

SEED IMPROVEMENT IN CANADA

Dominion Occupies a Foremost Place in This Important Work—Widespread Organization.

BY L. H. NEWMAN, DOMINION CEREALIST.

Among the countries of the world, Canada occupies a foremost place in regard to her organization and for systematic seed improvement and for handling high class seed in commercial quantities under efficient control. Twenty years ago, the Canadian Seed Growers' Association was established, with headquarters at Ottawa, for the purpose of encouraging greater interest in the production and use of a better class of seed on Canadian farms. This association is composed of individual growers who operate according to certain regulations. There are now upwards of 4,000 of these men scattered throughout all the provinces of the Dominion, and their work is having a widespread influence.

While most of the actual breeding work is performed at the various agricultural colleges and experimental stations, yet there is a considerable number of the members who carry on selection work in one form or another, and who have contributed very materially to the improvement of the varieties commonly grown. Their work to-day, however, is largely that of multiplying the so-called "Elite Stock Seed" developed by the colleges and stations. These institutions realize fully that, if their work is to be productive of the greatest benefit to the country, their products must be used by those who grow crops. They realize furthermore that, in the absence of any definite system of control, their productions very quickly might lose their identity, or depreciate through becoming mixed with other sorts. They therefore welcome and encourage in every way the work of the association.

A LUSTY YOUNGSTER.

In a number of the provinces, subsidiary seed organizations have been established. Of these, the Alberta Seed Growers' Association is probably doing the largest business, although it has only been operating for two years. During this period, it has sold many thousands of bushels of wheat, oats, and barley, some of which have come as far east as Ontario. Very considerable quantities have also gone to the United States. The United States trade has received a very de-

Bolstering Up the Summer Lay.

It is a fact that summer egg production is quite profitable. Each year there seems to be a constantly increasing demand for strictly fresh, new-laid eggs in the summer. The price rallies very quickly in warm weather for the strictly fresh product. Anything which the poultryman can do to bolster up production through the warm summer months will materially swell his income from market eggs. Here are just a few suggestions that will help in attaining this goal.

See that the layers have cool, well-ventilated houses with plenty of open fronts with back ventilators and with windows under the drooping boards at the back of the house. Be absolutely sure that the birds are free from body lice and red mites. The use of blue ointment for the lice and painting the perches, nests and roosting boards with a good mite paint—two or three times during the summer, if necessary—will mean the addition of many dollars to the income. Birds which are fretted and worried and pestered with insects cannot lay their best.

See that the layers have some shade in their yards if trees, bushes or natural vegetation are not present, the planting of corn, spruce, or other luxuriant vegetation will be a great help in protection against the burning rays of the sun.

Then be sure that the birds have an abundant supply of clean, fresh water, kept in a shady place. An abundant water supply helps the birds to control body temperature.

Lastly, reduce the grain ration which is fed from eight to ten pounds of grain per 100 birds per day, and see that they eat increased quantities of dry mash, give them a wet mash, feeding it once a day, using regular dry mash and moistening it with skim milk, buttermilk or diluted semisolid buttermilk.

It is possible, through good management, to retard the molt, prolong the summer lay and increase the egg production per bird ten to twelve eggs by observing these simple practices.

The Destructive Spruce Bark Beetle.

During the last nine or ten years extensive outbreaks of the Destructive Spruce Bark Beetle have occurred in Eastern Canada, particularly in the Gaspé Peninsula, Que., in the Algoma district and in many spruce stands in New Brunswick. It has appeared in several places as far west as Lake Superior. The Entomological Branch of the Dominion Dept. of Agriculture is actively engaged in prosecuting methods for control and in general searching for means to suppress the pest. In furtherance of the work a pamphlet has been issued by the Dept. prepared by Dr. J. M. Swaine, Associate Dominion Entomologist, in which the origin, history, life and habits, and control of the beetle are fully and clearly dealt with. From

ced stimulus through the remarkable winnings of Canadian grains exhibited by members at the International Seed Exhibitions. In this connection it is interesting to note that practically every year since the inception of these International Seed Exhibitions, some fifteen years ago, the world-famous Marquis wheat, originated at the Experimental Farm, Ottawa, or a derivative of this variety, has won the grand sweepstake prize for the best hard spring wheat.

