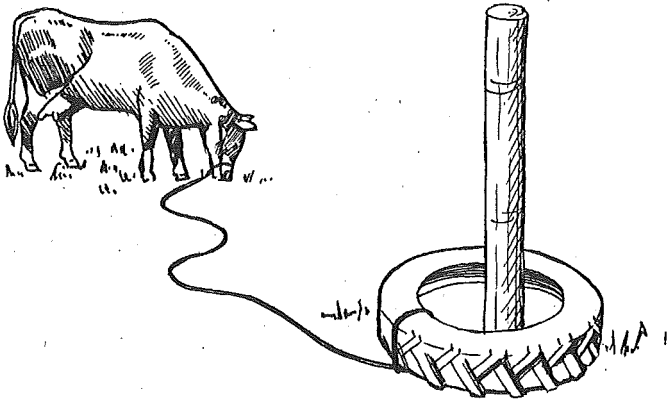


Figure 7 Tethering cows.

using this method is that the casing will roll around the post, preventing the rope from winding around the pole and thus bringing the cow close to it and decreasing her grazing area. *Popular Mechanics*.

### **Branding cattle—a quick hitch (Oct. 1936)**

**H**ERE is the handiest method of securing cattle for branding. Speaking as one who has had quite a lot of experience in this work in the east and west of the continent, I think that the method here advocated has many advantages. I have done large numbers of stock with only one helper, and where big mobs are being handled and more hands are available, the method can be used at several parts of the yard simultaneously. The beast is roped over the horns or neck and pulled up to the rails of the fence. Another rope is tied to the fence at about the height of the beast's hip and allowed to lie on the ground, and as the beast is brought up to the fence the rope is thrown over the top rail and hauled tight. I know of many fittings which can be added to stockyards to simplify branding, but this is the simplest as it can be used in any stockyard and only two ropes are necessary. A correspondent in the *Western Mail, WA*.

### **Goats' milk for ticks (Oct. 1915)**

**A** correspondent writes: 'Your article on milch goats in the June issue of the Journal tells me much that I did not know, and encourages the idea that we may be on the brink of a very big thing. I have lately met farmers who have raised calves on goats' milk, and all are quite positive that the calves had no ticks on them while receiving the milk. To quote the words of one of them: 'I thought everybody knew that, but it is really no good, since they get ticky again as soon as they are turned out.'

To my mind, the matter is set at rest. It is the goat's milk that kills the ticks. Now, if the active principle, whatever it may be, that protects the goat, can slay a comparative monster like a cattle tick in the attenuated form in which it must reach it through the mamma of the goat and the digestion of the calf, what chance would a little thing like a tubercle bacillus stand if it met the full strength of it? If the histologist and bacteriologist ever isolate the goat's "good fairy", something makes me think it will turn out to be an inherent corpuscle rather than a virus.'



## Conveniences for handling cows (Mar. 1899)

**M**R. H. C. Quodling, manager of the Westbrook Experiment Farm, gives the accompanying sketch of a convenient method of bailing up cows for milking.

In numerous places throughout the country, where a living is made by dairy farming, the absence of a systematic method of working the cows is very noticeable. Where cows are not housed, but a number are brought in to be milked and fed twice a day, the following method should commend itself.

The object is to pass all cows as they are milked through the gate at the head of the bail into a receiving yard, where they can be disposed of as convenient for pasture, thus saving all drafting. Feeding is accomplished through a hinged or sliding door in front of the cow, the box being protected from outside by boarding in.

Plough-line rope running through a series of pulleys arranged as in attached sketch facilitates the work. This form of bail has proved itself to be economical and efficient on the class of holding for which it is especially designed.

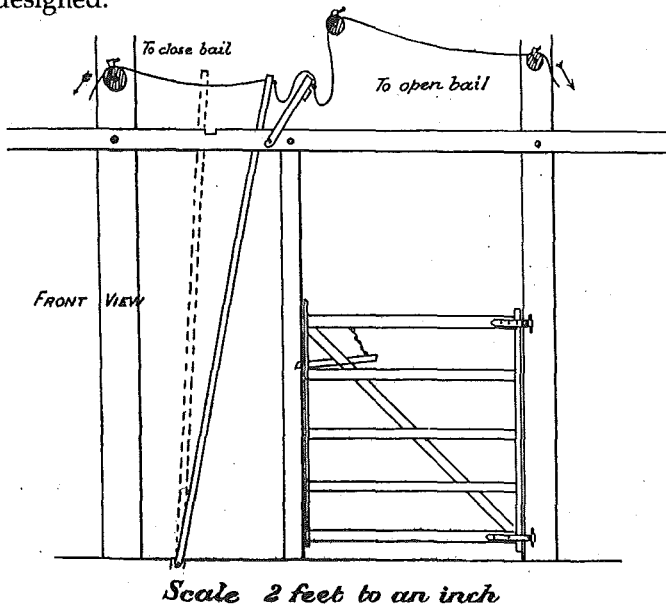


Figure 8 Convenient cow bail.

# CHOOKS and HONEYBEES

**E**VERYONE who could, kept poultry. All those cakes and biscuits for the smokos needed lots of eggs. Any extra could be sold by the women of the property for pin money, along with spare milk and homemade butter. Poultry also became part of the menu themselves, as required.

Bees were a different kettle of fish. While honey was a welcome addition to the table, fewer families kept a hive or three.

## Handling bees safely (Jul. 1907)

**I**t is not generally known that anyone attending to bees may escape many stings by first thoroughly washing their hands, and then rubbing them all over with a little pure beeswax. This prevents any odour from the hands being noticed by the bees. The scent from the beeswax attracts a bee's attention very strongly, and seems to deprive it of any hostility or bad temper. *Agricultural Journal*, Natal.

## To discourage bees from swarming (May 1925)

**N**OT many years ago bee farmers depended upon the swarming of their bees to provide increase, and much was done to encourage swarming. Artificial methods of obtaining increase, however, have reversed the position entirely. There are various reasons why swarming should be discouraged. It is not convenient, for instance, for the bee keeper to be always on the look out for swarms, more especially in out-apiary work. Again, the bees may swarm and thus divide their working force at a period when the best results could be obtained by keeping the whole colony intact. Nor may increase be desired by the apiarist at the period when the bees are inclined to provide it, while there is always the risk of losing the swarm.

To be successful in swarm control it is necessary to combine with selection in breeding a good system of management, working against those conditions which induce a colony to swarm. A colony with insufficient accommodation, for example, will surely endeavour to relieve the congestion in the hive. It is, therefore, necessary to provide ample hive accommodation. Good combs built from full sheets of comb-foundation in the brood chamber for the queen to lay in, and provision for the expansion of the brood nest as required by the colony in their building up work, are both of help in swarm control. The comfort of the colony must also be considered, by the provision of ample ventilation and the shading of the entrance to the hive during hot weather. Colonies with young queens are less disposed to swarm than colonies with old queens.

### **To prevent bees swarming (Jan. 1918)**

**F**ROM one of our South African exchanges, we take the following plan which corroborates the advice given by one of our Queensland successful apiarists:

'Before danger of swarming begins, take an empty hive body, and into this put all comb (with adhering bees) from colony to be worked, with the exception of one comb, preferably one with least brood. This comb (with the queen) is left in the old hive, which is filled with frames with full foundation, and excluder placed over frames. Bees and comb in other hive body are placed above excluder, after careful examination has been made to make sure that no queen cells are present, and a frame with full foundation inserted in vacant space. Beginners may note that under the least sense of isolation, in a hive for the queen, queen cells will be built, and in this case, with full excluder between, queen cells will in all probability be built in this upper story. A week after manipulation, examination for queen cells should be made, and if found must be destroyed.

'And in this way does the bee need guidance more than in the matter of swarming. Our South African bees swarm at the least excuse, often apparently with no excuse; and just now, when the veldt, in many parts, shows a blaze of bloom, early swarming may be a trouble.'

'Bad as our South African bees are in the matter of swarming, the instinct can almost entirely be bred out by tactfully worked swarm

prevention carried out season after season, and—a most important point—by breeding from colonies which have shown little inclination to swarm. This has been proved. The result is well worth the trouble entailed.'

### **Hints to intending beekeepers (Aug. 1914)**

**I**N reply to a correspondent, Mr G. Butler, the Hon. Secretary to the Queensland Beekeepers' Association, kindly writes:

The local knowledge necessary as to the suitability of a district for beekeeping is to make a careful note of the various trees in close proximity to the location in which it is desired to establish an apiary. If ironbark, blue and grey gum, box, and apple trees abound in great quantities it is quite safe to commence operations in that locality. Districts where lucerne is grown extensively produce honey of a good quality; it being light in colour is much favoured by the consumer. Bloodwood yields a honey of good density, but is somewhat dark in colour. Should more than one person wish to begin beekeeping it is not advisable to place apiaries too close together. At least 2 miles should separate one from the other, or the yields of honey will be considerably curtailed. If the knowledge of beekeeping is limited, the beginner should commence in a small way, and gradually acquire a knowledge of the habits of bees. As a subsidiary occupation to farming it is often a standby when other crops fail through climatic influences. Given a good genial winter it does not matter how dry the summer may be, the yield of honey will be bountiful.'

### **How to take a swarm of bees (Dec. 1906)**

**F**ROM a hive previously prepared for the purpose, take all the frames of brood except two, filling the vacant space with full sheets of foundation or combs ready built, and then, after introducing an Italian queen, proceed to the scene of action.

Take with you all the necessary tools, so that progress may not be hindered in substituting articles accidentally left at home. Among the necessities are: the nucleus hive; lumber for platforms; Porter bee-escapes for each hole; nails; saw; and a good smoker. An assistant is needed, and, after getting a position near the entrance to the wild-bee hive, adjust the Porter escape so that all bees inside must pass out, not

to return. Then construct the platform so that, when the nucleus hive is set thereon, the entrance of it will face and be next to the exit of the escape. Now, blow a whiff or two of smoke into both entrances, and the whole operation will be finished for the time being. After five or six weeks have elapsed, fire up the smoker, throw in a small handful of sulphur, pull off the Porter escape, and apply the fumes vigorously through the hole, changing the air inside, leaving a dainty harvest for your swarm on the outside to rob out, which they will surely do in less than ten days.

### Swarm-catcher (Oct. 1901)

A swarm-catcher which will save a great deal of worry and annoyance during the swarming season is here illustrated from an engraving in *Gleanings in Bee Culture*. It consists of a small block of wood, on the top of which is nailed a circular board, which is suspended from small branches, vines, or wires, stretched from one point to another, as occasion requires. The Mississippi beekeeper who invented this says that the bees nearly always select these blocks to swarm on. They are easily taken down, and the swarm hived.

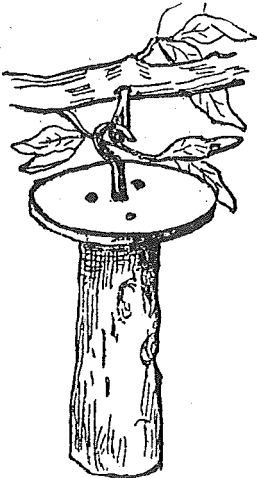


Figure 9 A swarm-catcher.

