

## General Quality Of 1935 Seed Crop Is Commented On

Adverse Conditions Existed All Over Dominion.

By Press and Publicity Division, Department of Agriculture.

Supplies for the seeding of field crops for 1936 must necessarily be derived largely from 1935 seed crops. The year 1935 was unique as regards conditions affecting the growth and maturity of all kinds of seed crops. Early frost together with adverse climatic conditions over a wide area of the Dominion did heavy damage in Western Canada, and one of the worst epidemics of black stem rust seriously affected grain crops of a large section of Manitoba and Saskatchewan.

To make specific reference to cereal crops, it may be said that in no part of Canada was the oat crop of normal quality. In Western Canada damage to this crop from frost was more severe and covered wider areas than for some years. This applied particularly to the northern parts of all three Prairie Provinces or those districts from which seed supply for the southern parts of these provinces, as well as other parts of Canada, is usually drawn.

The Provinces of Manitoba and Saskatchewan are the principal production sources of barley in Western Canada. Here this crop suffered from rust and excessive rain at harvest time. The seed is therefore light in weight and of poor color. Barley and oats crops throughout Eastern Canada gave great promise during the early part of the growing season. Unfavorable weather conditions at filling time, however, so affected these crops throughout large parts of the district that the quality of the seed from the standpoint of kernel weight or body of sample is the lowest in some years.

Referring to forage crops, timothy seed was of first importance in 1935 as regards yield, but the quality was somewhat impaired through loss of color and excessive hulling, the result of rain at harvest time and over-ripening. Red Clover seed production resulted in two distinct qualities of seed, the late crop, which constituted the bulk of the production, being of lower than average quality because of interrupted maturity by frost. Alsike seed was of very small volume and much below average quality, especially with respect to weed content. Alfalfa seed production in 1935 was of negligible proportions. Sweet clover more nearly maintained average quality than that of any other forage crop. However, it must not be inferred that an acute seed situation exists. Much good seed is available, but the usual supply of sound, plump, vital seed of cereals especially was not produced in 1935.

## Progeny Test Has Very High Place In Poultry Breeding

Work on This Subject Has Been Going On For Some Time.

Department of Agriculture.

The progeny test, as carried out at the Dominion Experimental Farms, is mentioned in the progress report just issued by the Division of Poultry Husbandry. Among a group of full-sister pullets some may be very good layers and others very poor, explains the report. The same is true of the transmitting ability of full brothers. Males cannot be judged, however, with any degree of certainty except by testing them through their daughters' production. This is known as the progeny test, and all males used for breeding on the Dominion Experi-

# AGRICULTURE

## Survey Conducted On Co-Operative Farmers' Business

Branch Founded in 1929 To Encourage This Movement.

By Press and Publicity Division, Department of Agriculture, Ottawa, Ontario.

When the Agricultural Economics Branch was established within the Dominion Department of Agriculture in 1929, the object of one phase of its work was to study the farmers' co-operative movement. To that end, under joint arrangement with the provincial governments a survey of existing organizations was undertaken in 1931, with the expectation that such a survey will be made annually or at intervals of a few years. The information thus obtained forms the basis for a permanent record of co-operative activities, and Publication 481, "Farmers' Business Organizations in Canada, 1935," just issued by the Dominion Department of Agriculture, supplements and brings up to date the information contained in Bulletin 173, previously published. The contents of the latest publication are based on information received from farmers' business organizations in Canada in 1933 and 1934 and summarize the business activities of co-operating associations during the crop years of 1932 and 1933.