VARIETIES OF GRAIN.

Thanks to the work of the various plant-breeding institutions, Canada now has at her disposal a very creditable assortment of varieties of grain. The old Red Fife wheat which first attracted the attention of the world to Canada as a producer of wheat of high quality, has been superseded by at least seven other varieties, both as regards yield and earliness of maturity. The Marquis wheat just referred to occupies first place as regards total area grown. It is estimated that at least 90 per cent. of all the spring wheat grown in Western Canada, and about 70 per cent. of the spring wheat grown in the United States consists of Marquis.

In Eastern Canada, Huron Ottawa is now recommended and is grown to a considerable extent. Certain other promising varieties of wheat produced at the Experimental Farm, Ottawa, as well as at some of the provincial institutions are at present under investigation, and it is safe to say that some of these will find a place.

While steady and substantial progress is being made in the production and development of superior varieties of grains there is room for improvement. In the West, for instance, there is a need for productive, strong-strawed varieties of wheat of high quality which will either resist or escape the ravages of wheat-stem rust. A good deal of progress has been made in this direction already, and it is confidently expected that before very long varieties will be introduced which will be able to cope more successfully with this grave menace to successful crop raising.

this bulletin we learn that neglected slash is often the cause of outbreaks. Infected trees, which turn red in clumps and scattered patches, usually die in one year, losing their foliage by the first winter following the attack and the injury spreading in the subsequent summer to the surrounding green timber. Almost invariably the infested green trees show many of the thumb or gull about the size of the thumb or smaller, studded over the lower ten to forty feet of the bark of the trunk. Many beetle-infested trees, says Dr. Swaine, have the bark partly removed by woodpeckers, which are often an important factor in checking or preventing outbreaks. Where attacks are threatened or suspected the Dominion Entomologist at Ottawa should be advised. Meanwhile a study of Dr. Swaine's bulletin, in the Publications Branch of the Department of Agriculture, with its several descriptive illustrations of the beetle stages, will be found interesting and enlightening.

Origin of the Turkey.

It is generally supposed, says the Poultry Husbandman of the Dominion Experimental Farms, in his bulletin on the care and management of turkeys, that our domestic turkey originated from the common American wild turkey, which was the largest of the wild family, although some writers claim that the bronze variety, which is the most popular in Canada, came from the Mexican turkey, because of its brilliancy of color and white markings on tail and tail coverts. It cannot be denied, adds Mr. A. G. Taylor, the Poultry Husbandman, that there has been considerable infusion of blood of the American wild turkey due to crossing of wild turkeys with domestic hen turkeys. There are more than half a dozen breeds of the bird, the principal of which are the Bronze, White Holland and Narragansett. Other breeds are Black, Slate and Bourbon Red. Standard weights of the adult cock are: Bronze 36 lbs., White Holland 28 lbs., Narragansett and Bourbon Red each 30 lbs., Black and Slate each 27 lbs., and of the hen: Bronze 20 lbs., White Holland, Narragansett, Black, Slate and Bourbon Red each 18 lbs. Mr. Taylor is also authority for the statement that there is little difference in the hardiness of the breeds and that the flesh of all turkeys is very similar both in texture and flavor.

Last year's berry boxes for this year's fruit may cost you a good sale. Some folks don't like to find petrified 1923 or 1924 berries in 1925 packages, and you can't blame them if they don't. The canning houses don't care—use old boxes for this trade, if you must use 'em, but use new boxes for the retail trade. I've found that it pays.—G. McK.

To be successful with the orchard four things must be done—prune, spray, cultivate and fertilize.

How to Identify the Plum Spider Mite.

The European red mite is a fruit pest which was introduced into Canada on nursery stock imported from Europe. Known also as the plum spider mite, it is found in the fruit districts of the Maritime Provinces, Ontario, and British Columbia, and is especially injurious to plums. A new circular, issued by the Dominion Entomological Branch, gives the life history and methods of control of this pest and tells how to distinguish it from the common red spider. The eggs of the red mite are at first pink and later a dull, dark red, while those of the common red spider are at first colorless and later reddish in hue. The nymphs of the former are dull red and those of the latter flesh colored. The adult mite is carmine while the spider is green, yellow or orange. The spiders spin conspicuous strands of silk while the mites do not. The circular may be obtained from the Publications Branch, Dept. of Agriculture, Ottawa, gives concise information concerning the pest, including methods of control.

