

Science Applied to Dairying.

Allowing ten cows an hour to a milker, which means lively work, it requires the continuous service of an army of 300,000 men, working ten or twelve hours a day throughout the year, to milk the cows kept in the United States. According to these figures compiled by the department of agriculture, there are five times as many men in the army of cow milkers as there are in the army of soldiers who are putting a girdle of the Uncle Sam brand of imperialism around the globe.

The dairy industry is fast passing out of the category of agricultural pursuits into that of manufacture. It is now one of the principle industries run largely on the co-operative plan. The effect of the establishment of cheese and butter factories, comparatively new in kind, is to transfer the making of butter and cheese from the farm to the factory. Originating in this country, although now extensively adopted in others, the general plan may be rightly called "the American system of associated dairying." It constitutes one of the notable and important landmarks in the progress of dairying during the present century.

The early cheese factories and creameries were purely co-operative concerns, and it is in this form that the system has usually extended into new territory, whether for the production of butter or cheese. The cow owners and producers of milk co-operate and share, upon any agreed basis, in organizing, building or renting and re-fitting, equipping and managing the factory and disposing of its products. The farmers interested as joint owners, and all who contribute milk or cream, are called the patrons. The operations are managed by a committee or board of directors chosen by and from the patrons. If the business is large enough to warrant the expense, the immediate supervision of the concern and all its interests is intrusted to a single manager, employed by the board. In a factory of this kind all expenses are deducted from the gross receipts from sales and the remainder is divided pro rata among the patrons upon the basis of raw material contributed. Another plan is for the plant to be owned by a joint stock company, composed largely, if not wholly, of farmers, and milk or cream is received from any satisfactory producer. In this case interest on the property or capital is usually allowed and included in the current expenses. The management is otherwise the same; the stockholders receive a fixed rate of interest on their investment and the dividends to patrons depend upon their deliveries of milk or cream and the fluctuations of the market for the factory products. The proprietary plan is also common, being managed much like any other factory; the proprietor or company buys the milk or cream from the producers at prices mutually agreed upon from time to time and assumes all the expenses, risks and returns of the business. Another way is for the factory, whether owned and managed by a company of farmers, probably themselves patrons, or by outsiders, to bear all expenses, make and sell the butter and cheese at a fixed charge per pound and divide the net proceeds of sales as on the purely co-operative plan.

Cheese making has been transferred bodily from the realm of domestic arts to that of manufactures. Farm made cheeses are hard to find anywhere; they are used only locally, and make no impression upon the markets. In the middle of the century about 100,000,000 pounds of cheese was made yearly in the United States, and all of it in farm dairies. At the close of the century the annual production of this country will be about 300,000,000 pounds and 96 to 97 of this will be made in factories. Of these establishments, there are nearly 3,000, but they vary greatly in capacity, and many are very small. New York and Wisconsin each has a thousand. The former state makes nearly twice as much cheese as the latter, and the two together produce three-fourths of the entire output of the country. The other cheese making states, in order of quantity produced, are Ohio, Illinois, Michigan and Pennsylvania; but these are all comparatively unimportant. A change observed as taking place in the factory system is that of bringing a number of factories previously independent into a combination, or under the same management. This tends to improve the quality and secure greater uniformity in the product, and often reduces cost of manufacture, all being decided advantages. More than nine-tenths of all cheese made is of the familiar standard variety, copied after the English Cheddar, but new kinds and imitations of foreign varieties are increasing. The cheese made in the country, with the small importations added, gives a yearly allowance of less than four pounds to every person; but as 33,000,000 to 50,000,000 pounds are still annually exported, the per capita consumption of cheese in the United States does not exceed 3½ pounds per annum. This is a very low rate, much less than in most European countries.

