Seasonal reminders
Orchard Notes

THE main cultivation of all orchards should be completed by the end of September. If left later than this, cover crops will not decompose as readily as when turned in at the correct stage while depletion of the soil moisture will occur. As far as possible cover crops should be turned in at flowering.

Owing to wet weather conditions, it is possible that pruning may have been delayed and if so every endeavour should be made to complete the work before bud-burst. However, some varieties of peaches and nectarines have a habit of shedding their buds late in the season and, where this occurs, pruning should be left as late as possible.

PESTS AND DISEASES

(a) Stone Fruits
For the control of fungus diseases such as shot hole, leaf curl and leaf rust, thoroughly spray the trees at bud-burst stage with a Bordeaux mixture at 6:4:50 strength.

If it is found necessary to spray again use Bordeaux mixture at 2:3:50 strength or lime-sulphur, 1 part to 100 parts water.

Apricots, however, should never be sprayed with lime-sulphur after petal fall otherwise damage to fruit may occur.

(b) Apples and Pears
Where heavy infestations of bryobia mite and San Jose scale occur it may be necessary to follow up the mid winter oil spray with an application of lime-sulphur, 1 part to 10 parts of water just before bud-burst.

Pear Scab.—Control measures for pear scab consist of a spray of Bordeaux mixture 6:4:50 at bud-burst followed by a 2:4:50 Bordeaux spray at petal-fall. If considered necessary further applications can be made at fortnightly intervals.

Some varieties such as Josephine and W. Cole are very susceptible to spray russet and for these varieties it is advisable to substitute lime-sulphur 1-75 for the Bordeaux mixture.

(c) Citrus Fruits

Collar Rot.—This disease may become evident as a result of the wet winter conditions particular where the bud union of the tree has become buried. Symptoms are splitting of the bark of the trunk and the death of patches of bark leading to partial "girdling" of the tree. Full details of control measures are given in the leaflet dealing with this disease.

Fruit Fly.—The last of the navel crop should now be stripped. If left on the trees they become a potential breeding ground for fruit fly. Apply foliage baits to citrus trees composed of 1 oz. sodium fluosilicate, 2 lb. white sugar to 1 gallon water. Proprietary mixtures such as Lurotox or Fluotox may be used.

(d) Grapevines
Spraying will be required for the control of black spot. A mixture of 1 lb. of bluestone to 2 galls. of water applied while the vines are still dormant should be followed by Bordeaux sprays after growth has commenced.

New fungicides tested last season proved more effective in controlling black spot than copper sprays and for growers who wish to try them, Thiram and Ziram are available commercially. Details of the tests were given in the May-June issue of the Journal.

Preventive sprays of colloidal sulphur or applications of sulphur dust should be used to control powdery mildew as soon as the shoots have made approximately 4 inches of growth.

NUTRITIONAL SPRAYS
This is probably the best time for applying nutritional sprays of trace elements such as zinc, manganese and copper to citrus trees. Leaf mottling usually indicates zinc deficiency but may also be due to lack of manganese. The following sprays may be used:

Zinc
(a) Zinc sulphate ... 10 lb.
Quick-lime ... 5 lb.
Water ... 100 galls.
(b) Zinc oxide ..... 5 lb.
Water ..... 100 galls.

Manganese
Manganese sulphate ..... 10 lb.
Washing soda ..... 10 lb.
Water ..... 100 galls.

Copper
Copper sulphate ..... 5 lb.
Quick-lime ..... 5 lb.
Water ..... 50 galls.

In all cases the addition of a spreader such as white oil at the rate of ½ gallon per 100 gallons of spray is advisable. If desired a combination spray comprising the following may be used:

Cuprox ..... 5 lb.
Manganese sulphate ..... 10 lb.
Zinc oxide ..... 5 lb.
Water ..... 100 galls.

**Beekeeping Notes**

CAPE weed and other early-flowering nectar and pollen producing plants will soon be in bloom and the beekeeping season should soon be in full swing. Ensure that all hives are in good repair before the busy season commences. There should be very little drone comb in the hive for it is during this period that the bees are liable to raise large numbers of drones, sacrificing worker brood for these useless “passengers.” Bees will always raise a few drones but when a comb has more than 10 per cent. of drone cells, it should be destroyed.

Do not try to increase the bees too quickly during the current period. A warm spell often tempts a beekeeper to spread the brood but this is particularly risky as chilling can occur and cause heavy losses during the spring. If a swarm has wintered in a single-decker hive, the beekeeper naturally wishes the queen to extend her egg-laying activities as widely as possible in order to take advantage of the coming honey flow. To achieve this, he should remove a frame containing pollen and honey from each side of the frames where egg laying is taking place.

