ture and the Irrigation Expert of Victoria have both gone abroad looking for farmers.

A NEW GROWTH STIMULANT.

Victor Nightingall, a Victorian scientist, has found that radio-active material, when applied to plants, causes a great stimulation to growth. While investigating the cause of sterility of the spermatozoa in the male, caused by the excessive exposure of X-rays, first noticed a few years ago by a London scientist, he thought that possibly some light might be thrown on the subject of experimenting on plants. He found that plants were sensible to the rays in a marked degree, and stimulation of growth was seen at an early stage in the development of the seed. Of course, the experimenter knew that the rays could not be applied to a field, so he thought of trying the effect of some radio-active ore which happened to be in the laboratory for use in wireless telegraphy. He found that results almost equal to the rays were got. Wheat exposed to the action of the ore made rapid progress; it was twice as thick as that treated naturally. It was also found that the eel-worm pest was destroyed in soil subjected to the influence of the ore. Extensive trials are being made this season under the direction of the Department of Agriculture in Victoria.

WHEAT VARIETY TESTS.

Last wheat season innumerable experiments were conducted throughout the wheat States of Australia with various varieties of grain, imported and locally-bred. Federation, the creation of William Farrer, is easily the favorite. There are, of course, soils where other kinds do better. Federation carries a very poor straw, but it was bred for the dry districts, and a short straw was, therefore, a necessity. Another favorite is Dart's imperial, which is a sport, discovered some years ago. It is recognized by the various Departments of Agriculture that neither these two kinds, or the others being grown, mean the final triumph of either the farmer or the scientific breeder. The Jonathan wheat, boomed a few years ago, was also a sport picked out by an observant farmer, so were Steinweidal and others which could be named. For this season more extensive arrangements have been made for tests and observation.

PROPOSES 14-PER-CENT. MOISTURE MAXIMUM FOR BUTTER.

A commissioner, appointed to inquire into the export butter trade in Australia, has recommended complete State supervision from the yard to the ship. The moisture contents, he suggests, should be not more than 14 per cent., but other experts are suggesting that the maximum should be further reduced.

HAS HE A SUBSTITUTE FOR RUBBER?

The rubber boom has reached Australia, but the white-Australia policy seems to destroy any chance of the trees being raised on the continent. New Guinea, however, is very handy, and there are illimitable areas there at very low rates for 99-year leases. It is interesting to mention, however, that a Mr. Gayner, of Middle Park, Victoria, has made a discovery which he claims will supplant rubber. The process is said to be very simple. It consists of anointing the fabric, whether canvas or cloth, with a glutinous vegetable compound possessing remarkable qualities. The application of this mixture to the fabric not only endows it with all the qualities of rubber, but, in addition, creates a tire which is proof against deflatation from ordinary punctures. The self-sealing characteristics of tires and inflated goods made on this principle form one of their most valuable qualities, and will readily appeal to the legion who have had experience of puncture troubles. Additional features in favor of the new discovery are that tires under its process are as resilient as rubber, while the cost of manufacture is not more than one-half, and is likely to be reduced as manufacturing operations expand. If this discovery turns out as successful as the syndicate which has it in hand thinks, it will prick a lot of the rubber bubbles lately blown up.

J. S. DUNNET.

Sydney, Australia.

The Real Thing.

Editor "The Farmer's Advocate":

When reading the remarks of Mrs. Hopkins on the subject of farmers, I was under the impression that she was romancing about a variety almost as extinct as the Dodo or Great Auk, but I am pleased to be able to state that I came upon two full-grown specimens of the F. Hopkinsii on the 1st inst. last. It was during a celebration in our little town, and while I was observing them carefully through my glasses, which are not of a high magnifying power, I saw one take a bite from a twist plug of tobacco, such as used to be sold in quarts twenty-five years ago, when tobacco was cheaper than it is now, and Macdonald's Cut was the only kind obtainable in a country store. Whether these two specimens were from the district, or whether they were emigrants from the part of the country that Mrs. Hopkins is familiar, I am unable to say. Should they again come under my observation, I may be able to give you further particulars as to their sanitary arrangements and standards of etiquette when driving out with the females of their kind.

LUSUS NATURÆ.

Coming Show Dates.

Winnipeg Industrial Exhibition, July 13th to 23rd.
Highland and Agricultural Society, at Dumfries, July 19th to 22nd.
Brandon, Man., July 25th to 29th.
Regina, August 2nd to 5th.
Saskatoon, August 9th to 12th.
Edmonton, August 23rd to 26th.
Sherbrooke, Que., Aug. 27th to Sept. 3rd.
Canadian National Exhibition, Toronto, August 27th to September 12th.
St. John, N. B., Dominion Exhibition, Sept. 5th to 15th.
London, September 9th to 17th.
Ottawa, September 9th to 17th.
Charlottetown, P. E. I., Sept. 20th to 24th.
Victoria, B. C., Sept. 26th to October 1st.
Halifax, N. S., Sept. 28th to Oct. 6th.
New Westminster, B. C., Oct. 4th to 8th.
Maritime Winter Fair, Amherst, N. S., December 5th to 8th.
Smithfield Club Show, London, Eng., Dec. 5th to 9th.
Ontario Winter Fair, Guelph, Dec. 5th to 9th.
Toronto Fat-stock Show, Union Yards, December 12th and 13th.

Breed-study Contest.