The cows in the United States were not counted until 1840, but have been since enumerated for every decennial census. It has required from twenty-three to twenty-seven cows to every 100 of population to keep the country supplied with milk, butter and cheese and provide for the export of dairy products. The export trade has fluctuated much,

but has never exceeded the produce of 500,000 cows. With the closing years of the century it is estimated that there is one milk cow in the United States for every four persons. This makes the total number of cows about 17,500,000. They are unevenly distributed over the country, being largely concentrated in the great dairy states. Thus, Iowa leads with 1,500,000 cows, followed by New York with almost as many; then Illinois and Pennsylvania with about 1,000,000 each. The states having over 500,000 each are Wisconsin, Ohio, Kansas, Missouri, Minnesota, Nebraska and Indiana. Texas is credited with 700,000 cows, but very few of them are dairy animals. In the Middle of Eastern states the milk product goes very largely to the supply of the numerous large towns and cities. In the Central West and Northwest butter is the principal dairy product.

Real Estate Transfers.

N. L. Knighton to W. H. H. Cary, lots 3 and 4 of block 4, Tillamook City.

Jane P. Patterson to N. McMillan, deed to correct description of former deed.

W. S. Runyon, by admin., to Richard Nixon, various tracts.

Richard Nixon to A. J. Vantine, quit claim deed, various tracts; same to Olean Land Co.

U. S. to Louis Oestreich, Se ¼ of Nw ¼ and lots 2 and 3 of sec. 19, tp. 2 S, R. 8 W.

U. S. to Leonard Crenshaw, S ½ of Ne ¼ and lots 1 and 2 of sec. 2, tp. 2 S, R. 8 W.

U. S. to Henry Ward, Sw ¼ of sec. 26, tp. 2 S, R. 8 W.

U. S. to Martha Pike, Nw ¼ of Ne ¼, S ½ of Ne ¼ and Ne ¼ of Se ¼ of sec. 8, tp. 1 N, R. 9 W.

U. S. to Theodore Stockman, N ½ of Nw ¼, Sw ¼ of Nw ¼ and Nw ¼ of Sw ¼ of sec. 25, tp. 1 N, R. 8 W.

U. S. to Louis Peterson, Nw ¼ of sec. 32, tp. 1 N, R. 7 W.

U. S. to Lathem E. Smith, Ne ¼ of sec. 32, tp. 1 N, R. 7 W.

U. S. to George Shotwell, S ½ of Se ¼ of sec. 3 and N ½ of Ne ¼ of sec. 10, tp. 2 S, R. 8 W.

U. S. to Thomas M. Stark, Ne ¼ of sec. 22, tp. 1 N, R. 7 W.

U. S. to Edmond Bergeson, Ne ¼ of sec. 35, tp. 1 N, R. 7 W.

U. S. to Alphonse D. Labonte, Nw ¼ of sec. 35, tp. 1 N, R. 7 W.

U. S. to George D. Johnson, Ne ¼ of sec. 34, tp. 1 N, R. 7 W.

U. S. to Jacob H. Kingsley, Se ¼ of sec. 34, tp. 1 N, R. 7 W.

U. S. to James H. Johnson, Sw ¼ of sec. 34, tp. 1 N, R. 7 W.

U. S. to Herman Quick, Nw ¼ of sec. 34, tp. 1 N, R. 7 W.

U. S. to George Goodman, Nw ¼ of sec. 33, tp. 1 N, R. 7 W.

U. S. to John F. Bryan, Se ¼ of sec. 33, tp. 1 N, R. 7 W.

U. S. to Kenneth McRay, Ne ¼ of sec. 33, tp. 1 N, R. 7 W.

U. S. to Warren S. Covill, N ½ of Se ¼ and N ½ of Sw ¼ of sec. 28, tp. 1 N, R. 6 W.

U. S. to Lewis Kaelde, Se ¼ of sec. 35, tp. 1 N, R. 7 W.

U. S. to Daniel A. Robey, Sw ¼ of Se ¼, E ½ of Sw ¼ and Se ¼ of Nw ¼ of sec. 3, tp. 1 N, R. 9 W.

Michael Slattery to Delos A. Blodgett, S ½ of Nw ¼ of sec. 30, tp. 2 N, R. 7 W, and S ½ of Ne ¼ of sec. 25, tp. 2 N, R. 8 W.

Patricia F. Brown to Nelson P. Wheeler, W ½ of W ½ of sec. 24, in tp. 2 S, R. 7 W.

George A. Barton to Nelson P. Wheeler, E ½ of Ne ¼ and E ½ of Se ¼ of sec. 30, tp. 1 S, R. 7 W.