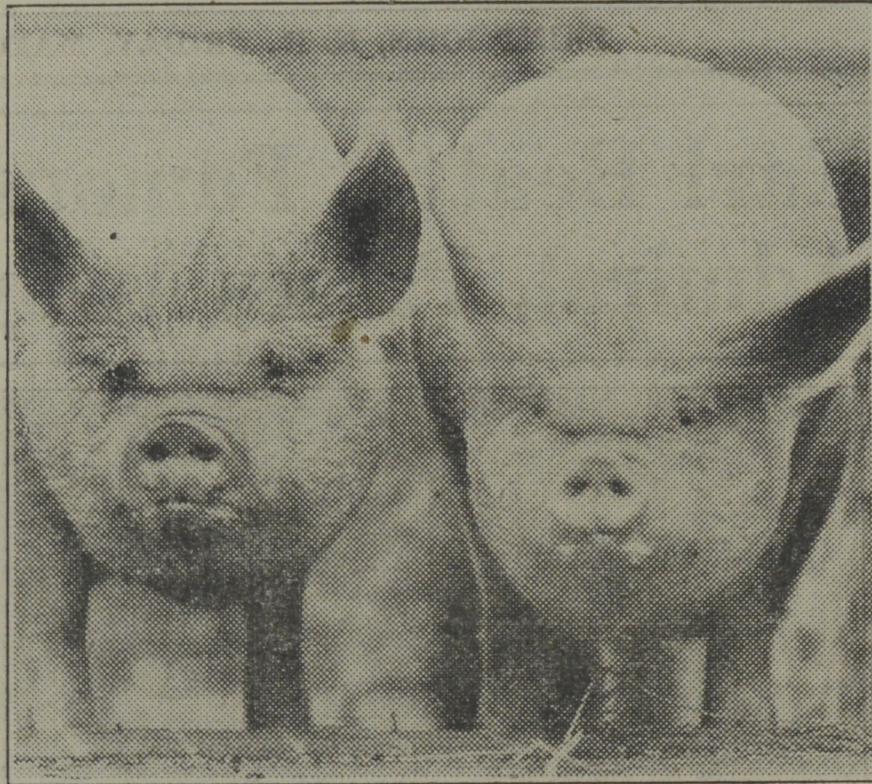
The records obtained from farmers' business organizations at present on the active list show that during the latter part of the last century and up to 1915 development of co-operative enterprises in Canada moved slowly. The records of the Agricultural Economics Branch show that of the companies at present active, 139 were established during that period. During the next decade and up to the present time, organization in business by farmers has made steady growth in numbers, membership and business. Co-operative organizations now hold an integral position in the movement of farm products to market and the purchase of farm supplies, and they have gained an important place in the field of Canadian business. The activities of the larger organizations, such as the wheat pools, livestock and fruit co-operatives have reached a high stage of development, and have received world-wide recognition. In addition to these there are hundreds of comparatively small organizations which are working quietly and effectively in serving local areas.

mental Farms are subjected to this test. Thus the cockerels used for breeding are kept until the following breeding season and rated on their progeny according to: 1. The fertility and hatchability; 2. range and adult mortality; 3. egg production up to January or February; 4. egg weight.

Males that give poor fertility and hatchability are not used a second year. Such males are culled after the first breeding season. The range and adult mortality of different males may run from ten to 50 per cent., or more. Males whose progeny have a high death rate are not used a second year, neither are their sons, even if the production of the surviving daughters is very high.

The males chosen for second-year breeding work, together with their sons, are those whose daughters come into production at from six to seven months of age, lay at a good and uniform winter rate, and have low mortality and egg weights that average around standard size by January or February.

## DESTINED FOR ROYAL PIGGERY



Looking very serious, probably because of their new-found importance, these two Middle White Gilts are photographed as they prepared to leave the British Home Counties Pedigree Pig Breeders' Association en route to the Royal Farms at Windsor. King Edward VIII. purchased the pigs from H. Whitworth Hall.

## Some Suggestions On Orchard Care And Maintenance

Annual Applications of Fertilizer Necessary, Experiments Reveal.

By H. HILL, Division of Horticulture, Ottawa, Ontario.

Many orchardists are now familiar with the common foliage symptoms of faulty nutrition; the pale green leaves, slender or stunted growth characteristic of a low nitrogen supply, the delayed bud break and brown to purplish ronzing of foliage due to an inadequate supply of phosphorus and the yellowing and scorching of the leaf margins due to lack of ample potash. A general lack of vigor brought about by a scarcity of available nitrogen is not serious since it may be quickly corrected by the application of an available nitrogenous fertilizer but it may take several years to correct a condition of debility caused by a deficiency of phosphorus or potash. The amount of nitrogen that may be safely fed depends upon the amount of available potassium present since there is a direct relationship between these elements. The more nitrogen fed the more potassium required.