## How to transfer bees (Jan. 1934)

**T**HE objects of the compulsory use of frame hives are to facilitate the work of apiary inspection and the control and eradication of diseases found in bees. The best time to carry out the process of transferring bees from a box or other imperfect hive to a regulation hive with frames is in the spring during the first honey flow. Broodrearing is not then in full swing, and combs are not overladen with honey. The danger of robbing is also minimised by the presence of nectar in the fields. The work should be carried out on a sunny day when most of the field bees are out.

First, prepare a standard-sized hive body complete with frames, and standard-size bottom board and cover. All the frames with the exception of one should be wired, and contain sheets (preferably full ones) of comb foundation. Give the bees in the box hive some smoke, and remove the hive from its stand, and substitute for the time being the frame hive minus the one empty frame; this new hive on the old stand will keep the field bees occupied for a while. Next turn the hive box upside down, remove its bottom board, and place an empty box, open side down, over the comb; have a neat fit if possible. Drum the bees up into the empty box by beating on the sides of the box hive with two stout pieces of wood. When completed remove the box now containing the bees and place it temporarily over the frames of the new hive on the stand.

The combs may now be removed from the box hive. The best pieces of worker brood combs should be cut to fit neatly in the empty frame, and made secure with string fastened right around the top and bottom bars.

Next lift the box of bees from above the frame hive, and place the frame of brood about the centre of the frame hive; replace the cover on the frame hive, and then dump the bees from the box at the entrance of the new hive, and allow them to enter. It is usually best to dump a few first and see that eager entry is sought, and then bump the remainder out. The bees should make a contented start in their new home, having brood for inducement.

### *An alternative method*

After the first box hive has been successfully transferred as described and good headway made in brood rearing, other box hives may be transferred by what is known as the second method of transferring.

Secure a frame of brood (preferably with some larvae), and place it in a new prepared hive fitted with comb foundation. Invert the box hive, place the frame hive minus its bottom board over the combs, and then drum the bees up into the frame hive. When the drumming is completed, the new hive, now containing the bees, is placed on its bottom board on the old stand.

Remove the cover of this new hive and place a queen excluder over the frames; then on top of the excluder fit the old hive to act as a super for the time being. In three weeks a good brood nest should be established in the frames, and all of the brood in the old box above will have emerged, the queen being unable to return to it.

The box may now be removed and the bees drummed out of it into an empty box and then dumped in front of the new hive. The combs can be removed from the box hive and the honey and beeswax made use of. There is no loss practically with this method of transferring. A. and P. Notes, NSW Department of Agriculture.

### **Artificial bee-feeder (Dec. 1898)**

**T**HOSE who have gone in for beekeeping will realise the necessity for some artificial means of succouring the insects in the early spring after a spell of warm weather has induced them to quit their winter quarters. After stocks have been divided in the autumn, and a sufficient quantity of queens have been distributed, the bees, under ordinary conditions, will be well until the following spring. It is at the period preceding summer that the stock breed rapidly, and then pollen is required. Failing pollen from fruit trees and flowering plants, a substitute must be given, placed so that the insects can get at it readily. A good artificial food is provided by dipping a bundle of hemp or tow into peaflour. This should be suspended under a glass bell, supported by a tripod about two feet from the ground, the peaflour bunch being removed beyond the reach of the rain. Here the bees will shelter in inclement weather, and even when the sun is shining bright they will load themselves with peaflour pollen. This artificial food is stimulating, and the bees thrive well on it.

## How to take a swarm (May 1899)

A very simple contrivance for taking a swarm with little trouble was explained by Mr McKnight as follows:

'What I have used for 15 years is considered to be the best thing of the kind that is used anywhere. Its construction was not originally with me; I saw it mentioned or described in *Gleanings* 14 or 15 years ago, and I was a comparatively young beekeeper at that time, testing nearly everything I saw that came along. This is a very simple and cheap contrivance. Those of you who were brought up in the old country will best imagine what it is like when I tell you it is on the principle of a chimney-sweep's brush, only a chimney-sweep's brush is wire, and this is made of wood. Take, for instance, a piece of stick 2 inches square, and say 2 or 3 feet long, chamfer the four edges of it and make it octagonal in shape (eight-sided), cut off a few pieces of lath, rip your lath up the centre, cut them into pieces about 2 feet long and nail them around on these eight bevels one after the other till you get it filled down well, 6 or 8 inches would be quite sufficient.

'At the other end cut a tin ferrule, put it on the stock with perhaps 2 or 2 ½ inches to receive the stick that you put into it. Have in your yard half-a-dozen or more different lengths of stick that will slip easily into this socket. When your swarm is clustering that is the best time to do it, but it does not matter; you can do it almost as well after it is clustered. You can see at once what length of stick is required to reach the cluster. Take the stick that you have in hand, put it into the socket, and as they are clustering put this in amongst them and they will cluster on it every time. I have taken swarms of bees off the top of a very old elm tree; simply by tying one on to the other you can reach away up to where the cluster is. If they are clustered, as very frequently they are, before you have noticed them, take your stick again and give a sudden jerk near the cluster of bees till you dislodge them from their resting place. I will guarantee to catch ninety-nine swarms out of one hundred with that simple contrivance. Having them clustered, then you can set your stick on the ground and take it away. When they are all settled upon your chimney-sweeping brush, lower your stick, drop the stick that was in the socket, carry home the swarm of bees to the front of your hive, and give it a sudden jerk and there you are.'



## How to make an observatory bee hive (May 1900)

**T**Hese comments on bee hives are from H.R. Stephens, Busy Bee Apiary, Toowoomba.

In order to watch what might be termed the "home life" of bees, special hives are necessary, and on this account are called observatory hives. The hive here described is intended to hold three frames of Langstroth size. Pine is a suitable wood for making the hive, but cedar may be used, although it would be more expensive. The internal dimensions should be in the same proportion as for an ordinary hive, with the proper bee spaces between the comb and glass. The hive consists of two cases—the inner case and an outer case, into which the former is fitted. The glass is fixed in a separate frame, which is held in place by four small buttons. The projecting ends of the top bar of the frame of comb rest on small pieces of tin plate. An outer shutter should be provided to shut out the light as well as to retain heat.

In stocking the hive, select three combs from the centre of a strong colony containing plenty of brood in all stages from the egg upwards. Lift them out, and place one at a time in the observatory hive, taking care that the queen is also moved in. It is advisable that a large proportion of the bees to populate the observatory hive should be young ones that have not flown, otherwise there is a great risk of depleting it through the old bees going back to the hive from which they were taken. It is quite possible to succeed without taking the queen with the bees, if the comb contains eggs or larvae not more than three days old, from which the bees can raise a young queen. But in this case considerable time elapses before the progeny of the young queen is added to the population, which, meanwhile, will diminish somewhat in number, so that the results may not be so satisfactory as by the first method. The hive should be set up within doors—a warm outhouse or shed will do very well, or a room in a dwelling-house might be used for the purpose. A covered passage must be made through the wall to the outside for the bees. A small bracket landing-place should be arranged at the entrance of the hive, for the bees to alight upon. Although this is not the right time of the year for starting an observatory hive, beekeepers could get one made in the winter, ready for the warm weather, as observing the ways of the bees under the glass is very interesting and instructive, and the hive always attracts attention at shows and exhibitions.

### **To tell an old fowl from a young hen (Jul. 1899)**

**I**N lifting up the wing, and pushing aside the feathers of the sides, you will find in the case of a young hen a long down, light and close, arranged regularly between the other feathers which cover these parts of the body. Through the skin, which is delicate and rosy tissue, the very small blue veins will be apparent. In a hen more than one year old, the down and the veins will have disappeared, the skin is of dull white, and dry, less smooth, and somewhat farinaceous looking. The smooth leg, with bright scales, is also one of the best indications.

### **Preparing poultry show exhibits (Apr. 1925)**

**T**HE poor condition in which many of the utility birds are shown is a subject of comment at all shows where utility classes are provided, and never more so than at the two big metropolitan shows (writes the Poultry Expert of the New South Wales Department of Agriculture). This applies to all breeds, more or less, but particularly to white leghorns, either because they have not been washed or because they have been badly washed. In many cases bad washing is worse than no washing at all—the result of lack of experience and want of knowledge on the part of the owner.

To wash a bird plenty of warm water and towels and three large bath tubs should be provided, and a coop that is lined with clean crash or some such material. This coop should be placed either in the sun or before a stove, so that the bird can be put into it to dry. If it is in the sun, care should be taken to protect the white lobes, or they will be scalded, and the result will be blisters that later on will leave red spots in the lobe and cause the skin to become creased and wrinkled.

In the actual washing of the bird it is necessary to have three waters, the first being the soap water. To make this, about a quarter of a pound of good soap (white Castile is best) should be cut into slices and dissolved in about half a gallon of hot water. Pour into this about 5 gallons of lukewarm water, and into the lot plunge the bird—over the head to start with, and then holding the head out of the water while the lather is rubbed well into the feathers. And now comes an important point: the bird must be thoroughly soaked, and sufficient time given in soaking to loosen the dirt. Usually about ten minutes is required, but the dirtier the bird the greater the length of time necessary in this bath.

Next put the bird through a rinsing water, which will remove the soap—there must be plenty of water to do this thoroughly—and then into the third bath to remove the last possible trace of soap. Failure to remove all the soap means a quite inefficient washing. Most poultry exhibitors use the laundry blue-bag in this last water, but it must be employed sparingly, and the water must not be made darker than a light sky-blue. Finally, stroke all the water possible out of the feathers, and dry off with clean towels. The bird should then be put into the drying coop, and every care taken to avoid dirt or dust.

The operator should be seated on a low stool or chair while at work, with a pad of sacks covered with a clean towel over the knees. Washing should be done one or two days before the day of showing to allow of the bird 'preening' its feathers to web them out. It is fatal to good results to wash a bird twice inside one week. Therefore it is necessary to make sure of the first operation. Amateurs should practise on a bird not intended to be shown in order to get used to the work.

### **To tell the age of eggs (Sep. 1901)**

**M**AKE a brine by adding 2 oz of salt to 1 pint of water. Place your doubtful eggs one by one into the solution. If the egg is old, it will float on the surface; if fresh laid, it will sink to the bottom; if one day old, it will sink but not touch bottom; if three days old, it will float just below the surface. The reason for this is simple enough. As the egg ages, it loses moisture by evaporation, and, consequently, the older the egg the lighter it becomes.

### **Egg-tester (Dec. 1898)**

**W**E illustrate an egg-tester which cannot be surpassed for determining the fertility of eggs after setting, and also for ascertaining whether the chick is alive in its different stages from two or three days up to the time of hatching. By throwing out all the infertile eggs and dead chicks, whether in incubators or under hens, a great saving of time is effected when the hatching season is at its height. By its use breeders can also determine in a few days whether the eggs they are sending out to customers are generally fertile or not, and in this way make a saving to themselves and their customers of time, patience, and money. The tester is made by

cutting a hole in the north side of a building or a large dry-goods box, and having a mirror outside in such a position as to reflect the sun's rays directly into the hole, and upon the eggs, held against it from the inside. The inside, of course, should be as dark as possible. Our illustration is so clear that further description is not necessary. This method of testing eggs has been used for a number of years, and has been found convenient and practical. *Weekly Times*.