U. S. to Sarah Bell, E ½ of E ½ of sec. 22, tp. 2 S, R. 7 W.

Henry Gross to A. W. Severance, Sw ¼ of sec. 34, tp. 2 N, R. 7 W.

Walter Madden and wife to Luvina E. McGrew, various tracts.

Geo. Williams to Chas. Kunze, 42.75 acres in the Quick D.L.C.

Horace Holden to B. C. Lamb, tract in sec. 25, tp. 1 S, R. 10 W.

U. S. to Eva Messner, Se ¼ of Ne ¼ and Ne ¼ of Se ¼ of sec. 30, tp. 2 S, R. 7 W.

U. S. to Mary E. Klyver, E ½ of W ½ of sec. 22, tp. 2 S, R. 7 W.

U. S. to Christian Zimmerman, Ne ¼ of sec. 32, tp. 2 S, R. 7 W.

U. S. to Harry Starr, W ½ of W ½ of sec. 28, tp. 2 S, R. 7 W.

Christinn Zimmerman to Nelson P. Wheeler, E ½ of E ½ of sec. 24, tp. 2 S, R. 7 W.; also various tracts.

Philip Zimmerman to Nelson P. Wheeler, Nw ¼ and Sw ¼ of sec. 32, tp. 2 S, R. 7 W.

Christian Zimmerman to Nelson P. Wheeler, W ½ of W ½ of sec. 28, tp. 2 S, R. 7 W.

Charles L. Granton to Duncan Brewer Lumber Co., E ½ of Se ¼ and Nw ¼ of Se ¼ and Se ¼ of Ne ¼ of sec. 13, tp. 1 S, R. 8 W.

C. & E. Thayer to Curtis Johnson, S ½ of Nw ¼ of Sw ¼ and Se ¼ of Sw ¼ of sec. 18, tp. 2 S, R. 9 W, and Ne ¼ of Se ¼ of sec. 13, tp. 2 S, R. 9 W.

U. S. to Orlina Gravel, Se ¼ of Nw ¼ and W ½ of Nw ¼ of sec. 25 and Sw ¼ of Sw ¼ of sec. 24, tp. 2 S, R. 8 W.; same from John B. Paquet to D. A. Blodgett.

Robert Hicks to D. A. Blodgett, Se ¼ of sec. 31, tp. 2 N, R. 7 W.

L. D. Ackley to M. F. Leach, 20 acres in tp. 1 S, R. 9 W.

Larkin Reynolds to F. L. Buell, Ne ¼ of Sw ¼ of sec. 4, tp. 2 S, R. 9 W.

W. J. Elliott to Emma Broadhead, lots 11 and 12 of block 5, Bar View add. to B. V. City; same to John M. Bodie.

State of Oregon to the Olean Land Co., Ne ¼ and N ½ of Nw ¼ of sec. 16, tp. 1 S, R. 7 W.

AT COST! AT COST!

\$20,000 WORTH

Of Extra High Grade Clothing, Dry Goods, Shoes, Hats, Men's Furnishing Goods, Ladies' Jackets, Capes, Tailor Made Suits, Shirt Waists, Millinery and Parasols, **MUST BE CLOSED OUT!** In 30 days at Cost or less than Cost.



Owing to our limited quarters, which is impossible for us to display our stock and to wait on customers in a business way, we have decided to close out our entire stock, and if satisfactory arrangements can be made for a large store building, we shall re-open again next fall, with the finest and largest stock ever brought to Tillamook.

NOTE THE FOLLOWING CLOSING OUT PRICES:

- 145 BOY'S SUITS. Sizes from 12 to 20. No shoddy goods. Made of Clay Worsted, Mixed Cashmere and Fine Thibet. A bargain at \$5.00 and \$6.00 Choice per suit, \$3.15.
- 185 BOY'S SUITS, strictly all Wool, Oregon Cashmere. Sizes from 12 to 20. Worth \$7.00 and \$7.50 while they last. Choice per suit, \$4.90.
- 165 EXTRA HIGH GRADE SUITS made of Albany, Salem and Brownville Woolen Mills, in sizes from 12 to 20. Well worth \$10.00 per suit. Choice of the lot, \$5.90.
- 150 BOY'S FANCY WORSTED FINE CLAY SERGES and FANCY MIXED. Prices, \$4.90, \$5.50, \$6.00, \$7.50 and \$7.90 per suit. A bargain at double the price.
- 120 MEN'S ASSORTED SUITS. Some all wool, Blue Thibet, and mixed goods. Worth \$6.50 and \$7.50. Choice \$3.90 per suit.
- 85 MEN'S SUITS. Extra heavy beaver, blue Vaquina cloth, cheviot, and meltons. Worth \$7.50, \$8.50 and \$9.00, choice per suit, \$4.90. Here is a snap for you.
- 100 EXTRA GOOD OVERCOATS. To close out for nearly half the former price.



