

An application of Ammonium sulphate  $\frac{1}{2}$  to 1 Cwt. per acre has been found effective in stimulating the production of tillers, and overcoming the effects of the disease, in cases where the intensity of attack is not very great.

As the disease is carried over to the next season, through the stubbles in which the sclerotia are lodged, it is recommended that in all badly infected fields, the stubbles are removed and burnt after the harvest.

Hurried preparation of the land should be avoided and the field should be puddled well, and time must be allowed for the remnants of the previous crop to rot and disintegrate before transplanting is done.



### Gleanings.

**Plant Identification is an Important Service.** The New South Wales National Herbarium has received 240 duplicate specimens of South American plants to add to its collection. Many of them are species not previously represented in the collection. They include a large number of leguminous plants, and ten species of Lantana new to the Herbarium's records. Plant identification is an important service to Australian farmers. It helps to keep a check on the accidental introduction of plants known to be pests, or which may become so under Australian conditions. There is also an increasing interest in new plants, especially pasture grasses or grasses likely to be useful for the control of soil erosion. It is a curious fact that Australian farming rests on the successful cultivation of crops, fruits and grasses imported from other parts of the World. Many imported plants have done much better in Australia than in their original environment, and it is quite likely that among the specimens recently obtained from South America may be some that will eventually find a useful place, not only in the Australian Herbarium, but also among the pastures and cultivated crops of the future. (Agricultural Newsletter No. AGN/225).

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**Once-a-Day Milking.** A Queensland dairy farmer has startled the Australian dairy industry by maintaining that once-a-day milking is a good commercial proposition that will reduce dairy production costs. Mr. and Mrs. C. E. Tudor, who have a Jersey stud at Gayndah, Queensland, say that from actual practice over a period of years, they have proved that a good living can be made from dairying if cows are milked once daily and fed on good pastures and crops. Stall feeding is only necessary when pastures are unbalanced, and there are no crops. With twice-a-day milking, so the Tudors, a farmer spends about seven hours daily with his cows. He does not have time to grow all the feed he needs and has to pay high prices for lucerne and grain. Under their scheme, the cows are finished in the morning and the rest of the day is left free for farm-work. There is little difference in the butterfat yield of a cow with once-a-day milking. Milk supply is a little less but this is offset by the amount given over the whole lactation period, which is extended. The Tudors milk freshly-calved cows twice-a-day for six weeks, then put them on to once-a-day milking.

**New Potato Does Well.** Monak, a new variety of potato bred by Mr. J. G. Carrol plant-breeder of the New England Experiment Farm, Glen Innes, New South Wales, has done well in official trials, yielding two tons a acre more than Factor and Katahdin, the varieties usually grown in the district. The trial crop was planted on July 21, 1948, and harvested on November 10. A complete fertilizer mixture was supplied at the same rate to all plots, and all varieties had to contend with a dry spring. Yields of varieties in the trial, calculated to the nearest half ton were:—

	Tons.
Monak	8½
Mainguy	7½
Factor	6½
Sequoia	6½
Sebago	6½
Moona	6
Aussie	5½
Katahdin	5½
Seedling 2511	5½
Seedling 2507	4½

Monak is a cross between Pontiac and Katahdin. It matures a little later than Factor. It has large round white smooth-skinned tubers with shallow eyes and is blight-resistant. Moona, another new variety in the trial, is a cross between Factor and the American variety Saranac. With Monak and seedlings 2507 and 2511, it was bred at Glen Innes by Mr. Carrol.

**Scientists Tackle Citrus Problem.** Australian research workers are tackling the problem of finding a practical method of ridding citrus orchards of boron, where it is believed to be present in excessive and toxic quantities. Many citrus trees in the Mildura irrigation area of north-western Victoria have displayed an affection of the leaves known as 'tip-burn'. For a long time this was thought to be a disease. Then it was supposed that 'tip-burn' was caused by salt in the soil, brought to the surface by continued irrigation. This salt theory has not yet been disproved, and investigations are continuing both at Mildura and on the Murrumbidgee Irrigation Area, in New South Wales. Meanwhile, an alternative explanation has been suggested by the discovery that boron in toxic quantities is present in the soil of places where 'tip-burn' is prevalent, and where an almost total absence of soluble salts proved that salting was not causing the symptoms. If this is confirmed by further investigation, it may be necessary to devise some method of neutralising or 'fixing' the boron in the soil. The alternative would be the long and costly process of developing citrus strains with a high resistance to boron in abnormal quantities. (Agricultural Newsletter: No. AGN. 224).

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**Bananas Now in the Can.** Queensland banana growers are looking forward to increased production and prosperity now that the fruit marketing cannery at Banyo, Queensland, Australia, has produced canned bananas. Following extensive experiments, the factory has developed a method of processing which produces canned bananas that are not affected by bacteriological action and retain practically 100 per cent of their natural colouring and characteristic flavour. Previously bacteriological action and colour deterioration had prevented canning. A trial pack of 8,000 dozen tins of bananas has been placed on the market to test public demand. Successful canning of bananas will mean stabilisation of prices and increased demand, as excess supplies can be taken off the fresh fruit market. Queensland, where the canning process has been developed, grows only 6,00,000 bushels of bananas a year, a small proportion of the total Australian crop. The most productive area is the north coast of New South Wales, where 4,600 farmers between Tweed Heads and Nambucca River, have total plantation areas of 30,000 acres from which they harvest 2,500,000 bushels of bananas a year. Besides these, they grow tropical fruits—pineapples, pawpaws (paw pia), passion fruit, avocados—with side crops of beans, tomatoes, peas and sweet potatoes which altogether return them £A 3,500,000 annually. (Agricultural Newsletter. No. AGN. 220).