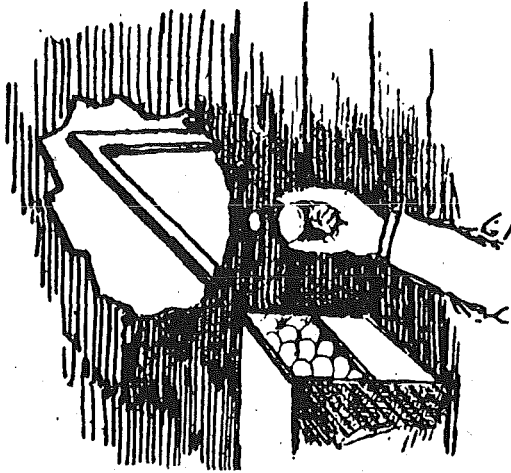


Figure 10 Egg tester.

### To tell the age of a fowl (Feb. 1898)

**T**HE simplest way, and one which is adopted by the London poultry-dealer, is to feel the breastbone of the live bird. If the bone feels tender and supple like gristle, the bird is young. If, on the other hand, the bone feels hard and ridgy, the bird is fully mature, and very much so.

# FURTHER TAILS from the FARMYARD

**H**ORSES and cattle, due to their general importance in the scheme of things, their sizes and probably their noise and crisis-making abilities, were seen to play major roles about the property. Other beasts also provided their share of produce and trauma to life on the land.

## Angora goats jumping fences (Apr. 1906)

**I**T is generally understood that the Angora goat is not given to jumping fences when enclosed in a paddock. This is no doubt correct in the case of goats which have become accustomed to their surroundings, or which have been bred on the run. When, however, the goats are imported, they should not be immediately given their liberty, or the chances are they will be very soon missing. A case in point lately happened at the Pine River. A gentleman imported a valuable buck Angora from the south and let it go, on arrival, in a paddock securely fenced with a 5 feet close paling fence. That night the goat jumped the fence, and has not since been heard of. To avoid such severe loss, it is well to tether new arrivals for a time until they have made themselves thoroughly at home.

## The pig's nose (Feb. 1899)

**T**HE nose of the pig is an index of its nature and condition. The shape and texture show that it is designed for nuzzling, for rooting, and for overturning things, and this is 'the nature of the brute' to perfection. The condition of the animal is in many ways shown in the nose. In the healthy pig the nose is moist, cool, and pink in colour. To the touch it is elastic. In disease it changes in appearance, becoming pallid or purplish, dry, hot, and rigid, or else flabby. Many an experienced breeder can tell at a glance the general condi-

tion of a pig from the condition of its nose. When your swine grow listless, and do less nuzzling than usual, and seem to be dozing and sleeping more than usual, inspect their noses, and you are likely to find in them the indications of fever and other troubles. *Farmer and Stock-breeder.*

### Egg-eating dogs (Jun. 1907)

**T**O cure a dog of eating eggs, draw the contents of two or three eggs by making holes in both ends, and fill in with a paste of some kind containing a little red pepper. Put these in the nests where the pup is accustomed to find eggs. Do not practice cruelty on the young brute by using a large quantity of pepper—a very little will suffice to give it a poor opinion of eggs as a diet for dogs.

### Measuring the weight of a pig (Apr. 1935)

**T**HE smaller the animal the greater the risk of error in calculating the deadweight from measurements and calculation. However, a rough guide may be obtained by measuring the length and girth, taking the girth of the animal in inches, just behind the shoulders right round the body, and measuring the length in inches from a point midway between the ears, along the curve of the back to the tail-head. Then to get the approximate deadweight of the animal in pounds use the following formula:

$$\frac{\text{girth}^2 \times \text{length}}{524} = \text{deadweight in lb}$$

Thus, if the length measured was 46 inches and the girth 40 inches then by squaring the girth (i.e. multiplying it by itself) the result is 1 600, which multiplied by the length gives a product of 73 600. This figure, divided by 524, gives approximately 140 lb, which would be the dead weight required.

There can be no doubt that the system of actually weighing the pig alive is better, and this may be done conveniently by means of platform scales, or by means of a crate suspended from a large spring balance.

If the liveweight is actually taken by weighing in this way, then it is necessary to calculate the deadweight from it by estimating that the figure required will be from 70 to 80 per cent of the liveweight according to skill in judgement and the degree of fatness attained by the animal.

## **Facts about animals (Jul. 1934)**

**T**HE Creator gave various animals special prehensile organs and attributes to enable them to exist in the same environment. Observation makes some of these special features apparent and it would be well for every young farmer to note them in the animals to be fed.

Many of them, however, have not been noticed by the average farmer, and are worth mentioning. For instance, the sheep has a cleft upper lip, that it may spread the sections apart and get its teeth close to the ground for short herbage cropping.

The cow takes its forage in a different fashion. Her tongue is rough like the rasp, and with it she gathers between her eight incisors, locks or tufts of grass which she then wrenches and cut offs for mastication with her molar or grinding teeth. In a time of drought, when grass is dry and loose in the ground, the roots, with some soil attached, commonly enter the cow's mouth with each tuft of grass; but the cow discards the soil and it falls from one side of her mouth. At such times one will find little heaps of this discarded soil everywhere on the pasture.

This is not done by pasturing horses. The rigid teeth of the upper and lower jaw seize a tuft of grass and cut it off for chewing. If soil comes with the grass it is swallowed, and so much 'dirt' or sand may be thus taken in as to cause indigestion or colic, which often proves fatal.

The horse's tongue is long, slim, and smooth, instead of being rasplike, and the ridges of the horse's hard palate are also smooth, as is the lining membrane of the cheeks. Look into the cow's mouth and you will see that some long, teat-like objects (papillae) project from the inner surface of the cheeks, especially on a level with the grinding surface of the molar teeth, and the ridges of the palate are also rough, with saw-like edges pointing backward.

The papillae and points of the palate ridges or 'bars', together with the roughness of the tongue, are intended to help the cow retain the feed in her mouth while chewing her cud. A farmer once wrote us that when his cow was sick he looked in her mouth, saw the papillae mentioned, thought

there were warts, cut them off, and reported that the cow was not a bit better after the operation. It is well to know the facts about such anatomical features.

That is also true regarding teeth. The incisor teeth of the cow normally or naturally are somewhat loose in their sockets, but the looseness has often been blamed to the eating of silage, by the uninformed farmer. So has the early wearing away of the cutting edge of the incisor teeth. That occurs when the cow is ageing, so that when she is twelve years old, and sometimes when she is younger, one may find little rounded stubs, like collar buttons, projecting from the gums, instead of large, broad, shovel-shaped teeth. The broad parts quickly wear off and the slim necks remain. In the horse, however, the incisors, above and below, last the animal until it is twenty or more years old.

The hog 'goes' the cow and horse 'one better' when on pasture. It roots below the surface to obtain feed, grubs, mineral etc. and, therefore, is fitted with a special bone in the snout and a ring of strong gristle as well, to make rooting possible; and speaking of extra bones, you may find two of them in the cow's heart, but none in that of the horse. A moment of thought will enable the reader to understand, with these facts about domestic animals, why the giraffe has such a long neck, the elephant its trunk, the anteater its elongated proboscis, the carnivorous or flesh-eating animals their fangs and bone-crushing molars, and the feline animals their claws, which have special muscles to keep them hidden or spring them into savage action. *Hoard's Dairyman*.

### Normal temperatures for animals (Mar. 1932)

Animal	Degrees fahrenheit
horse	99.5 to 100
ox	100 to 101.5
sheep	101 to 103
goat	101 to 103
pig (adult)	101 to 102.6
pig (young)	102.6 to 104
dog	99.2 to 102
rabbit	100.85 to 102
cat	100.4
fowl (average)	103 to 106 or 107
small birds	104.6 to 108



The small temperature of an animal as taken with a clinical thermometer is an index of the heat of the blood, and this, even in healthy animals, varies within certain limits. The normal temperature is raised slightly after a meal, during rumination, lactation, or pregnancy. Work also raises it, and exercise much as when pigs are driven at a rate faster than that at which they are accustomed to move. The temperature of the same animal is always higher in the evening than in the morning. Young animals have a slightly higher normal temperature than old ones, and animals of anxious and restless temperament a higher one than sluggish or sleepy animals.

The temperature of the pig is taken by means of a clinical thermometer inserted into the back passage and held there for not less than sixty seconds, and for preference, a longer period. Care should be taken to 'set' the thermometer before use, that is, to see that the mercury is a good deal below the line of normal temperature of the animal's body. Care in handling is emphasised.

Normal respirations of the pig are about fifteen respirations per minute. Normal pulse is about seventy-five beats per minute. The pulse can be taken on the inside foreleg.

## **Counting sheep (May 1940)**

**I**T may be taken as a fact that unless a person is born with or has developed an aptitude for this work they will never make a first-class sheep counter. There are many methods of counting. The novice will try and count them singly as they come—one, two, three, four, and so on. This is a very slow process, and the gate has to be very narrow if an accurate tally is to be obtained.

Some count in twos—two, four, six, eight, and so on. This again is slow where big flocks have to be dealt with, and the sheep would be better on grass than in the break.

A successful method is to count in groups of three, one up to thirty-three, and let a single sheep go and tally 100.

It is astonishing to observe the speed and correctness of two good counters, one giving delivery and the other taking delivery.

It is a rare thing, when two good counters are engaged, to see a check count, and this applies where thousands of sheep have to be correctly

tallied. Constant practice is necessary to keep in form. To this cause may be attributed the fact that many drovers excel in counting sheep.

### Salting cows and pigs (Sep. 1903)

**I**F salt is sprinkled on the backs of cows it will make them more gentle and friendly. In the case of pigs, it has the effect of keeping off lice and mange.

### The protection of young pigs (Mar. 1901)

**M**ANY young pigs are lost through farmers neglecting to take precautions against their being overlain by the sow in her brood house. The provision for the sow with a litter, of sufficient protection for her young, is an easy and inexpensive matter, and need cost but a trifling sum. The following scheme should be adopted:

Use 2 inch by 8 inch plank *a* around the interior of the house, and about 10 inches from the floor *c*, the plank *a* being rendered more secure to the side *b* by the support *d*. The space thus provided under the plank *a* is sufficient for the young pigs to crawl into, and the sow cannot overlay them owing to the protective plank projecting. The sow may not find this arrangement quite so comfortable as when she can get more surface support by lying at the side of the house, but it is not a difficult matter for her to take her ease under any sort of conditions, and, if she cannot lie up against the wall, she must support herself against the projecting plank. Anyhow, the farmer will find the arrangement serviceable.