The European Red Mite.

The European red mite, known also as the plum spider mite, is a serious pest of plum and other fruit trees in different parts of Canada. It passes the winter in the egg stage. The eggs, which in the winter are located on the bark, hatch during the blossom season, and the dull, red colored larvae migrate to the leaves and feed on them. In a little over two weeks they are mature and the females lay eggs on the foliage. Though not very prolific, the shortness of their life cycle accounts for their rapid increase. Making as many as six generations possible during the summer. A new circular issued by the Dept. of Agriculture at Ottawa, describes the appearance of these mites, and the injury they cause. They are controlled by spraying with commercial lime sulphur at the regular times for other pests.

Don't forget that wood-ashes are excellent to spread over the ground where you intend to plant late radishes. Wood-ashes are good for most any garden crop, for that matter, and they are rich in potash, an element that costs money.

Daily Doings.

Encourage children to keep a diary. It will train them to habits of observation and give them more ease and greater naturalness in writing than can be acquired by school compositions, because they keep a diary as a pleasure not as a task, and because they deal in it with everyday things they actually know and do.

My children have small diaries with five lines for each day's notation. In the evening they confer with each other as to what was the most important event of the past twenty-four hours. No two decide on the same thing and no two express what they write in the same style.

Keeping a diary helps them in spelling as well as in the art of expressing themselves and, though their lives are not eventful, it will be interesting for them to look back over these records in after years. They are not permitted to pry into each other's diaries, and I read what they write only on invitation.—M. P. D.

Our Rubber-Tire Swing.

Out under the elm, when dishes are done, My sister and I have the mostest fun! Sometimes we play "bear" and pretend we're afraid, Sometimes we play school, and besides we've made A playhouse, a "teeter" and 'bout everything— But most fun of all is our rubber-tire swing! —Elle Dawson.

Marking Clothes.

I find that marking my children's clothes saves much time in sorting after each washing, as well as preventing disputes among the children. Each child has a different color. Stockings and underwear are marked with colored yarn and lighter garments with colored thread.—M. V. S.

Ouch!

Visitor—"What small girls you employ in your dairy!" Foreman—"Yes, those are our condensed milk maids."

Some varieties of fruit trees are always sending up suckers just at their base. If these are cut now in hot weather it gives them a setback they are not apt to overcome.

HARVEST MEALS LOOK THAT THE MEN-FOLKS LIKE

BY NELL B. NICHOLS.

Never do I see an ambitious binder or header moving through golden wheatfields or a crew of hungry harvesters coming in to dinner but what I remember a shining belt buckle with pink sets. The buckle was purchased with money my father gave me when I was fourteen as reward for cooking for his harvest hands two long weeks. While the sun sizzled above the western plains I had the time of my life, experimenting in the kitchen, learning to roll pie crust that didn't have to be patched and making dishes that I'd never try in view of my mother's experienced eyes.

The menus and recipes for harvest meals which I am passing on to you had their beginning as long ago—as well as the days when belt buckles were in vogue.

My experiences have convinced me that all hungry farmers have a fondness for the following foods: Beef, noodles, ground and baked in a loaf, and in stews made by combining the left-over meat with vegetables; baked ham, cold sliced tomatoes, cabbage sauté and cole slaw and cucumbers sliced in vinegar; pie and cookies. And whenever two large dishes of the cold vegetable are placed on the table the cook always scores a hit. Coffee, an abundance of it, has no substitute.

Here are two of my favorite menus for harvest meals:

Beef with Raisin Sauce	Brown Gravy
Potatoes au Gratin	Creamed Peas
Bread Butter	Apple Jelly
Sliced Cucumbers	Cole Slaw
Vanilla Ice Cream	Butterscotch Cookies
Coffee	Iced Tea

I sometimes substitute chocolate pudding with cream in place of the ice cream; but as a rule the men like the frozen dessert best, and it can be made early in the morning, which eliminates last-minute preparations. I use a crankless freezer with excellent results. Frequently the beef is roasted with catchup. I use a waterless cooker for roasting, and this eliminates the basting. Various kinds of pies are used for the fried ones, but the fried variety may be made a few days before serving if stored in covered jars.