These frames should be replaced with others containing drawn comb or foundation.

A queen dislikes crossing a honey-filled frame to commence egg laying beyond it, but with the honey-filled frames removed and empty drawn combs awaiting her she can extend her egg laying activities without difficulty.

When adding an extra super, the combs of honey and pollen should be placed in the centre of the new super and the remaining space filled with drawn comb or foundation.

**Expenditure on Soil Erosion is an Allowable Deduction**

The national importance of soil erosion control has been recognised by the Federal Government by allowing expenditure on soil erosion control as a deduction in assessing income tax. Some queries have arisen with respect to what expenditure on soil erosion works is allowable as a deduction. The Deputy Commissioner of Taxation, Western Australia (Mr. T. C. H. Powell) has supplied the following information relevant to this matter.

The relevant provisions of the Income Tax and Social Services Contribution Assessment Act dealing with soil erosion are as follows:

Section 75 (1). Expenditure incurred in the year of income by a taxpayer engaged in primary production on any land in Australia in—

(g) preventing or combating soil erosion on the land otherwise than by the erection of fences:

shall be allowable deduction.

The Deputy Commissioner of Taxation has also supplied the following explanation:

2. Expenditure on the purchase of items of plant, machinery or instruments would not be allowable, but payments to your Department for surveys would be. The deduction allowable is for “expenditure incurred” so that no deduction is permissible for the value of a person’s own labour, nor, of course, for any expenditure such as wages or fuel which is claimed elsewhere under other headings in the return.
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Journal of agriculture Vol. 2 1953
**Vegetable Notes for September-October**

**SEPTEMBER** and October are busy months for the keen home gardeners, as full advantage should be taken of the warmer days. Tomatoes, lettuce and late cabbage could be planted, and peas and beans sown during these months. For successful culture of tomatoes at this time, they should be planted in sheltered positions with a north or north-easterly aspect. A forkful of well rotted compost or stable manure, together with a handful of complete fertilizer, should be buried beneath each plant.

It is important to plan planting so that as far as possible a succession of vegetables is available over as long a period as possible. The ordinary small household does not require large beds of peas or beans planted at the same time. Double rows 6-8 ft. long planted at intervals of two to three weeks spread the crops much better. Similarly, five or six lettuces or cabbages will usually be sufficient to plant out at one time.

A few plants of silver beet put out in September or October will continue to produce over a long period and there is no need to have a succession of plantings. Carrots may also be sown at this time. Heavy soils should be deeply dug and the shorter varieties such as "Short Horn" and "Chantenay" grown.

First plantings of cucumbers, pumpkins, melons or marrows could be made during these months where injury from frost is no longer a danger.

### POTATO GROWING

Excepting for the extra early metropolitan crops, which are planted in sheltered positions on sandy soils and with the use of organic manures, there are very few potatoes dug during September. Those growers who have wisely chosen early Albany seed, such as that grown at Grasmere, should reap the benefit by commencing to harvest their crops in early October. Because of the probability of export to the Eastern States and the fact that the local market is normally bare at that time, much of the early crop is dug in a somewhat immature condition.

Growers are reminded that immature potatoes are highly perishable and although of reasonable appearance when freshly dug, after transport or being held for some time their appearance often deteriorates. This is usually occasioned by rough handling, resulting in cuts, further skinning and bruising, or by exposure after digging to hot conditions or drying winds.

The unsightly potato which is browned and rubbery is usually a "skinned" potato which has been exposed to hot, drying conditions. This can occur to bagged potatoes left too long in the field. Bags should be removed from the field to a sheltered position as soon as possible.

Plantings are made during September and October in the Hills, Manjimup, Osborne Park, Albany, Hamel, Waroona and Mandogalup areas.

### Watch for Footrot

ALTHOUGH the incidence of foot-rot has been slowly reduced, the disease is still prevalent in the areas of higher rainfall, and it is important that there should be no relaxation of the measures which have been adopted for its control and eventual eradication. The disease is usually at its worst during the spring when wet conditions underfoot and a heavy growth of clover and other herbage favour the spread of infection. Under these conditions a large proportion of the flock, including both adult sheep and lambs, may become affected.

When the feed dries off in summer, the disease subsides, and although carriers of infection are still present there may be little or no evidence of foot-rot in the flock. These carriers perpetuate the disease and, with the onset of winter, active cases commence to appear and increase in numbers until the infection reaches its peak in the spring.