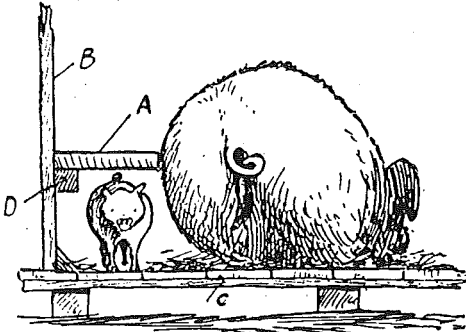


Figure 11 Protection of young pigs.

# AROUND the HOMESTEAD

**I**T was not just in the sheds and paddocks of the property that making do was a fact of life. It also could be quite an art form within the house. Mending went well beyond darning socks and sewing on patches.

## **To clean straw hats (Apr. 1898)**

**S**TRAW hats are so commonly worn in Queensland, and they suffer so much from the summer sun, that it may not be amiss, for the sake of those who live outside the realm of the 'cleaner' to give the following recipe for the renovation of the straw:

The tan of a season's wear will vanish before a stiff old toothbrush dipped in lemon juice and flower of sulphur. The whole must be thoroughly gone over, and the result will be very satisfactory.

## **To cool a room (Oct. 1900)**

**W**E have somewhere read lately that if you wish to cool a room all that is necessary is to hang up a large wet cloth in some part of the apartment, when, if the ventilation be good, the temperature will sink 10 or 15 degrees in less than an hour. The experiment is worth trying during our hot summer days and nights.

## **How to clean saucepans (Mar. 1902)**

**S**AUCEPANS in which rice, oatmeal, or any sticky substance has been boiled are especially unpleasant to clean. The cook's usual plan is to scrape them with the best silver spoon; hence the condition of silver table and dessertspoons in many houses. Here is an easy plan by which saucepans may be rapidly and effectually cleaned. The moment the pan is

emptied, put a cupful of ashes into it, add water and allow to boil up—the saucepan will be cleaned.

### **Cleaning lamp wicks (May 1900)**

**A** smoky lamp is often the result of a dirty and clogged wick. Steep the wick in a little strong washing soda and hot water. Then dry thoroughly, and the lamp will burn much better.

### **To cut the neck or bottom off a glass bottle (Jul. 1912)**

**G**ET a piece of wire (no. 4 gauge) about 2 feet long, and turn one end of it to make a circle large enough to pass over the broad part of the neck of the bottle. Put the circle end in the fire till it is red hot; then place it over the bottle neck for a few seconds; take it off and plunge the bottle into cold water. The neck will break off clean just where the ring was placed.

In the old farming days in Queensland, when a good deal of night work had to be done in the way of loading produce on to farm boats to save a tide, clear glass bottles were used as lamps (snakes being pretty numerous on the tracks). To turn a bottle into a lamp all that was necessary was to fill the bottle up to about 2 inches from the bottom with cold water, set it on the hot ashes as deep as the 2 inches mark, and in a minute or two a crack went clean round the high-water mark, the bottom of the bottle falling off. Then a candle was inserted into the neck, and a useful lamp was provided at no cost.

### **To take ink out of paper (May 1901)**

**T**O take ink out of paper, wet a teaspoon of chloride of lime with a little water; apply to the spot with a cloth, but do not rub it. The ink will gradually grow fainter till it entirely disappears.

### **To soften a hard sponge (Jul. 1914)**

**T**HE *Town and Country* magazine gives these recipes for softening a sponge:

- 1 Soak it in cold buttermilk for a few hours, then wash it in clean water.
- 2 Take one quart of rainwater, make it quite hot, then add a teaspoon of soda and a little soap. Lay in the sponge for ten minutes, then it will be ready for use.

### **Garlic cement (May 1899)**

**I**T is not generally known that the expressed juice of garlic makes an excellent cement for broken glass and china. The juice must be applied as soon after breakage as possible, as the edges of the broken parts become worn away by friction. This makes an everlasting cement, and if the edges are neatly joined no sign of a fracture remains. The expressed juice of an onion also makes a very good adhesive fluid.

### **Cement for broken china, glass etc. (Apr. 1902)**

**T**HE following recipe is vouched for by a correspondent as being a good one, and, being nearly colourless, it possesses advantages which liquid glue and other cements do not.

Dissolve  $\frac{1}{2}$  oz of gum acacia in a wineglass of boiling water, add plaster of Paris sufficient to form a thick paste, and apply it with a brush to the parts required to be cemented together.

### **To mend cracked crockery (Mar. 1904)**

**W**E have seen the following method recommended in one of the rural journals:

Put two pieces of loaf sugar into the cracked vessel with one-third of a tumbler of water; then place it on a very brisk fire. Spread the syrupy liquid over the cracks. The melted sugar will ooze through the cracks and soon grow hard, completely stopping the

fissures. Vessels employed for cooking food can be mended in this manner. The burnt sugar does not impart any unpleasant flavour to the food cooked in a vessel thus mended.

### **To make oilskin overalls (Nov. 1913)**

**I**N the good old days of sailing vessels, sailors used to make their own oilskins and sou'-westers when they could get the necessary materials from the slop chest. The jacket and trousers are made of strong canvas, cut to shape. The canvas is then treated with a thin coat of boiled linseed oil and hung up to dry. When perfectly dry, apply another coat of oil and let that dry. Two or three coats of oil will be needed, each being allowed to dry before the next application.

### **Waterproofing coats, etc. (May 1914)**

**D**ISSOLVE  $\frac{1}{2}$  lb shredded yellow soap in 1 quart of hot water. Then stir in 1 gallon of boiled linseed oil and 3 oz of turps. Give the material two or three coats of this. Beeswax is not needed. Another good method of waterproofing is with alumina soap. This consists in passing the article to be treated first through a warm soap bath (1 lb to the gallon); then through an alum bath of the same strength, followed by passing the stuff through the mangle. There will be no appearance of any coating, as the alumina soap is in the fibre itself. This metallic soap is excellent for the purpose.

### **Waterproofing boots (Mar. 1935)**

**M**ELT in a tin over low flame 1 pint boiled linseed oil,  $\frac{1}{2}$  lb mutton suet, 6 oz clean beeswax, and 4 oz resin. See that boots are dry and clean, and give a plentiful dressing; it must be put on warm with a soft brush. The leather will become quite pliant and resist all moisture.

An alternative method is to rub a lump of wax on the boots or shoes till they become a grey colour, then heat a piece of old linen or soft calico in the oven and smooth over with the hot rag until the leather has absorbed the wax. Allow shoes to cool, then give a good brushing and apply a good boot polish.

### Sticky oilskin coat (Oct. 1933)

**T**RY these methods for treating sticky oilskin coats:

- 1 If the oilskin is sticky, it would be necessary to boil it in a solution of washing soda and water. After it has dried it should be redressed with oil-dressing.
- 2 The application of French chalk in liberal quantities to the sticky portions of the coat is another method that could be employed to remove the stickiness. The chalk must be allowed to remain on the coat for twenty-four hours, when it may be brushed off. Of course, there will be a white mark that will remain for some time, but this method is shorter and more convenient than the boiling method.

### How to keep cut flowers (Feb. 1907)

**T**HERE are flowers which will last a considerable time when cut and placed in a vase of water. Again, there are some of the most beautiful blooms which fade away within 24 hours. Various means have been suggested for the preservation of cut flowers, amongst which *Garden and Field* recommends taking the flowers every morning from the vases, refreshing the stems by a few minutes' bathing in fresh water, and then sprinkling the blooms lightly with the hand. The water is to be changed every day. Sunshine is very injurious if allowed to rest on cut flowers, and gas saps the very life of delicate blossoms. If flowers are cut before the sun can stare them out of countenance and placed in tepid water, they will last for 48 hours. Nasturtiums, heliotrope, and, above all, roses, should be gathered at night if possible. Their stems, and those of all flowers kept in water, should be cut daily. The wisteria is a beautiful but perishable blossom that seems to pine away when transferred to the house (the jacaranda does the same—Ed. Q.A.J.), but the Japanese have conquered this propensity by the most heroic treatment. They burn the stems of the graceful creeper, and then immerse it in spirits. Other woody plants like the hydrangea, branches of fruit blossoms and others, can be treated in the same way.

### A bush chair (Oct. 1936)

**F**OUR lengths of wood, a bolt and a cornsack are all that is needed to make this comfortable bush chair. Bolt three pieces of wood together at the top to form a tripod. Fasten the fourth piece across two of the pieces at a suitable height from the floor and tack or sew one end of the sacking to this piece and the other to the top of the chair.

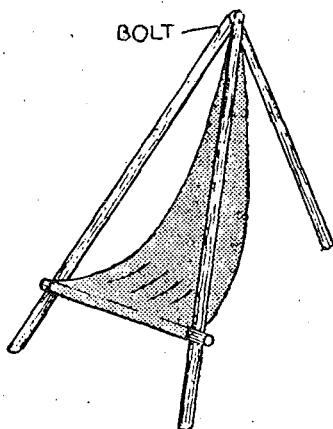


Figure 12 A bush chair.

### Garden furniture from round timber (Jul. 1935)

**T**AKING advantage of natural forks and curves, no. 1 shows a plant stand using forks for the uprights boring right through the cross-pieces.

No. 2 shows a lounge chair with round uprights to split slabs for the arms, dowed together, the seat made of bush sticks threaded with wire, or weave the wire on two strands over and under, cut off the projecting round tenons or dowels when finished; they are left in the sketch to show method of working.

Sketch 3 is a table with forks for legs, cover with boards or round sticks close together if the rustic effect is required. The only tools required are a fairly fine-toothed saw, a brace and a couple of bits, a chisel or even a knife



and a hammer. Leave the bark on if possible, or peel, stain, and varnish with a cheap varnish stain.

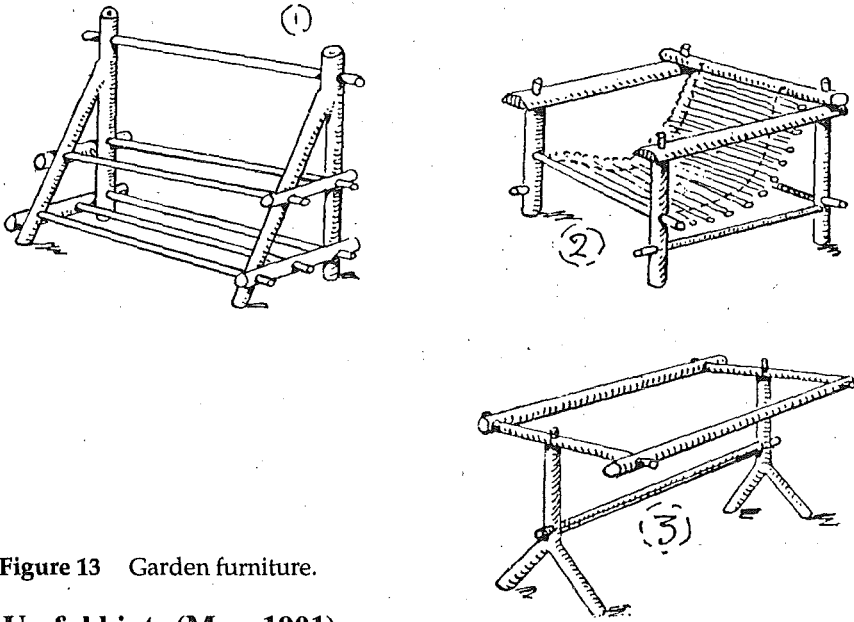


Figure 13 Garden furniture.