Some of the recipes which I use at this season are as follows:

BEEF ROASTED WITH CATCHUP.
Sprinkle a four-pound rump roast with one teaspoon salt, one-fourth teaspoon pepper and two and one-half tablespoons flour; put into a waterless cooker and pour on one cup catchup. Bake three hours in a moderate oven. When well browned on one side turn

Make Your Own Porch Mats.

For the back porch you need a mat that will stand hard and continuous usage, and one made from corn husks will be found to give the most satisfaction.

The work of making these mats is light and pleasant, and so simple that the children may assist you.

Only the white, soft inner husks are retained. These should be laid flat in a box or barrel and kept to be used for mat making during the winter and spring.

Start the braid with six husks, tied together with stout twine halfway down their length. Divide off three strands, each having two husks in it, and begin to braid.

Cross the left strand over the right and, when you bring the third strand over the right, add two new husks to that strand. Take care to leave a good three inches of that part of the husk which was stiffened from the cob projecting at the top of the braid.

Add two husks to each strand, in the same way, as each one is brought over the right side and held firmly by your thumb.

A little attention to your braid will soon teach you to keep the projecting husks of the same length and to so wrap the short ends in the new husks added that the braid will be smooth on the under side. If an unevenness is seen, unbraided back to the place and do the work over again. The same husks can be used for the second braiding, as they are sufficiently tough not to be harmed by handling.

Every now and then coil the braid around itself upon the floor, in round or elliptical shape, to determine the size. When it is large enough, fasten the end with twine, as you would tie hair with ribbon.

The braid must be thoroughly dampened before the sewing is done, as the dry husks would be too brittle to hold stitches. Let it stand in water overnight and then drain for several hours before beginning to work upon it. Use the largest size darning needle and rather fine but very strong linen twine. Do not take your thread too long, as it may knot. Fasten each new thread to the old one with a good firm square knot.

Take great pains at first to hold the braid rather loosely, so that the mat will lie flat instead of bulging up on the floor. After a few times around you will have no trouble.

Fasten the end firmly and put the mat upon the floor with the smooth side down.

Paint the perches every four months with warm tallow and thus keep mites away.

and brown on the other. Make a gravy from the drippings in the pan.

POT ROAST OF BEEF.
Wipe a four-pound shoulder roast with a piece of cloth wrung out of cold water, rub over with two teaspoons salt, sprinkle with pepper and roll in flour. Sear the entire surface in a frying pan containing hot fat fried from salt pork. When the meat is browned place in a kettle and add three-fourths cup hot water. Cover and cook slowly four hours or until the meat is very tender. Add more water during the cooking if necessary, and turn the meat two or three times. Make a gravy from the kettle drippings.

RAISIN SAUCE.
Brown one-half cup butter and add one-fourth cup flour, five teaspoons salt and a dash of pepper. Stir in two cups hot water. When the mixture begins to thicken add one cup raisins and two tablespoons lemon juice. Serve on the platter with the pot roast.

BUTTERSCHOTCH COOKIES.
Cream one cup shortening with two cups brown sugar. Add two beaten eggs. Sift four cups pastry flour with one teaspoon soda and one teaspoon cream of tartar. Stir a part of the dry ingredients into the egg mixture and add one teaspoon vanilla. Knead in the remainder of the flour and one cup chopped nut meats. Shape the dough into loaves and set in the ice box or a chilly place for several hours or overnight. Slice off and bake in a hot oven. These cookies may be made several days before using.

POTATOES AU GRATIN.
Use six cups boiled potatoes, diced, and three cups white sauce, which is made by thickening two and three-fourths cups sweet milk with five tablespoons flour and seasoning with three tablespoons butter and three teaspoons salt. Use one-half cup grated cheese. Arrange the potatoes and white sauce in alternate layers in a baking dish, sprinkling every layer with a little of the cheese. The top layer should be of white sauce. Cover the top with fine bread crumbs and brown in a moderate oven.

