

Best cream pasteurizer in '16 improves quantity, quality

CONTINUED FROM PAGE 1

committee. They were located at Mill View, Le 45, Central Deception and St. Leonards in Prince County. Unfortunately, the one at Mill View had only been operated a season or two when it was burned down and not rebuilt. It produced 2,000 cheese and the returns favoured it. It improved its pattern by that manner of handling the milk. The "Dunk" River factory continued in operation for several seasons, but finally closed. St. Leonards factory continued in operation for twenty successful seasons and supplied the milk of cheese because very popular and continued so until the end of the general market in the nineties placed factories around it, cutting up its territory so badly that the company was compelled to close. This, the most successful of the first cheese factories, was for the proper appointment of territory, put out of operation in 1927 the Cornwall factory was built and continued in operation for about 28 years.

Prof. James W. Robertson, then Dominion dairy commissioner, visited the province in 1931 with the intention of introducing cooperative dairies because this form of dairy manufacturing was successful in Ontario. He spoke at public meetings for the purpose, explaining the new plan and offering assistance to carry it out. The first meeting was held at Kennington in Prince County, and although favourably received, the farmers were slow to avail themselves of the offer.

On going to Kings County, Prof. Robertson met with better success. His offer was accepted by the people of New Perth in the vicinity, and a company was organized and a supply of milk guaranteed. The new factory was built and was opened in readiness and was opened on June 20 and closed on June 20. The quantity of milk received was 696,247 pounds and the value was \$69,624.70.

ASSOCIATION FORMED

In order to offer continued assistance and instruction services, and to secure a uniform make of butter and cheese throughout the province, and to raise the quality of the output to the highest point of excellence attainable, it became evident that a general organization was necessary. A meeting was held in Charlottetown and the initial steps in the organization of the Prince Edward dairy association were taken.

The "direct" report of the first year (1929) records the history of this as follows: "A meeting of delegates from the dairy companies of the province was held in Charlottetown on March 4, 1929. At this meeting, J. W. Robertson, J. Dillon, Premier D. Farquharson and other delegates were present. It was unanimously decided to form a dairy association for the province. The following persons were appointed a committee by the meeting to procure an act of incorporation for the association: Thomas Simpson, David P. Irving, James MacDonald, Lanchin MacDewar, Wilfred MacDewar, William Calbeck, and John Anderson. The committee was also asked to provide for the formation of a Dairyman's Board of Trade. After some discussion about the financial affairs of the association, Prof. Robertson announced that he had received from the Department of Agriculture at Ottawa to make a grant of \$300 to the association for the current year. Premier Farquharson announced that the Provincial Government would grant the sum of \$400 per year.

The committee met on April 16, 1929, and afterwards became law, the committee consisted of the following directors of the association: Arthur Simpson, Mayfield, was also elected president; John Anderson, Secretary; Treasurer, J. W. Robertson; Auditor, J. W. Robertson. The association was organized on June 1st, 1929, and the first meeting was held on June 22nd, 1929. It was decided to engage Mr. Morrow to be the "man" of the association. On February, 1930, at \$75.00 per month, he paying his own expenses. In order to provide sufficient fees for carrying out the purpose of the association, the directors authorized a levy of 1/4¢ per hundred pounds of milk, to all milk received at several cheese "butter" factories in the province between the 1st of June and the 31st of December, 1930; the total amount of the levy was \$2,775.00. At a meeting of the directors held on December 22, it was decided to engage Mr. Morrow to be the "man" of the association. On February, 1930, at \$75.00 per month, he paying his own expenses as before. Mr. Jenkins was appointed auditor in the place of the late Mr. Charles Farner.

34 FACTORIES

A report of the business of the cheese and butter factories of the province for the year 1930, is herewith submitted which shows the value for 1930 was \$286,000.

117,21, a gratifying increase over the business of any previous year. The number of cheese factories in operation was 34, and there was one addition not working, the number of creameries was six, with two separating stations; four plants for winter butter making were added during the year.

When cheese factories were first established in the nineties they were accustomed to making cheese in the summer months, that is from June 1 to October 31. These five months were considered the cheese season. After October 31, the factories in some cases, converted into a creamery where the milk was separated and the cream added to creamery butter made from unpasteurized milk within the plant.