- 285 SUITS FINE CASHMERES, clays, fancy black and blue, brown and mixed colors. The lowest price suit in the lot is \$8.50, and some of them are worth up to \$12.50. Take your pick for the small sum of \$5.90 per suit.
- 200 SUITS VERY FINE WOOLEN AND WORSTED. Worth from \$10.00 to \$13.50. They are a snap at the regular price. To close them out quick, \$6.90 per suit.
- 360 EXTRA FINE DRESS SUITS and among them are Prince Albert Suits, Fine Black Frock Suits, Sack Suits, square and round cut, blue double breasted suits, and some fancy mixed at prices from ½ to ¾ less than they have formally been sold for.
- 250 PAIRS ALL WOOL AND WORSTED PANTS, just as cheap as you have to pay for ordinary cotton pants.
- 220 CHILD'S KNEE PANTS SUITS. To close out from ¼ to ¾ below the regular prices. Our entire stock of MEN'S SHOES to close out from ¼ to ½ from its former prices.
- 200 MEN'S GOLF DRESS SHIRTS. Regular, 65c., 75c. and 85c. Choice, 50c. each.

- 150 DRESS GOLF SHIRTS, \$1.00 and \$1.15, to close out 65c. each.
- All our high grade Standard, Victor, Silver and Perfect White, Colored, Laundered and Golf Dress SHIRTS. Regular, \$1.25 and \$1.50 shirts. To close out 90c. each.
- All our latest styles, 3 and 4 ply linen COLLARS. Worth 15c. and 20c. Choice, 10c. each.
- The very best CELLULOID COLLARS, 2 for 15c.
- Men's extra heavy Jersey ribbed UNDERWEAR. Regular 50c., 65c. and 75c. Value 35c. each. Extra heavy half wool 40c. each. Extra heavy good quality wool double breasted and double back Underwear, 62½c. each. Extra high grade Swits Conde ribbed Underwear. Worth \$1.50. To close 75c. each.
- 100 Laundered Pucale SHIRTS. 65c. and 75c. values. To close 30c. each.
- 1,500 yds. Challico, Lawns and Dimities; worth 8c., 9c. and 10c.; to close out, 5c. per yard. 1,000 yds. French Follard and French Organdies, regular 25c. goods; to close out, 12½c. per yard. 800 yds. Worsted Dress goods; worth 18c., 20c. and 25c.; to close out, 12½c. per yard. 650 yds. of Fancy Worsted, solid colors, plaids, check; regular 50c., 65c., 75c. and 85c.; choice of the lot 40c. per yard.
- 1,000 yds. very high grade and the very latest novelties of Fancy, Plain and Figured DRESS GOODS, 42, 44 and up to 58 inches wide. Regular \$1.25, \$1.35 and \$1.50. To close out at 85c. per yard. 250 yds. of colored silk plushes at 35c. per yard.
- 50 Extra high Grade JACKETS, advanced fall style, satin and silk lined, regular \$15, \$16.50 and up to \$22.50. Choice, \$9.90 each. Call at once and get first choice.
- 280 LADIES' and MISSES JACKETS, ranging in prices from \$1.00 to \$10.00, to be closed out at a sacrifice.
- All our CHILDREN'S JACKETS, Ladies' and Misses Golf, Plush, Cloth, Astrican and ilk CAPES. Ladies' Tailor Made SUITS, Skirts, Millinery and all our Shirt Waists and the remainder of our Mackintoshes to be closed out below cost.

Remember the stock must and will be sold. Call and get first choice as the goods are moving out fast.

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