Foot-rot results from infection with the microbe *Fusiformis nodosus*, which is always present in the feet of affected sheep, where it may persist for several years. The infection is not however, able to survive in the soil for more than 7-14 days, and it is consequently possible—by disposing of the whole of an infected flock for slaughter, and restocking after a fortnight with "clean" sheep from a dry inland area—to completely eradicate foot-rot from a property. This method has been successfully employed by a considerable number of farmers in the higher rainfall areas. In a somewhat similar manner foot-rot may be eradicated by the removal of "carriers" while the disease is quiescent in summer.

The eradication campaign should commence in the winter when the feet should be kept pared and the flock regularly passed through a foot-bath and transferred to spelled paddocks. Any sheep showing evidence of the disease should be isolated in a convenient paddock where the feed is short, and treated in a foot-bath containing bluestone or formalin until recovery is complete and they may be safely returned to the main flock.

It is necessary to emphasise that unless paring is drastic enough to expose all pockets of infection, success in treatment will not be achieved.
By adopting these measures throughout winter and spring it will be possible to keep the disease under control; fewer cases will occur, and this will enhance the prospects of successful eradication when the removal of the "carriers" is undertaken during the summer months.

The detection of these carriers will involve the examination of every foot of every sheep on the property followed by the removal and segregation of every animal showing evidence of infection, or the presence of hidden pockets of infection. The feet of these sheep should be carefully pared, and they should be treated in a foot-bath until freed of infection. Alternatively they may be disposed of for slaughter, or if the numbers are not too great, retained on the property in isolation and used for ration purposes.

In the areas where it exists, foot-rot represents a greater source of loss to the sheep and wool industry than all other sheep diseases. It may be eradicated by one or other of the methods described, and this should be the objective of all sheepmen whose flocks are known to be affected.

Further information is contained in Leaflet No. 668, which may be obtained upon application to the Department of Agriculture.

Entomological Notes

One of the most important host plants for fruit fly at this time of the year is the loquat. This early ripening fruit offers the over-wintering flies a chance to lay eggs and so to breed a generation ready to attack the first stone fruits. Baiting should, therefore, be carried out thoroughly on all loquat trees.

Climbing Cutworm.—This insect is well known to market gardeners and farmers for its voracious feeding on tomatoes and the seed pods of such plants as lupins and peas. In farming areas a watch should be kept for the appearance of this pest in plague numbers about the flowering time of the pea or lupin crop. This year, especially in the northern agricultural area, there is a possibility of cutworm plagues because of the early autumn rains.

Climbing cutworms may be controlled on field crops with DDT applied as a dust or spray about petal fall. Vegetables may be treated with similar preparations.

Mealy Bug on Vines.—Recent tests with the following insecticides:—DDT, lime-sulphur, gammexane, sulphuric acid, hexone, E605 or parathion, and a systemic insecticide pestox 3H—have shown that DDT will give outstanding control.

Note
1. When picking, mark infested vines. (It is not usually necessary to spray the whole vineyard.)
2. Spray marked vines just before bud-burst with ½ per cent. DDT emulsion.
3. The spray should be very thoroughly applied with a good power outfit.
4. No satisfactory control has been obtained from any summer treatment.

Grasshoppers.—Farmers are now advised to inspect suitable grasshopper breeding grounds on or near their properties to ascertain the likelihood of future crop losses from grasshopper attack.

Bait should be sought from the nearest road board authorities and spread before the hoppers have reached the winged stage.

Wheatbelt Notes

During September, fallow may need to be worked, but over-cultivation should be avoided as it is likely to encourage erosion, particularly on the lighter soils. Hay cutting will commence in some districts and cereal hay should not be allowed to become too ripe. Hay cut not less than two weeks after full flowering is easily digestible and highly nutritious.

September is the main shearing month and the woolgrower should pay attention to the preparation of the clip. Book killing space at export works for fat lambs. Well grown lambs (except those intended for export) can be weaned at shearing time.

Meadow hay should be cut when the bulk of the pasture is in full flower, subterranean clover just when the plants are beginning to wilt.

With hot summer days not far ahead it is a good plan to plough the firebreaks during September while the ground is in suitable condition.

October activities will consist largely of haymaking and stacking, and it should be remembered that hay deteriorates rapidly when exposed to sun and rain. To obtain good quality hay it should be carted as soon as it is sufficiently dry to stack. If carting has to be delayed the hay should be placed in large stocks.