**Apple-thinning Hormone Sprays.** Promising results are being obtained in Australia from experiments with sprays to regulate or thin apple and pear crops. Trials carried out by the Horticultural Division of the New South Wales Department of Agriculture during the last two seasons have used various sprays containing the hormone preparation 2, 4—D, and the commercial product Methoxone. These 2, 4—D sprays gave the best results, particularly with Granny Smith, Democrat and Delicious apple trees. Depending on the strength of the spray, either all the young fruit was removed or all fruit from weak spurs removed, leaving fruit, often thinned out to singles, on strong spurs. In rare instances, the spray killed the weakest spurs but this loss of weak spurs which hardly ever set fruit is not considered a disadvantage. Where the spray was used to remove fruit from the tops of Granny Smith trees, fruit on the lower parts of the trees was undamaged and was exceptionally well-grown and uniform in size. Thinning effected by sprays applied in 1946 promoted blossoming in 1947. Australian apple and pear growers have been warned by agricultural authorities that tests are still in early stages and recommendations are only made for experimental purposes. They emphasise that the strength of sprays must be regulated to the variety and vigour of individual trees, and that pears and sensitive apple varieties require sprays of low strength, which means that growers who decide to use the hormone spray method of thinning must be prepared to carry out a certain amount of experimental work in their own orchards or consult district fruit officers. [Agricultural Newsletter: No. AGN/225].

**New Cool Chamber for Eggs, Fruit & Vegetables.** A cool chamber which keeps eggs, fruits and vegetables fresh and odourless for periods of months, is an Australian invention, now being marketed in Melbourne, Victoria. Inventor is Mr. V. Holmquist of Boondarra Road, East Street, Kilda, who is a specialist in the commercial use of activated carbon. The new cool chamber requires only two gallons of water daily, and once installed there are no other costs of upkeep. The principles of the invention are the use of activated carbon to absorb food odours with water circulation and air currents maintaining the food products in good condition. The characteristics of activated carbon enable it to absorb carbon dioxide gas which is given off by fruit in storage. The substance used is actually activated charcoal, processed by the marketing company for use in the cool chambers.

In combination with flues built into the chamber and the walls, backed with carbon, all odours from fruit and vegetables are absorbed, and the food products are kept fresh and in a natural state. The cool air which passes through the watered carbon circulates throughout the chamber, and assists in the general operation. No expensive upkeep is required for the domestic type of cool chamber which is now being marketed, and the



water, a gallon or so, is replenished each day. A system of syphons at the top of the chamber provides for the continual water circulation through the built-in carbon. The cool chamber, which is built of galvanised iron, is 27 inches long, 21½ inches wide and 40 inches deep, and sells at £A 25. It is intended to be placed outside the house, so as to gain the full benefit of the air circulation. Tests conducted by the inventor show that oranges and other citrus fruits remain fresh for periods of up to six months. Bread will keep fresh for a week, and vegetables and milk do not use their qualities after months of storage.

Larger units 6 ft. x 6 ft. x 6 ft. 6 ins., are being extensively used by poultry farmers in Victoria for storing eggs. This model is sold at £A 100. A report by the inspector's section of the Australian Egg Board states that the claim made by the manufacturing company that eggs could be held for long periods in association with commodities like citrus fruit, onions and vegetables, had been proved by experimental tests. After four months' observation it was found that the eggs (of export quality) had not absorbed any odour or flavour. To meet the requirements of citrus growers and orchardists generally, the company also markets a large unit 12 ft. x 8 ft. x 8 ft., at £A 300. It is claimed that the results are an improvement upon refrigeration, as the fruits are not affected in their taste qualities, after long periods of storage—a result which the company claims cannot be obtained by usual refrigeration. A fourth application of the principles of [the invention is a very small cool chamber which can be fitted into the orthodox ice-box to absorb the usual food odours through the activated carbon. [Agricultural Newsletter No. AGN/226.]



### Extract

**Sugarcane—Pineapple disease of sugarcane** (*Ceratostomella paradoxa*) is the major cause of failure of cane sets to germinate in Mauritius, often causing serious economic losses, especially under drought conditions and in cooler uplands. Experiments by treating the cane sets with organic mercury compounds before planting, have given satisfactory results. The ends of the cane sets were dipped into a 1% or 2% solutions of organic mercury compounds like Aretan, Agrosan, Verdasan, Abavit, or Ceresan and planted them in infected soils. Some cane sets were dipped in dry lime. Some of the plots were irrigated and a few were not irrigated. For control untreated cane sets were also planted. When germinated plants were examined later, untreated plants showed 68·87% infection, whereas 1% solution treated plants showed not more than 10% infection. Aretan was the best of all the organic mercury fungicides used. A 2% solution of Aretan treatment reduced the infection to 3·67% and in all cases a 2% solution of the organic mercury compound was better than 1% solution. Treating the ends of the cane sets with lime did some good and the infection was still 29·67%. The experiments further showed that the disease was especially prevalent under dry conditions. The infection was 42% less on the irrigated than on the unirrigated controls. (Sugar Vol. 43, No. 7, July 1948, p. 52).

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