The method of making the butter was by means of a butter churn. After the cream was ripened, vat, cooled to a ripening temperature and held until it had developed a considerable amount of acidity, which was considered to make the best flavored butter. When the amount of acidity was determined, the cream was then churned, and when the cream had a nice well developed percentage of acid, it was churned at a moderate temperature into butter in a square box churn, which was about three quarters of an hour, with suitable temperature, the butter was then separated from the milk which was released from the churn and carried in a tank for the farmer and the butter was washed in the churn in the form of granules. After being allowed to drain, a high percentage of salt and gathered into a large body by the rotating of the churn, the butter was then packed in a rotary table for working purposes.

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READILY ACCEPTED

This unpasteurized cream butter was very readily accepted on the market and the farmers, but its keeping quality was not good. The butter industry could not develop very rapidly with such a system of manufacture.

It was not until the advent of the cream pasteurizer in 1916 that butter production began to increase and the development continued until the butter surpassed cheese and eventually far exceeded it.

The first cream pasteurizer was installed in the factory at North Troy in 1916 and the eventual result was a marked improvement in the flavor and palatability of the butter, and in the quantity of production.

In 1930, for example, only 572,729 pounds of butter were produced in the province and this compared with 4,431,739 pounds of cheese which was the greatest production in the province's history.

Elmer Gamble, who is now associated with the Amalgamated Dairies at Summerside, was assistant butter maker at North Troy when the cream pasteurizer was installed. Frank Lang was the butter maker at North Troy.

UPSWING SLOWED

It was several years before the pasteurizer was installed in many butter factories, so that slowed the upswing in butter

manufacture, Mr. Gamble recalls. Butter, production varied a bit up and down until 1916 when only 532,155 pounds were produced. Production gradually increased as other butter plants installed cream pasteurizers. It surpassed one million pounds for the first time in 1920 when 1,373,327 pounds were produced and it varied between that and the two million mark until which was reached slightly with a production of 2,028,554 pounds. Butter production didn't hit the three million mark until 1928 when 3,469,410 was made. It was 4,313,122 in the following year and that increased to almost six million last year when production reached a near record - 5,339,645 pounds.

The average price for butter was 25.40 cents per pound in the first year for which price figures are available. It was down to 23.79 the following year but was 27.12 in 1917, hit 26.19 in 1918, was 45 cents the following year and jumped to 35.31 cents in 1920 as the price rose to the highest point it was to achieve until 1948 when it reached 64.75 cents per pound. Cheese was worth 1.66 cents per pound in 1901, the earliest year for which a price is available. Production slipped to 2,668,166 in 1902 though the price straggled slightly to 19.25. Cheese production slipped well below the 3,000,000 pound mark in 1908 and 1907 but was back on top of that figure in the following three years as the price per pound ran 11.50 down to 10.68.

ROSE ABOVE 20

The price of cheese was back 20¢ the cent in 1917, hit a slightly higher than 190 and one quarter million pounds were made and it hit a peak of 26.50 in 1919. It did not reach again until 1947 when the price rose to 31.20 and it was 35.92 in 1948 the last year for which the comparative figures for butter and cheese were so readily available when this was being written.

Cheese production dropped below two million pounds for the first time in 1928, with 1,681,774 pounds manufactured, climbed beyond two million briefly in 1924-26 and then slumped to 870,579 in 1930, and was down in 1935 to 212,111 pounds as the rural butter plants were also down to 1,672,000 in the mid-depression years. Cheese brought only 11.22 cents per pound and butter was not so much better at 23.11 cents.

Cheese manufacture was back to 1,106,000 pounds in 1942 as the economy was recovering and butter climbed to 3,469,000. The price for cheese that year was a 21.20 and butter brought an average of 37.2 cents. The following year the butter made jumped to 4,313,122 at 38 cents a pound and cheese slumped to 780,000 pounds at 24.75 per pound.

Cheese production last year was only 884,310 pounds for a total value of \$27,590.55 which paid the milk producer of 47¢ per 70 cents per pound butter fat, slightly more than the average 64.95 cents per pound butter fat paid to the man who sent his product to the market. The total value of butter which totalled \$3,789,305 in value.