As stimulating an interesting study in breed type, we offer a prize for the first and best answer to the question, "What breed is this bull, and why?" Contestants are expected to name the breed of the bull represented in the picture, and in a brief sentence or two, not exceeding thirty words in length, to state the points, both negative and positive, which lead them to their conclusion. The first correct answer will not necessarily win the prize; neither will the best answer necessarily do so. While the main stress will be laid upon discrimination, as exemplified by reasons given, still, in case of a close decision, priority in receipt at this office will turn the scale. The sooner your answer is in, the better your chance of the prize. The contest will close July 23rd, and the award will be published the following week, together with the winning answer. Send a letter or postcard giving decision, reasons, name and post-office address, to "The Farmer's Advocate," London, Ont., marking it "Breed-study Contest." The prize will be any book, of value not exceeding one dollar, advertised from time to time in this paper. If the winner desires a more expensive book, he may have his choice by paying the difference in value. Only one prize will be given, but several answers may be published. Now, lodges and agricultural college students, here is your chance. Anybody is eligible to compete.

What Breed is this Bull?
(See breed-study contest.)

A revised edition of Bulletin 11, containing the inspection and Sale Act (Fruit Mark's Act), is now ready for distribution. This bulletin contains the amendments up to date, together with notes upon the various sections of the Act, suggested by its enforcement during the last few years. A copy of this bulletin will be sent, postage free, to all who ask for it. Address, The Fruit Division, Department of Agriculture, Ottawa.

United States Crop Conditions Below the Average.

The general average condition of crop growth in the United States on July 1st, 1910, according to the official summary of the United States Government's July Crop Report, was about 5.5 per cent. lower than on July 1st, 1909; 3.8 per cent. lower than July 1st, 1908, and 3.4 per cent. lower than the ten-year average condition on July 1st. In the New England States, conditions are 5.5 per cent. better than a year ago, and 4.1 per cent. above the average. In the Southern States, conditions are about 3.5 per cent. better than on July 1st a year ago, and 2.4 above the ten-year average. In the North Central States, east of the Mississippi River, conditions are 8.7 per cent. below a year ago, and 4 per cent. below the average. In the North Central States west of the Mississippi River, 15 per cent. lower than a year ago, and 12.2 per cent. below the average. In the far Western States, 3.6 per cent. below a year ago, and 4.3 per cent. below the average. The acreage of the cultivated crops so far estimated by the Bureau of Statistics is about 4.2 per cent. greater than last year.

The preliminary estimate of the area of corn planted is 114,083,000 acres, an increase of 5,312,000 acres (4.9 per cent.), as compared with the final estimate of last year's acreage. The average condition of the corn crop on July 1st was 85.4, as compared with 89.3 on July 1st, 1909, 82.8 on July 1st, 1908, and 85.1 the ten-year average on July 1st.

The amount of wheat remaining on farms is estimated at 5.3 per cent. of last year's crop, or about 38,739,000 bushels, as compared with 15,062,000 on July 1st, 1909, and 38,708,000 the average amount on farms on July 1st for the past ten years. The average condition of winter wheat on July 1st, or when harvested, was 81.5, as compared with 80.0 last month; 82.4 at harvest, 1909; 80.6 in 1908, and 81.3 the average at time of harvest for the past ten years.

The average condition on July 1st of spring and winter wheat combined was 73.5, against 85.2 last month; 86.5 on July 1st, 1909; 83.9 July 1st, 1908, and 84.0 the ten-year average on July 1st.

The average condition of some other staple crops on July 1st was as follows: Oats, 82.2, as compared with 91.0 last month; 88.3 July 1st, 1909, and 86.6 the ten-year average on July 1st. Of barley, 73.7, as compared with 89.6 last month; 90.2 on July 1st, 1909, and 88.1 the ten-year average on July 1st. Of rye, 87.5, as compared with 90.6 last month; 91.4 on July 1st, 1909, and 90.4 the ten-year average on July 1st.

White potatoes is estimated at 3,521,000 acres, or 4,000 acres (0.1 per cent.) less than last year. The condition of the crop on July 1st was 86.3, as compared with 93.0 on July 1st, 1909, and 90.9 the ten-year average on July 1st.

The acreage of tobacco is estimated at 1,216,000 acres, or 35,700 acres (3.0 per cent.) more than last year. The condition of the crop on July 1st was 85.3, as compared with 89.8 on July 1st, 1909; 86.6 on July 1st, 1908, and 86.3 the ten-year average on July 1st.

The acreage of flax is estimated at 3,103,000 acres, or 361,000 acres (13.2 per cent.) more than last year. The condition of the crop on July 1st was 65.0, as compared with 95.1 on July 1st, 1909; 92.5 on July 1st, 1908; 91.2 on July 1st, 1907, and 91.1 the average on July 1st for seven years.

The average condition of the hay crop on July 1st was 80.2, as compared with 86.1 last month; 87.8 on July 1st, 1909, and 92.6 on July 1st, 1908. The condition of timothy on July 1st was 79.2, as compared with 87.1 on July 1st, 1909; 90.2 on July 1st, 1908, and 85.1 the ten-year average on July 1st. The condition of clover on July 1st was 82.8, as compared with 83.8 on July 1st, 1909; 95.5 on July 1st, 1908, and 84.6 the ten-year average on July 1st.

The strawberry crop was abruptly shortened by dry weather. Roseate prospects for strawberries are always heavily discounted when drouth characterizes the season prior to and during picking.