### Useful hints (Mar. 1901)

**T**O remove an obdurate screw, apply a red-hot iron to its head for a short time, the screwdriver being applied immediately the screw is hot.

To clean a lamp chimney, nothing is so good as a piece of newspaper. Drop a very small quantity of kerosene on it, and rub the chimney till it shines.

To prevent ants climbing up fruit trees, bind strips of sheepskin smeared with tar round the trunk.

### How to set a mouse-trap (Jan. 1901)

**A**FTER setting a mouse-trap place it in a paper bag, and you will find it a sure way of trapping these little pests.

### **Silver fish (May 1901)**

**A** camphor wood chest is a delusion and not a snare, so far as silver fish are concerned. Try blue gum and ti-tree leaves. The smell of the blue gum is almost certain to banish these insects.

### **Remedy for flies (Oct. 1899)**

**I**T is a troublesome question to know what to do with the flies this summer. This is the best method of destroying them that we know of. Take half-a-teaspoonful of black pepper in powder, 1 teaspoonful of brown sugar, and 1 teaspoonful of cream; mix them well together, and place in the room on a plate when the flies are troublesome, and they will soon disappear. Cold green tea made very strong and sweetened with sugar will also, where set about the room in saucers, attract flies and destroy them.

### **Bird scares (Apr. 1927)**

**T**HE manager of the Home Hill State Farm, Mr C. G. Munro, writes: Two different bird scares were tried here recently. The first was a kerosene tin slung by a piece of no. 8 fencing wire through the ends. On the outside of the tin oblong pieces of tin 12 inches by 6 inches were soldered from corner to corner diagonally, on each of the four sides. A vane 14 inches by 6 inches was fastened above the tin on the wires that connected with the central shaft through the centre. The lower end of this vane was placed sufficiently high to allow the tin and its sails to revolve beneath the vane by wind pressure; a few light pieces of wood put inside the tin caused sufficient noise to attract notice. This contraption was suspended from the end of a long sapling set in the soil with a good lean and strutted by two forks to keep its base sufficiently firm to withstand windage on the revolving scare. Parrots and cockies give this thing a wide berth.

Another device, also composed of kerosene tin, was fitted with two tin wings from its corners and a tail to keep it in the wind. This suspended from a leaning sapling also frightened the birds, who probably mistook it for a new kind of hawk. The frequent flashes of reflected sunlight from the moving and plunging scare made even the crows look upon it with black suspicion. Whether that frame of mind will continue remains to be proved on future crops.

# TOOLS of the TRADE

**N**OWHERE did ingenuity show itself so clearly and so often as in the area of tools. Someone faced with a problem or the need to achieve an end, modified what was handy, or built the necessary tools from scratch. The oft-mentioned bushies' abilities to use green hide and fencing wire to keep things together stretched a lot further than that.

## **To mend a watering-can (Jan. 1901)**

**T**O stop the holes caused by rust in a watering-can, dry the can thoroughly, dip a piece of linen or cotton rag in copal varnish and put it over the leaky place inside. When thoroughly hardened, give a coat of paint to the whole can, outside and in.

## **A homemade vyce (Apr. 1936)**

**T**HIS vyce will hold a piece of wood as tightly as an iron vyce will. One would need a piece of wood 8 inches by 1 ½ inch as high as the table, and another piece of 5 inches by 7/8 inch two-thirds the height of the table. A block 4 inches by 1 inch by 4 inches is nailed on to the big piece half the way up, and a hinge is put on to this and the smallest piece of board. The big piece is then let in at the top, as in the diagram, and is nailed on to A. A hole is then bored through all these, and a bolt is put through with a washer on both ends. A spring is put between the two boards with a nut on the ends. With a spanner it is an easy matter to tighten the nut. This bolt needs a thread from the outside of the moving jaws when shut to the end.

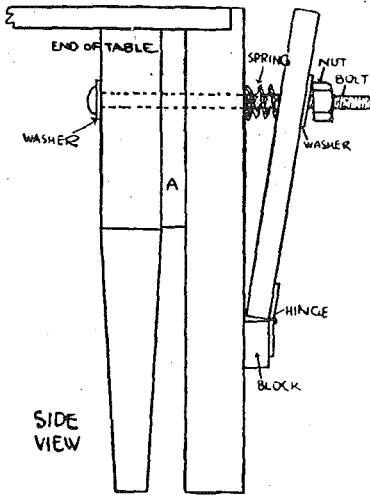


Figure 14 Homemade vyce.

### How to sharpen a scythe (Jun. 1898)

**T**HE almost universal use of mowing machines has left so little use for the old mowing scythe, that the proper method of grinding it is almost a lost art. In grinding a scythe, always hold the edge towards you, with the point nearest you, and the heel farthest away, so that the stone will grind across the blade at an angle of about 45 degrees. This makes a serrated edge, with the points projecting toward the point of the scythe. Hence in swinging the scythe through the standing grass these fine points catch hold and sever the fibres of the stalk. If these minute saw teeth were pointing towards the heel, the tendency would be to slip over the stalk. Thus it is that when scythes are ground straight across the blade, they do not cut well. In using the whetstone, imitate the grinding, and, as the stone moves forward, pull it downward. Do not hold it too far under, but just level or flat with the blade.

### Care of the saw (Mar. 1935)

**S**AWS are the hardest tools for the amateur to keep in good order. Leave two or three of the teeth nearest the handle of a new saw always untouched; they never come into actual use, and if left intact provide a certain guide as to how the other teeth should be kept.

### Attachment for saw horse (Apr. 1936)

A stirrup iron attached to a short piece of chain and fastened to the saw horse as shown in diagram, is very useful for keeping timber steady. The chain has only to be thrown over the log and the foot placed in the stirrup.

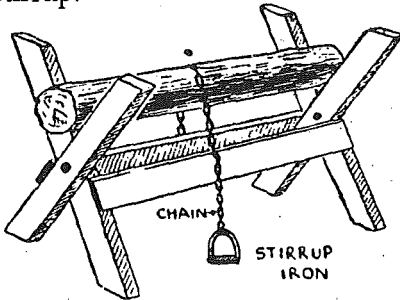


Figure 15 Attachment for saw horse.

### Large nail puller (Feb. 1926)

PULLING a long nail, especially from hardwood, is likely to break the claw end of the ordinary hammer head. Here is a method that makes pulling the nail easier and relieves the strain on the hammer. A piece of gas pipe is put over the hammer head, and a block of wood put under it. The pipe gives greater purchase and the block of wood greater height so that the long nail can be pulled out.

### Preserving tool handles (Dec. 1906)

A simple method of strengthening and preserving the handles of tools used on the farm is as follows:

Bore a  $\frac{5}{16}$  th inch hole,  $3\frac{1}{2}$  inches deep, in the top end of the handle. Fill this with clear-running oil, and leave the fork (or whatever implement it may be) standing overnight. By morning most of the oil will have soaked down through the handle. Fill again, and cork the hole with a wooden peg. Should you think the handle needs more oil at any time, it is an easy matter to bore out the cork and fill again. It answers equally well for the handles of axes, slashers, shovels, forks, picks, hoes, and most of the other tools about the farm. *Northern Planter*.

### Handy bag needle (Jun. 1925)

**A** bodkin or needle suitable for use with string or twine can be readily made from one of the openers that are used to open tin containers. The wire-opener is straightened out and the ends rounded up with a file or on the grindstone, that they may pass freely through the open weave of the sacking. This simple modification is so easy that a few of the openers can be put aside until such time as the bodkins are needed, when one or more may be straightened up and pointed for use.

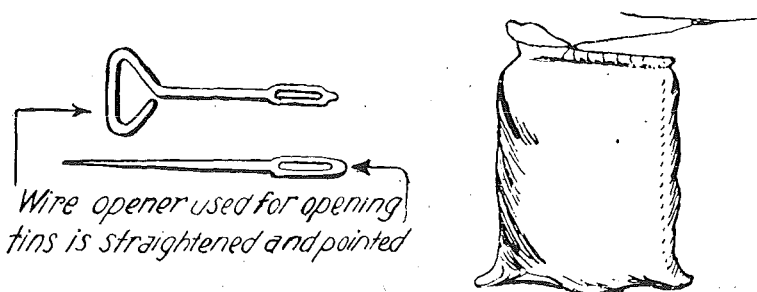


Figure 16 Bag needle.

### One-person saw (Jan. 1927)

**A** very handy sawing device for a single operator sawing up the trunks of small trees into short blocks for fuel, is rigged from the ordinary crosscut saw, as shown in the accompanying illustration taken from *Country Gentleman*. Two scantlings, each 8 feet long, are driven into the ground about 3 feet apart with their upper ends leaning almost together. Two 3 inch strips are nailed across the sides of the tops of these posts, through the centre of which is bored a  $\frac{1}{2}$  inch hole. A bolt of the same size is passed through this hole and through a hole in a 2 inch x 2 inch scantling standing vertically—this scantling being on the outside of the cross strips—providing a free-swinging support for the end of the saw blade. This is shown in the illustration. There are several holes in this pendulum scantling for adjusting the blade up or down. One of the handles is removed from the blade and a small bolt is passed through the small hole in the end of the blade and through the lower end of the scantling. Either

a sawhorse may be used or cross stakes may be driven in the ground as illustrated to hold the logs while being sawed. As the saw moves back and forth the swinging scantling holds the end of the saw steady. The device is easily rigged, and is very much appreciated when once tried by those who need to cut wood for fuel.

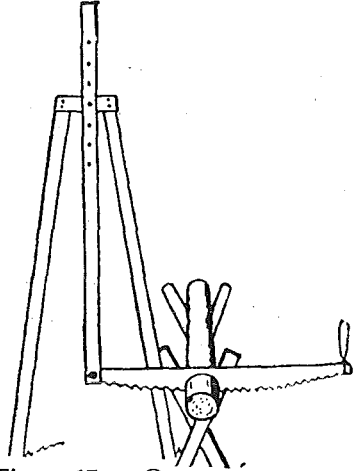


Figure 17 One-person saw.

### Sawing nails (Jul. 1918)

**W**HEN working up old timber it often happens that nails buried in the wood are encountered, to the detriment of the saw. This difficulty can be overcome as shown in the accompanying sketch published in the *SA Farmers' Advocate*: The nails may be sawn through without injury to the saw, by notching the back edge of the saw with a hammer as here shown, and using this edge to saw through the nails. If the notches are made small, this will merely add to the saw's usefulness.