Another advantage is that you can build them yourself in off time. They are inexpensive and simple and will last many seasons.

To make sure you are getting waterproof glue for plywood, look for the industry mark on the edge of the panel - PMBC Exterior.

Paints boxes with good exterior house paint, sealing thoroughly the edge grain of the plywood.

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Economical berry boxes smooth plan from pickers

Here's something to give the field hands a hand. A wise move, especially if you are married to the hands.

Mother's garden or commercial berry operation will go smoother with these neat berry boxes to produce steady flow of berries from pickers to packers.

The box holds 16 standard number, yet not too heavy. Another advantage is that you can build them yourself in off time. They are inexpensive and simple and will last many seasons.

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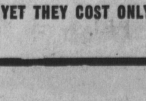
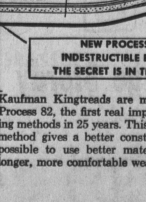
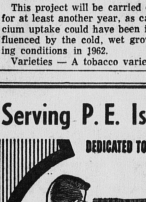
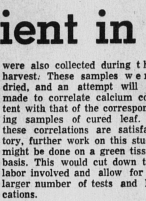
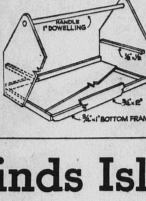
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Farm finds simple way to raise insect masses

Root maggots go into a dormant state in the pupal stage under certain conditions, and once in diapause they remain in that state for up to six or eight months without change at room temperatures. Diapause can be broken a little faster by subjecting the pupae to a temperature of 40 deg. F. or above 70 deg. F. for 24 to 48 hours if they are kept at nearly a constant temperature at any level from about 60 deg. to 70 deg. F. They can be prevented from going into diapause only by subjecting the mature larvae to a fluctuating temperature of

from about 65 deg. to 70 deg. F. at 34-to-48 hour intervals. Diapause is induced by the secretion in the insect body of the enzyme cholinesterase which produces the chemical acetylcholine which in turn brings about the quiescent state by greatly slowing up all reactions in the system. Subjection to the fluctuating temperature apparently prevents the increased enzyme activity in the mature larvae.

Studies at the Experiment 1 Farm have shown that root maggots will go into diapause if nearly mature larvae are subjected to a temperature of below 50 deg. F. or above 70 deg. F. for 24 to 48 hours if they are kept at nearly a constant temperature at any level from about 60 deg. to 70 deg. F. They can be prevented from going into diapause only by subjecting the mature larvae to a fluctuating temperature of

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Study finds Island soil is deficient in calcium

By K.E. LELACHEUR

A study was started in 1962 to determine calcium uptake in tobacco grown on soils with a wide range of pH levels. This subject is considered important from a manufacturing standpoint. Ontario tobacco contains approximately 3.8-4.2 per cent calcium which is rather high for satisfactory processing. Such percentages of calcium present in the crop will produce a high percentage of shattering and reduce filling power or the number of cigarettes that can be produced from a given unit of tobacco.

Ontario tobacco is grown on soils with a pH level of 6.8-7.0 while the average pH of soils suited to tobacco on Prince Edward Island is under 5.5. The crop needs a small amount of calcium for proper growth and fertilizer utilization. Magnesium is also required on low pH soils. The object of this study is to measure the calcium content of the cured leaf to a point that it would adversely affect the processing qualities.

PLOTS ESTABLISHED

Plots were established at two locations in 1962. These sites were both on Culloden soil with a low pH level. Dolomite limestone was applied early in May at rates increasing from zero to 2500 lbs. per acre in 500 lb. increments. The plots were retolled to a depth of five inches to work in the limestone as much as possible. Tobacco was harvested and cured from all treatments, and calcium analysis of the cured leaf tissue will be correlated with soil analyses for pH on samples taken immediately after harvest. The expected change in pH from the limestone treatments was evident in the results of soil analysis. Tissue samples have yet to be analyzed to measure the calcium uptake on these plots.

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This project will be carried on for at least another year, as calcium uptake could have been influenced by the cold, wet growing conditions in 1962. Varieties - A tobacco variety

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