Shearing should be completed in all but late districts and the weaners should be placed on good grazing. Class the ewe flock and market the culls or place them in suitable paddocks for fattening.

Ewes intended for mating should not be allowed to become overfat. Dipping to control lice and keds is compulsory and should be carried out three to six weeks after shearing using an approved dipping preparation according to the directions. Drench for the control of worms.
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Poultry Notes

SPRING is the busiest period of the year for the poultry farmer as this is the flush season for egg production and the farm is stocked to capacity. The following notes cover the September-October period.

Nature's influence on egg production comes to the fore at this period of the year. The hen flock rested and re-plumaged, finds egg-laying a comparatively easy assignment and, providing the birds are managed and fed correctly, a daily harvest of eggs awaits the farmer. Pullets that have undergone a partial moult during the autumn and have been sluggish producers during the winter months return to a good rate of lay. Flocks subjected to electric lighting during autumn and winter and which have laid consistently well for several months will not give such a spectacular response to the spring stimulus but should nevertheless maintain a good rate of lay. The lights should not be switched off prematurely as this may have an adverse effect on production. During September the lights should come on at 4.30 a.m. and at the end of September they can be dispensed with.

Culling is normally at a low ebb during early spring because the majority of birds will lay at this period. However culling is a continuous practice and it is the flock which is culled continuously throughout the year which returns the maximum profit. Irrespective of the level of production there should be no hesitation in removing the obvious culls that are apparent even to a beginner. The characters displayed by a cull are a pale, shrivelled comb, loss in body weight, sluggishness, an inferiority complex and often a desire to frequent the perches during the day. On handling the bird, the abdominal capacity is very much reduced or, in the case of an overfat bird, it is distended with a thick, rubbery layer of fat. In comparison a bird that handles well will have a full, soft and pliable abdomen. The pelvic bones of a poor layer are close together, thickened and rigid, as against the wide apart, sharp pliable pelvics of a good layer. Examination of the birds according to these criteria should reveal the obvious cull to the inexperienced hand but the differentiation between the profitable and unprofitable layer requires a degree of skill gained only from practice. Invariably there are a few birds which develop some unaccountable sickness These birds seldom recover and they should be removed as soon as possible as they present a possible disease hazard to the remainder of the flock.

Young Stock.

By nine weeks of age the young stock should be fully perching and from ten weeks of age onwards they should be allowed to range freely on open grassland. If natural grasses are not plentiful, freshly-cut lucerne, maize, elephant grass or cereal crop should be fed. Free range and greenfeed contribute towards building up the constitution of the young stock which is a pre-requisite for heavy and persistent egg laying. Growing stock do not require much time and attention but they should not be neglected during this vital phase of their life. The housing accommodation should be clean and comfortable and dry mash should be kept before the birds at all times. The customary practices of deworming at 10 and 18 weeks of age and vaccinating against fowl pox at 12 weeks of age must be attended to. These precautionary treatments are extremely simple and cheap yet can be depended upon to pay good dividends.

General.

It is advisable for the farmer to check the following points concerned in correct management which are often overlooked.

Minimum Floor Space.

Adult Birds—
- 2-3 sq. ft. per bird (semi-intensive housing).
- 3-4 sq. ft. per bird (intensive housing).

Young stock—
- 1 sq. ft. per bird (up to point of lay).

Minimum Perching Space.

Adult birds—
- 60 linear feet per 100 birds.

Young stock—
- 35 linear feet per 100 birds (9-12 weeks).
- 50 linear feet per 100 birds (13-20 weeks).

Minimum Feeding Space for All Dry Mash Feeding.

Chickens—
- 1 - 4 weeks—12 ft. per 100.
- 4-10 weeks—16 ft. per 100
- 10-20 weeks—24 ft. per 100.

Adult Birds—
- 30 ft per 100.

The implementation of trough feeding is a cheap and satisfactory method of providing adequate feeding space.

Watering Facilities.

Automatic watering is easily the best system of providing water to poultry. The waterers should be shaded and in close proximity to feed receptacles and nests and set up so that water spillage is kept to a minimum. Four feet of watering space will provide for 100 birds.

Floor Litter.

The litter must be kept dry and friable at all times if it is to serve its purpose. During wet weather this is often difficult to achieve and depends to a large extent on the construction of the poultry house. Driving rain, spillage from water vessels, bad ventilation and overcrowding are usually responsible for the litter being damp and difficult to work. The farmer should look to these possible causes and rectify them even if this means modifying the structure of the shed. Occasional liming and forking-in contribute towards a good deep litter.
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