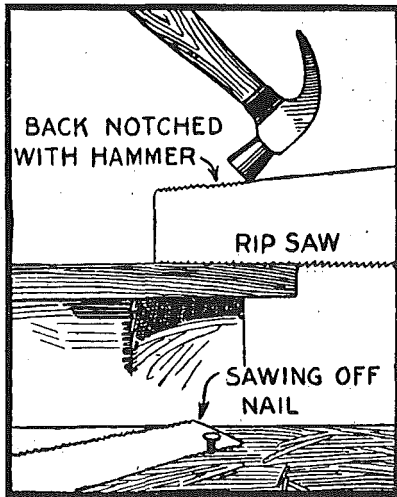


Figure 18 Sawing nails.

### Uses for old motor tubes (Sep. 1941)

**M**ANY uses can be found for a strip of rubber from an old motor tube. The hands are apt to get sore when digging, hoeing, and doing many other jobs which call for constant friction. Cut two pieces of the rubber so that they will slip over and protect the fingers and palms, while being held in place by the loops formed to grip the back of the hands.

Rings cut from a tube, slipped over the feet and up the legs keep the trouser bottoms from coming into contact with wet soil much more comfortably than the usual piece of string.

A number of strips twisted together and nailed to gate and post will act as a very efficient spring to keep the gate closed. Two or three bands carried in the pockets will come in handy in a hundred odd ways when you are working about the garden, taking the place of string, wire and nails in many places.

### Homemade barbed-wire stretcher (Dec. 1924)

**A**FTER trying various kinds of barbed-wire stretchers, none of which proved satisfactory, the stretcher shown in the illustration was constructed, and gave excellent results. It was made from a piece of 2 inches by



4 inches material, about 3 foot long. One end was slightly rounded to serve as a handle, and a  $\frac{5}{8}$  inch hole was drilled about 4 inches from the other end. A  $\frac{1}{4}$  inch slot was then cut from the end of this hole to slip over the wire. After the wire is located in the hole, as shown, a round tapered wooden peg is pushed in to keep it there. Then, using the post as a fulcrum, the wire is pulled tight by drawing the stretcher up against one of the barbs. The peg should project far enough on each side of the hole, so that it can readily be driven in or out with a slight tap of the hammer.

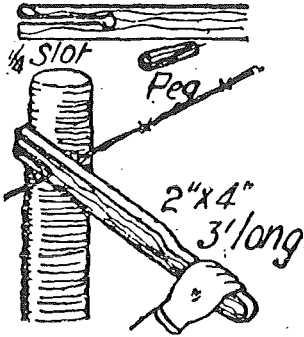


Figure 19 Barbed-wire stretcher.

### An effective stump extractor (Feb. 1905)

A correspondent sends us the accompanying sketch and description of a stump-extracting machine, which, he says, is simply worked with one horse, and is extremely powerful.

A 12 inch drum is bolted to a forked sapling, and is slipped over a handy stump, round which it works. No tackle is required. A wire rope with a piece of chain at the end is all that is required. The pole is 10 feet long. The wire rope is made fast to the drum, and the other end passes round the stump. No knot is used. As the horse moves around, a force of 20 tons is thus exerted, and no difficulty is experienced in dragging out very large stumps. The tackle can also be used on standing timber, care being taken to so arrange, by means of a tackle, that the tree falls away from the horse. The drum may be made in two halves, to avoid lifting over a stump. The halves are simply placed against the stump, and are bolted together. The cost of the whole outfit would only be about 2 pounds.

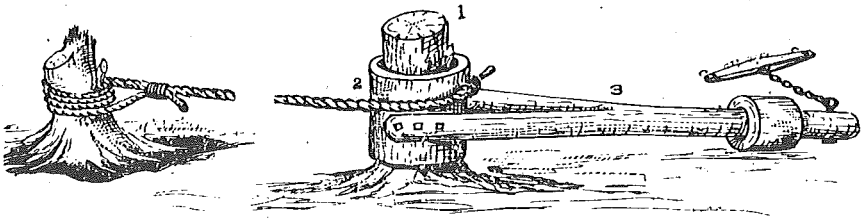


Figure 20 Stump extractor.

### Sharpening a lawn-mower (Feb. 1926)

**T**HE ordinary lawn-mower with its rotating knives is not an easy article to keep in the careful adjustment necessary for the best quality of work. The cutting action of these knives is really a shearing one, and the knives will sooner or later wear so that the grass will be in a way chewed off rather than cleanly cut. Most lawn-mowers are made with the stationary blade adjustable, and all that is necessary to sharpen the mower is to loosen and tighten certain screws by which this stationary blade is adjusted. It sounds simple, but it must be very carefully done, otherwise the bearing of the rotary knives against the stationary knife will not be even, and the mower will be hard to operate, and will give poor results.

The idea sometimes possesses one to use a file on the rotary blades, but this is a mistake, because it is extremely difficult to keep the line of their cut exactly parallel with the stationary blade. It is better to let the lawn-mower be self-sharpening with the slight adjustments that are necessary for the stationary blade.

### An emergency crowbar (Sep. 1937)

**A** very efficient crowbar can be made from an old double-ended pick head, a large-size gate hinge, and a stout handle of spotted gum or similar wood. The diagram shows how these are utilised and held together by two stout bolts. This tool will be found most useful when sinking post holes.

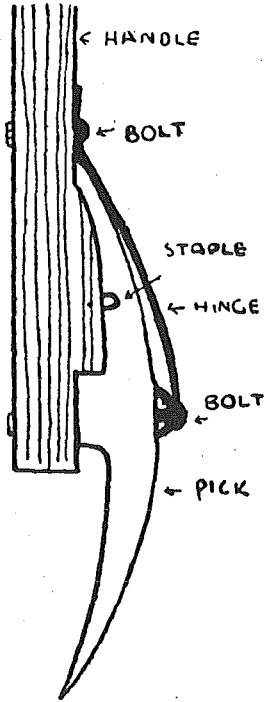


Figure 21 Emergency crowbar.

### An easily made tank gauge (Aug. 1902)

**A** correspondent from Toowoomba sends us yet another mechanical appliance which, he says, will show exactly the quantity of water collected in an iron tank without the owner having recourse to the usual tapping the knuckles on the corrugations of the tank. This contrivance is a simple gauge which anyone handy with tools can easily construct by studying the accompanying diagram. It will be seen that the instrument records the height of the water as being at  $h$ . This is accurate—far more so that tapping.

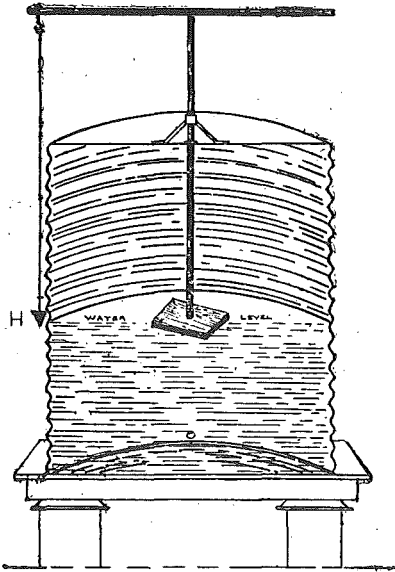


Figure 22 Tank gauge.

### Inaccessible screws (Jul. 1924)

**S**OMETIMES machine screws or bolts with screw heads on the tractor, or other farm machinery, are located in places not easily accessible, so that their removal or tightening becomes a difficult task by the usual method, much to the annoyance of the person doing the job.

When this occurs place a straight, stout screwdriver in the slot of the screw head, and holding it firmly with one hand, with the other apply a wrench on the flat part of the driver as illustrated. Then turn the wrench, using care that the driver does not slip out, also avoid applying too much pressure and breaking the screw head.

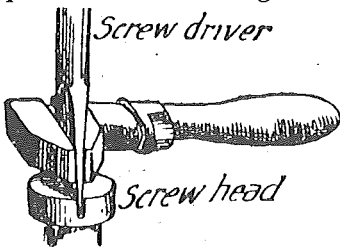


Figure 23 Inaccessible screws.

# TAN that HIDE

**L**EATHER and hides were other items which were available where beasts were kept and slaughtered—as long as you knew how to preserve them. Then, as now, hides and skins made excellent floor coverings and leather, and had innumerable uses about the place. Not everybody's idea of a good time, but waste was frowned upon.

## How to dress an angora goat skin (Aug. 1909)

**M**R W.L. Black, of Texas, USA, in his excellent work on *Raising the angora goat and mohair for profit*, gives the following formula for dressing the Angora goat skin:

'First. The skin should be "fleshed". If it has been dried, it should be thoroughly soaked over night in cold water, and then placed on a half-round beam, and scraped with a blunt knife to remove fleshy particles, and open the pores of the skin, to receive the preparation for tanning.

'Second. The next thing is to wash the hair of the skin with lukewarm water and good soap, and, in rinsing, if the water is poured on the hair properly, it will have a tendency to get it straight.

'Third. The skin is now ready to receive the dressing preparation, which is made of two-thirds powdered alum and one-third fine salt, well mixed together, and sprinkled over the fleshy part of the skin. See that the skin is covered to the thickness of a halfpenny. The skin is then folded up, flesh to flesh, and put away until the following day.

'Fourth. It is opened up and sprinkled with a solution of alum and salt and water in like proportions as the first. This is done with a whisk broom, to ensure that the preparation will cover every part of the hide. A little bran may be sprinkled over the skin at this stage to absorb the solution and keep it damp. The skin is folded up as before, and the same thing is done for a couple of days more, when it is hung up to dry. It will be drawn or contracted, through the action of the alum, to about two-thirds its natural size, when perfectly dry, which will require several days.

Fifth. After being dried, it has the appearance of a dried salted hide, very stiff, and all out of shape. It is then sprinkled with a little water to soften it. Do not make it too soft; just sprinkle it well, fold it up, and lay aside for twenty-four hours, with a heavy weight on it; the water will soon penetrate the hide, and it will be in condition for "mooning", which is the stretching process.

Sixth. The stretching, or working, is done with a half-moon-shaped knife, with a short crutch handle to hold it; and the skin is secured by means of a beam like a tall, carpenter's horse. This can be made out of 2 inch by 2 inch stuff, and it is fixed to the floor of the room under a string joist of the floor above. A piece of 2 by 2 stuff can be used to fasten the skin securely for "working". If you have no regular half-moon knife, one can be made out of an old saw blade, not too sharp. The skin is held firmly with one hand, and the worker has the half-moon fixed to the crutch-like handle, which is worked from the shoulder. The crutch handle is placed under the armpit, and the knife is held with the hand, and the skin stretched little by little, commencing usually at the outer end, and stretching all round as nearly uniformly as possible. The skin should be worked in this way several times before it can be brought thoroughly back to its natural shape. After each working, it should be worked in this way several times, when the skin will be quite soft and dry. It must not be worked at all unless there is sufficient dampness in the skin to admit of its stretching. If it is perfectly dry when you attempt to work it, it will split and crack.

Seventh. There should be as little combing of the hair as possible. If the hair is matted, separate it by teasing it apart, and then place it on the working beam, and, with a rounded stick or broom-handle, beat the hairs straight.