For these reasons, it is recommended that orchards which are in a good state of health should receive annual applications of about 200 to 300 pounds of 16 per cent. superphosphate and 150 to 200 pounds of muriate of potash per acre. The amount of nitrogen supplied should be varied according to the growth and foliage color of the trees. Good-sized leaves of a reasonably dark green color and five or six inches of sturdy twig growth on full bearing trees indicate sufficient nitrogen. Where it is desired to employ a complete fertilizer one containing nine per cent. nitrogen, five per cent. phosphoric acid and seven per cent. potassium may be used. It is preferable, however, to apply nitrogen when the color of the foliage indicates the necessity since excessive vigor may bring about poor keeping quality and induce various physiological disorders such as corky core or stippen.

In the case of shallow-rooted trees on compacted subsoils high level fertilizing is dangerous espe-

## HINTS ON HOW TO BEAUTIFY YOUR HOME SURROUNDINGS

It is generally accepted that the home is the first and best place to practice charity, so the home should be the first centre of beauty and no better start can be made in this direction than by beautifying the home grounds. For those who have a desire to make their home surroundings a joy to themselves and all who see them the booklet "Beautifying the Home Grounds of Canada," will prove a helpful and encouraging document. A limited number of this publication is available from the Canadian Horticultural Council, 114 Vittoria Street, Ottawa, for the nominal price of 25 cents. It has chapter on landscape architecture, how to make the lawn, the flower garden, furniture, pools, rock gardens, the kind of shrubs, plants, trees that can be grown in the different parts of the Dominion, with plans and illustrations. The time of the year is rapidly approaching when the noblest of pursuits—gardening, will be in full swing.

cially with nitrogen since the nutrient balance may be easily upset. On such soils the limited root development will not permit the carrying of an extremely vigorous top bringing about conditions of moisture deficiency and resulting in corky core and bitter pit. In many instances these troubles have been found on alkaline soils high in calcium or lime. On such soils avoid alkaline carrying fertilizers and employ relatively higher amounts of a potash fertilizer.

### BREEDING PROGRAM

Further improvement in type and uniformity has been secured at the Dominion Experimental Farm at Fredericton, New Brunswick, in the constructive breeding program which has been under way with a herd of Holstein and Ayrshire cattle. Cost of production studies are being continued and the herd used in connection with the pasture improvement investigations.

### FERTILIZERS

The recommendations of the Provincial Fertilizer Boards in the provinces of Eastern Canada have been completed and are obtainable from the Provincial Department of Agriculture in each province. Farmers and gardeners who are considering buying fertilizers will find it to their advantage to adopt these recommendations so that the most satisfactory results in crop production may be obtained.

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## Package Bees Soon To Arrive In Canada From The U.S.

Special Care Required Until They Are Well-Established.

By Press and Publicity Division, Department of Agriculture, Ottawa, Ontario.

Thousands of packages of bees will soon be coming into Canada from the Southern States and they will be expected to build up into good honey-producing colonies by the time the main honey flow from clover is ready to be harvested. To do so, however, says the Dominion Apiarist, the bees will require special care from the time they arrive until they are well established in their new location. Bee-keepers who are expecting package bees this spring should get in touch with their nearest express agent or customs officer and arrange for immediate delivery of the bees when they arrive.

As soon as the packages are received, they should be put in a cool, shady place and the screening of the packages sprinkled with cold water or a very thin solution of sugar and water. This will quieten the bees after their long journey. During the late afternoon or early evening, the bees should be released from the packages into the hives. Every shipment of package bees is accompanied with full instructions for releasing the bees. These should be followed carefully. Bee-keepers who have combs of honey saved from the previous year's crop are fortunate, in that the bees may be released on them and extra feeding eliminated. If dry combs or only foundation, are available, then the bees will have to be fed until such time as they are able to secure sufficient food from the fields.

After the bees are installed, they should not be disturbed for at least a week, other than to remove the empty package and replace it with comb or foundation, and to see that the queen is released from her cage. She should be released within 36 hours after installing the bees. Unnecessary disturbance of package bees for the first two or three weeks after they are in the hives usually causes them to supersede their queen, and many a promising colony has been ruined through excessive curiosity. Methods of installation and care of package bees are given in Pamphlet No. 107, a copy of which may be had free upon application to the Publicity and Extension Branch, Dominion Department of Agriculture, Ottawa.