FRIED PIES.
Roll baking powder biscuit dough about one-eighth inch thick and cut in circles. On one-half of these rounds place a little sweetened apple sauce. The other circles use for covers. The edges are moistened slightly with cold water and pressed together firmly. Then these little pies are fried with doughnuts in deep fat. When cooked they are drained and rolled in sugar. Other fruit sauce may be substituted for apple sauce.

OLD-FASHIONED LEMONADE.
Boll six cups water, eight cups sugar and the grated rind of six lemons together ten minutes. Then add three cups lemon juice. Cool and dilute with ice water, using one cup lemon syrup to three cups of water. Add chopped ice. The syrup may be bottled and kept in a cold place for future use.

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THE GUARDIAN OF THE THREE ORPHANS

BY M. K. O'DONNELL.

"Dash" was a large St. Bernard. His master had raised him from a little pup. He was a lovely dog, with a heavy coat of soft dark brown hair and a band of pure white around his neck. Dash worked very hard for he had the care of three little children. Their mother was a very busy woman, for they were poor, and she had not much spare time. The big, good-natured dog seemed to understand this perfectly and acted as if it was his duty to care for the children.

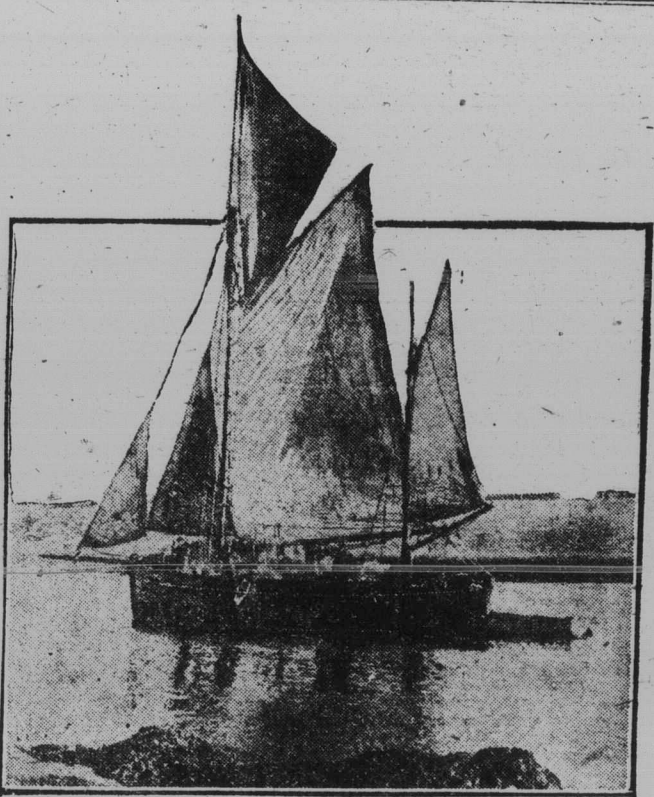
His master's home was on the bank of a large river, a dangerous place for such little children to play, but no one was ever uneasy as long as the dog was with the children. When they played by the river Dash never left them for a moment. He always walked along between them and the water. If any one of them ventured too near the edge, he would shove the child away from the water a safe distance on the bank.

At the front of the house there was a road, busy with autos passing every minute of the day. Dash never had a moment's peace when the little ones played near the river. He watched continually for cars and rigs, always

walking between the children and the vehicles and keeping them over to the side of the road out of danger. Many a time when the children were playing in the middle of the road and the dog saw an auto approaching, he would catch each child by the clothing in turn and hurry him to a place of safety.

Dash was very fond of his master who had always treated him kindly. One evening when this good man was on his way home from his work he was killed when crossing the railroad track. For days the dog refused to taste food, but he never forgot in his grief to look well after the three children. Shortly after this their mother died and their aunt, an elderly lady, came to live with them.

Dash continued his guardianship until the children were old enough to go to school. After he was relieved of his duties in looking after the children he seemed to grow lonely and sad. His appetite grew less and less daily until he was a mere skeleton. One morning he was found dead. Dash was well known in the town where his master had lived, and was called by everybody "The Guardian of the Three Orphans."



The oldest ship ploughing the seven seas. For 124 years, this magnificent vessel of Cowes, England, has traded continuously between Southampton and the Isle of Wight. During this time, she is reckoned to have traveled over half a million miles and, remarkable considering her size, she has carried 400,000 tons of cargo.