### **To tan a hide (Nov. 1919)\***

**T**HE first operation to which hides are subjected is depilation—that is removing the hair and the scarf skin. This is done in various ways. The most common plan is to throw the hide or skin into a strong watery lye of slaked lime with lime in excess. By this, in a few days, the hair is easily detached. In America this sweating is performed cold, and the hides are hung up wet in a damp cellar, and are kept moist for ten days or a fortnight. By this a sort of mild putrefaction takes place, when hair and scarf skin are

easily removed. One hundred pounds of hides will take 300 lb of wattle bark, yielding 40 lb to 50 lb of leather.

A single hide may be taken from the lime water and folded up wet. The ground bark is placed in water, and may be at first a weak solution, and finishing up with a strong one. From the weak to the strong solution takes about six weeks. The final process is to fold up the hide, putting in thin layers of tanning bark, leaving it in this state for six weeks more, when the hide will be found converted into leather. In tanneries the whole process takes about a year. A quick method of tanning skins is the following:

Pour 5 or 6 quarts of boiling water over 2 quarts of bran, and strain the infusion. Make an equal quantity of salt water, using as much salt as will dissolve. Mix the bran and salt water, and to each gallon of the mixture (when only lukewarm) add 1 oz of sulphuric acid. Immerse the skin in the liquor, stirring occasionally till tanned in about twenty minutes. Then rinse in clean water and hang up to dry. The leather will be white. This applies more to rabbit and other such skins than to heavy hides.

**\*Warning: Sulphuric acid is corrosive. Handle with care. Always add acid to the salt water, not salt water to the acid.**

### Curing goat skins (Feb. 1899)

**T**O cure a goat's skin, trim it on the flesh side with a sharp knife, and then well brush with a solution of 2 ½ lb of alum and 1 lb of common salt in 1 gallon of warm water; the skin should be treated two or three times with this solution on successive days. Now sprinkle bran all over the skin, brush out, and nail the skin to a board and dry it.

### Tanning skins (Feb. 1899)

**T**HE *Farmer and Grazier* gives the following as a good recipe for tanning skins:

Each kind of skin requires some special treatment; that is, all skins cannot be tanned in the same manner. But the general principle is to trim off the useless parts of the skin and remove all fat from the inside, then soak the skin in warm water for about an hour, then apply a coating of borax, saltpetre, and Glauber salts, 1 oz of each dissolved in sufficient water to make

a thin paste. The following day give a coating of a mixture of 1 oz of sal soda,  $\frac{1}{2}$  oz of borax, and 2 oz of hard soap. This mixture should be slightly heated, without allowing it to boil. After this, fold the skin together and leave it in a warm place for twenty-four hours. Then take 4 oz of alum, 8 oz of salt, and 2 oz of saleratus; dissolve in hot water, and when cool soak the skin in it for twelve hours; wring out and hang up to dry. If the skin is not sufficiently soft after this, the soaking and drying have to be repeated two or three times.

### How to tan (Jan. 1904)\*

**T**HE following is a method which has been used in a large tannery for many years in tanning fur or wool skins for robes, mats etc.

If the skin is not fresh, soak it thoroughly in soft water (never use hard water in tanning), then beam or scrape off all meat or loose fibre. Then put the skin in a lukewarm bath made of water with enough oil of vitriol to make it as acidic as vinegar, with a little salt added. Leave the skin in this 24 to 30 hours when the native grease should all be removed, and the glue in the skin loosened from the fibre of the skin, so as to give the tanning materials an opportunity to operate directly on the glue and fibre. Now wash the skin thoroughly, with strong soft-soap suds, removing all dirt or grease from wool or fur; then rinse in clear water. Now dissolve, in hot water, 2 oz alum, 1 oz Glauber salts, 1 oz borax, saltpetre the size of the end of your thumb, and add a little salt. Add this mixture to sufficient water, that is a little below blood heat, to cover the skin. Leave skin in this 24 hours; stir it up occasionally so the liquor will reach all portions of the skin. Now strip out all the liquor that can be with the hands, and hang up in the shade to dry, for the sun will make it hard. When bone dry, sprinkle the flesh side with water, fold up until the leather is evenly damp, not wet; then stretch to length, then to width, then pull it back to its natural shape. If the skin is handled according to directions, the leather will be as soft and pliable as velvet. Success in making leather depends more on the manner of handling than on the material used. To tan a skin without first removing all native grease and oil means that the leather will soon become rotten.  
*Australian Agriculturist.*

**\*Warning: 'Oil of vitriol', or sulphuric acid, is corrosive. Handle with care. Always add acid to water, not water to the acid.**



### How to cure sheepskins (Jun. 1898)\*

**C**ARPETS and soft rugs are not a usual part of the generally uncomfortable furnishings of a house or hut in the far west. At most the bare boards or ant-hill floors are adorned with a shrivelled calfskin dried in the sun. But with little trouble sheepskins can be so manipulated as to form excellent warm rugs especially useful during the cold winter weather. *Work* tells how the skins may be cured in the following manner:

If dry, soak them in water till quite soft. Scrape off any fat which may be present. Now leave them for about two days in a mixture. To 5 gallons of soft water add 3 ½ lb of common salt, and stir well to dissolve. Then add 1 ¼ lb of commercial sulphuric acid, and stir again. Then rinse the skin in cold water, and wring out as dry as possible. Hang in the shade to dry. During the drying the skin should be rubbed between the knuckles as when washing clothes, pulled, stretched in every way, and scraped. Any hard parts may be reduced with pumice stone, though scraping with a knife is quicker. As a finish, dust a little whitening over the skin, and rub this all over with pumice stone. During the scraping and stretching the wool should be combed out, and not left till the skin has dried.

**\*Warning: Sulphuric acid is corrosive. Handle with care. Always add acid to the salt water, not salt water to the acid.**

### Tanning rabbit skins (Sep. 1917)

**B**OIL some wattle bark until it is of a thick, pasty consistence. Add enough water to make it the shade of brown required. Place the skin in the tan liquid, with the fur side of one resting on the skin side of the next, in layers till all are covered. Leave them in the liquor for a fortnight or twenty-one days—the longer period for preference. Then take them out, and peg them on a board, as when first dried. Leave them till thoroughly dry, and they will be fit for whatever use you may put them to. The skins should be a good brown colour.

# ODDS and SODS

**F**INALLY we come to those bits and pieces too good to leave out, but which really do not fit into any of the other categories—from polishing bullock horns, to water divining, to the many uses of honey, lemon juice and vinegar.

## Attar of roses (Aug. 1908)

**T**HIS delicious perfume, which at one time used to be sold at a guinea a drop, may be obtained as follows:

Gather a quart of rose leaves from fragrant roses after the dew is all off. Do not pick them soon after rain, as they are not so fragrant then. Put a layer of the leaves at the bottom of a wide-mouthed glass bottle, sprinkle with salt, and then cover with a layer of absorbent cotton made wet with pure olive oil, another thick layer of rose leaves, sprinkle with salt, and fill the bottle with alternate layers until the bottle is full. Tie a piece of oil-silk (double) over the top of the bottle; set it where the sun will shine on it all day for two weeks; then uncover, and extract the oil from the cotton and rose leaves. It is superior to much of the perfumes which are sold.

## Honey paste for labels (Apr. 1909)

**I**T frequently happens that small labels on tins fail to adhere when dry. To completely overcome the difficulty, an American bee keeper, who tried all kinds of pastes for sticking labels on tin cans and buckets, conceived the idea of mixing honey with the paste, and this proved a perfect success, the labels sticking tightly to the cans after drying. To make the paste, mix dextrine and vinegar to the consistency to suit, then add about 2 oz of honey to the pint of paste. Do not make the mistake of putting too much honey in, or the label will have a greasy appearance, and will not

dry right. It requires more honey in a dry atmosphere than in a wet one. Such paste will keep in either a warm or cold climate. Other pastes might do if a label is used which will go clear around the tin and overlap a little, but they will not hold a small label.

### **To polish horns (Aug. 1909)**

**F**IRSTLY scrape the horns with glass to take off any roughness. Then procure some finely-powdered pumice stone, dip a damp cloth into it, and with this rub the horns till a smooth face is obtained. Afterwards polish with linseed oil and rotten stone, and the more the horn is rubbed with this the better will be the polish. Finish by rubbing with dry flour and a clean piece of rag.

### **Method of polishing bullock horns (Jan. 1934)**

**T**HE following methods can be used to polish bullock horns: First soak them in warm water until the core can be removed. Smooth by rasping, scraping with the edge of glass and sand paper, using the fine emery paper last; then rub with a cloth moistened with linseed oil dipped in emery powder, finally rubbing and polishing with the hands. They may be more readily handled by tapping in a piece of wood and holding in a vice.

Scrape well with glass and afterwards rub with finest glass paper; then with powdered bath brick and oil, and finally with rotten stone and flannel or felt. Scrape with glass to remove any roughness; then grind some pumicestone to powder or buy it in powdered form, and with a piece of cloth wetted and dipped in the powder rub them until a smooth face is obtained. Next polish with rotten stone and linseed oil and finish with dry flour or a clean piece of linen.

Rasp them to take the outside rough shell off, then scrape well till the colour shows up, using rough sandpaper; then scrape and finish with a fine piece of glass. For polishing use vinegar and whiting and finish with a piece of silk.

### **A good cup of coffee (Oct. 1903)**

**T**HE secret of making palatable, non-injurious coffee lies in the two words: quick infusion.

In the first place, have the coffee ground to the finest powder, so that its full virtue may be quickly extracted. Allow a dessertspoonful for each person, mix it with just enough cold water to make it thick paste, and let it stand until five minutes before the time to serve. Have fresh water boiling, pour on a cupful for each person, and two more for the persons who are likely to (but should not) wish a second cup. Put the pot over the fire and let the infusion come to the boil, settle with a dash of cold water or a clean eggshell, and serve immediately. This is a cup of coffee and not a cup of tannin. Coffee made in this way may be taken morning, noon, and night without injury, but the quantity drunk at one time should not be more than one cupful.

Coffee that has boiled or stood more than 5 minutes should be thrown away.

### **Infusing tea (Oct. 1903)**

**T**HE Japanese treat tea much as we treat coffee. They grind the leaves in a portable mill, reducing them to a fine powder, which is then mixed with hot water to about the consistency of Turkish coffee or a fine pulp. The Chinese and Japanese methods of infusing or drawing tea prevent the tannic acid or astringent principle from forming part of the beverage, but extract all of the more volatile and stimulating properties of the leaves. Tea should never be boiled.

Tea is a drink of drinks to the real connoisseur, the tea lover who is most competent to judge of merits of the world's beverages. Nothing can take its place, and it soothes, refreshes, and strengthens. Good tea, properly made and drunk in moderation, never does harm. Strange that coffee is attacked by owners of coffee surrogates while tea's virtues are taken for granted.

### **To protect steel from rust (May 1911)**

**P**OLISHED steel may be protected from rust by the application of the following compound: lard, 6 parts; resin, 1 part. Melted together, the two ingredients are stirred until cold. The resin prevents the mass from becoming rancid, and also acts as an air-tight film. If rubbed on a polished

steel surface, it effectually preserves and protects the polish, and is easily removed by gasoline or kerosene.

### **To protect galvanised-iron tanks from oxidisation (Sep. 1907)**

**M**IX linseed oil and cement to the consistency of paint, and apply like ordinary paint.

### **Some uses of honey (Feb. 1917)**

**H**ONEY is an excellent cleanser of the skin, though few are aware of the fact. Rub a little honey on the dry skin; moisten a little, and rub again; use more water, and rub. Wash thoroughly, when it will be found that the hands are as clean as the most powerful soap can make them.

Honey is also used for freckles: half a pound of honey, 2 oz glycerine, 2 oz alcohol, 6 drams citric acid, 15 drops of ambergris. Apply night and morning.

### **The value of vinegar (Sep. 1915)**

**E**VERY household would seldom be without vinegar on the kitchen shelf if its value were more widely known.

Its usefulness in the household can hardly be overestimated, as there are a surprisingly large number of duties that can be rendered comparatively easy by its application.

The boiling of eggs when the shells are cracked sometimes proves a little difficult. When this happens, add a small quantity of vinegar to the water, and the egg will be cooked as satisfactorily as if the shell had been undamaged.

Where it is desired to keep meat, and the more costly methods are impossible, the use of vinegar will again overcome the difficulty. Simply wrap the meat in a cloth wet with vinegar and it will be kept nice and fresh. Wash off the vinegar before cooking operations.

Vinegar heated to boiling point will also be found a most effective softener of hard brushes which have become dry and otherwise too hard to use.

Then, a little vinegar rubbed over the hands when they have become red and discoloured through rough work or too frequent dabbling in soapy water will greatly improve and whiten them.

### **The value of vinegar (Jul. 1935)**

**H**ERE are some ways of using vinegar:  
When boiling a fowl add a spoonful of vinegar to the water in the saucepan, and it will help to make the bird tender.

Do the same when boiling fish, and it will keep it white. Old potatoes, also, can be kept white by this means.

When put with rice, it keeps the grains separate. This is a good tip when boiling rice for curry.

In hot weather, if the joint does not look very fresh on arrival from the butcher, wash it all over with equal parts of vinegar and water, and then wrap it in a clean piece of muslin or old curtain wrung out in a solution of the same strength. Always hang the joint when possible, so that the air can get all round it.

If you think the joint will be tough when cooked, rub it with vinegar and let it stand for an hour or two before cooking. It will help to make it tender.

If vinegar is used instead of water in mixing mustard it will keep fresh much longer and also improve the flavour of the condiment. If the flavour is too strong use half vinegar and half water in the mixing.

For toilet water, vinegar is equally beneficial. A cupful added to the bath will be found most refreshing, while the same amount in a foot bath of hot water will ease aching feet in a wonderful manner.

As a gargle, use vinegar, a tablespoon in a glass of water. It relieves sore throats and acts as an antiseptic.

After washing the hair, rinse with warm water and a little vinegar. This removes all stickiness and makes the hair soft and silky

It is helpful, too, in many household tasks.

Windows rubbed with a cloth dipped in vinegar will take a brilliant polish.

For cleaning water bottles, take one part salt to two of vinegar, put into the bottle and shake well, then leave to stand for several hours. Give a final shake and rinse in clean water.

Sponges which have become slimy should be soaked for several hours in a fairly strong solution of vinegar and water, and then rinsed thoroughly in two or three changes of water. They will then be like new.

If your polished mahogany table gets badly smeared and spotted, a little vinegar will remove the marks. Use an old table napkin and rub with equal parts of vinegar and water. Rub dry, and polish in the usual way, and your table will be wonderfully shiny again.

### Uses of lemon (Oct. 1929)

**M**ANY people prefer lemon juice to vinegar when mixing a salad dressing, and it is much more digestible.

For washing dainty handkerchiefs add a few lemon rinds to the water when it is cold, and boil it with the handkerchiefs, and you will be surprised at their snowy whiteness.

As everyone knows, lemon juice is very useful after an accident with the inkpot. Rub lemon juice on the mark at once, leave for five or ten minutes, then wash off with milk, and the stain will have disappeared.

The juice of a small lemon, or half of a large one, taken first thing in the morning, without adding either sugar or water, is wonderfully helpful for rheumatism and indigestion.

The same treatment will soon make the muddiest complexion clear. After the lemon has been squeezed out, save the skin and rub it over the fingers if you want to remove ink or other stains from the hands. A few drops of lemon juice added to glycerine will make the hands soft and white again after a day's work in the garden.

In cookery the lemon is invaluable. Many sauces are insipid unless a squeeze of lemon juice is added. Sauces and custards are all the nicer if the thinly-grated rind of the lemon is boiled in the milk or cream preparation and then strained out. In stuffings a finely-grated lemon rind adds piquancy and flavour. Many people prefer a slice of lemon in their tea to sugar and milk. Cakes for tea, and some light puddings are nice with the finely-grated lemon rind added. Lemons, too, are invaluable for garnishing, their yellow tint adding colour to insipid food. Cutlets, fillets of fried fish, and pancakes all look and taste better if garnished with a slice of lemon.

### **The useful lemon (Aug. 1919)**

**T**HE lemon has many uses in the sickroom, the kitchen, and the house. The juice from half a lemon in half a glass of water before breakfast will correct the most torpid liver and prevent bilious troubles. For hoarseness, lemon and sugar will prove helpful and pleasant to take, and will cure sore throat when used as a gargle. In fever, the lemon is cooling and of great value for moistening the lips and cleansing the tongue. Two or three slices of lemon in a cup of strong, hot tea will often cure a nervous headache, and refresh the mind and body. A spoonful of lemon juice in a cup of black coffee frequently will cure bilious headache. An outward application of lemon will allay irritation caused by insect bites.

If a teaspoonful of lemon juice is added to boiling rice or sago, the kernels will be whiter and have a more delicate flavour. Tough meat is made less tough by adding a teaspoonful of lemon juice to the water in which it is boiled. Use slices of lemon to garnish fish and game of all descriptions. Lemon juice with olive oil instead of vinegar is preferred by many for salad dressings. After the pulp has been removed, the skins of lemons may be used as receptacles for serving salads or lemon ice. Lemon ice is one of the cheapest, most healthful, and refreshing desserts for summer.

Lemonade should be made the national drink, and is greatly improved when the well-beaten white of an egg is added. Iced tea is improved in flavour and made less constipating by the use of lemons. After the juice has been extracted, the rind dipped in salt will clean tarnished brass. Salt and lemon juice will remove rust, ink, or fruit stains from white goods. Lemon juice removes stains of all kinds from the hands, and prevents roughness and chapping. Lemon juice and rosewater, equal parts, will remove tan and whiten and soften the skin. A dash of lemon juice in water makes a cleansing tooth wash, removes tartar, sweetens the breath, and hardens the gums. Dried lemon peels sprinkled over the coals will kill disagreeable odours. A cloth soaked in lemon juice and bound around a cut stops severe bleeding until medical aid can be secured. *Philippine Farmer* Vol. V., No. 2.



## The divining rod (Nov. 1899)

COMPARATIVELY few people in Queensland have had an opportunity of testing the efficacy of the divining rod as an indicator of the presence of subterranean water; and because they have not seen experiments made, they are inclined to doubt, and to set down the experimenters as harmless lunatics. As a matter of fact, there are many persons who are so constituted that the divining rod in their hands never fails to point to the spots where water may be obtained at a greater or less depth. It has been said that Moses obtained the water in the desert for the children of Israel by employing this method. However that may be, it is quite certain that water has been found in places where none was suspected in various parts of the world by this simple means, and there are at this moment people in Queensland who have been very successful in this direction. As for the rod itself, it consists merely of a forked stick of hazel, willow, or peach. Indeed, it matters little from what timber the rod is taken, although some years ago it was thought that nothing but hazel was effective. The simplest description one can give of the rod is that it resembles a boy's catapult, but is larger, although not much thicker. The best form of rod is a forked stick of some such timber as peach or wattle.

The main stem should be about  $\frac{1}{2}$  inch in diameter, and from 8 to 10 inches long, the two forks long enough to allow each to rest on the hips when grasped by the hand. The fork having been prepared, all that remains to be done is to walk slowly over the ground, holding the fork in the position indicated. Now it must be observed that all persons have not the facility or power for discovering water by this means. The word medium appears to savour of spiritualism, but it is an undoubted fact that certain persons have failed to find water, where at the same trial others, using the same rod, have been successful. There are, we are told, people who make a good living by discovering water when no surface water is available.

Now what happens when the right person wields the rod is that on reaching a spot beneath which water is to be found, the rod at once begins to turn downwards, and does so with considerable force. On the operator moving away from the place, the rod resumes its horizontal position, pointing straight ahead of the holder, and it will remain in this position until another hidden spring causes it again to deflect towards the ground. Cases have occurred in which water has been found by a person holding an iron rod across the palm of the hand, and even a pliable stick bent in the form of a bow has assisted the operator as well as if the rod had been forked.

# CONVERSION TABLES

## Imperial to metric

### Length

1 inch (in)		= 2.54 centimetres (cm)
12 inches	= 1 foot (ft)	= 0.3048 metres (m)
3 feet	= 1 yard (yd)	= 0.9144 metres
5280 feet	= 1 mile	= 1.609 kilometres (km)
1760 yards	= 1 mile	= 1.609 kilometres

### Weight

1 grain (gr)		= 64.8 milligrams (mg)
27.34 grains	= 1 drachm (dr)	= 1.772 grams (g)
16 drachms	= 1 ounce (oz)	= 28.35 grams
16 ounces	= 1 pound (lb)	= 453.6 grams
1 seer	= 2.06 pounds	= 898 grams
14 pounds	= 1 stone (st)	= 6.35 kilograms (kg)
112 pounds	= 1 hundredweight (cwt)	= 50.848 kilograms
20 hundredweight	= 1 ton	= 1.016 tonnes (t)
2240 pounds	= 1 ton	= 1.016 tonnes

### Volume

5 fl oz	= 1 gill	
4 gills	= 1 pint (pt)	= 0.568 litres (L)
2 pints	= 1 quart (qt)	= 1.136 litres
4 quarts	= 1 gallon (gal)	= 4.546 litres
1 peck (pk)	= 2 gallons	= 9.092 litres
1 bushel (bus)	= 8 gallons	= 36.368 litres

### Temperature

$\frac{5 \times (\text{Fahrenheit} - 32)}{9}$	= degrees Centigrade
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# Old ways on the farm

## Here's some old-fashioned advice:

'If the sun sets pale it will soon rain.' (1906)

'Anyone attending to bees may escape many stings by first thoroughly washing their hands, and then rubbing them all over with a little pure beeswax.' (1907)

'Lemonade should be made the national drink, and it is greatly improved when the well-beaten white of any egg is added.' (1919)

Excerpts like these and others from the *Queensland Agricultural Journal* have been selected and combined into one delightful and fascinating book.

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### How they ...

- made a divining rod that worked
- built a bush chair
- waterproofed coats and boots
- made good ginger beer and rosella wine
- counted sheep
- cured sleeplessness with onions
- preserved sweet chilli peppers
- tanned animal skins
- and guessed the age of an egg!

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