near or far may have to compete with butterine. Does he compete now? In the home market his butter should not have to compete with butterine, because the manufacture and sale of butter substitutes is not allowed according to our law. In practice, however, it is different, for butterine is constantly sold in Canada. In sixteen samples taken from the markets throughout the Dominion, seven were proved by analysis to be oleomargarine. "These were samples of oleomargarine sent to the analyist as butter."—Report Adulterations of Food, 1885.

The tax of 2c. per lb. on oleomargarine is not levied by the United States when the product is exported, which stimulates sending it abroad. From the demand of oleomargarine by creameries in the United States, there is likely to be a great deal of butterine sold as butter.

The Lansing butterine works was first organized as a creamery, and made 5,000 lbs. to 6.000 lbs. of butter a day, selling at 25c. per. lb., until detected, when they appeared in their true colors, "Lansing Butterine Co."

Prof. H. A. Weber made an analysis of Silver Leaf Creamery butter, and the result was as follows: "Butter, 5 per cent. adulteration 95 per cent."—Report Ohio Exp. Station, 1886.

I interviewed a revenue officer in an American city a short time ago, in relation to the detection of sale of butterine or oleomargarine as butter. He said: "If a complaint comes to us that a party is selling butterine as butter, we generally send an officer down, and if he can find an oleomargarine tub, that the party complained of is selling from, we fine him; but if we don't find the tub, we don't trouble ourselves."

Every seller of oleomargarine in the United States, either wholesale or retail, is taxed and licensed, and every tub sent from the factory is stamped on top and side, "oleomargarine," in letters at least two inches long.

Now the evidence from the Canadian public analysists quoted, shows that butterine is sold in Canada. The American reports prove that butterine is sold as butter on the other side; the American Act shows that there is no tax per pound on the exported product, nor any Government stamp needed.

The American cheese is adulterated with oleomargarine: the cream or butter fat is extracted from the milk, and oleo is added in its place. The American experts say it cannot be detected as inferior by cheese buyers, but requires an analysis to detect it. These experts congratulate the United States that it is almost all exported.

The total receipts (including tax on manufacturer, wholesale and retail dealer, and 2c. per lb. on actual output), under the United States oleomargarine law for the twelve months preceding 31st October, 1887, was $950,048.70.

Lard from the United States, adulterated with vegetable oils, is being sold in Canada. The cheese, lard and butter of the United States is adulterated.

The United States receives nearly a million dollars a year from a tax on imitation butter. What does Canada receive? $o—nothing. Why? Because the Dominion protects her dairymen. In an "Act to prohibit the manufacture and sale of substitutes for butter," the manufacture and sale of oleomargarine in Canada is prohibited under a fine not exceeding four hundred dollars, and not less than two hundred. "This action was doubtless a wise one, and can be supported by many reasons. While there may be something said against it, such action was at least nothing worse than wisely leaning towards the safe side. A mistake on this side, if it has been made, is not serious, and in the future may be remedied; a mistake on the other side, if it had been made, would be one very serious, and extremely difficult, if at all possible, to remedy. The interest of the whole farming community was in apparent jeopardy, and being the most legitimate and important, the longest established and most permanent, it had a first right to protection."

O farmers of Canada, who cry out against monopoly! did you ever think that the Dominion Parliament had given you the monopoly of producing a certain article of diet; or rather that it is protecting you from having to compete against a very similar animal product? What does this protection amount to? One of the best dairy writers in the United States says that the sale of oleomargarine has depreciated the value of land in dairy sections five dollars per acre, and dairy stock ten dollars per head. Should this protection be continued? By such a protection the American Republic would lose a million dollars annually, which it receives as a tax.

Creameries in the United States adulterate with oleomargarine; the export trade is stimulated by no tax being collected on the exports. Are we to prohibit American butter on that evidence (which means retaliation), or are we to have a dairy inspector appointed to trace imports, and to investigate the various places where oleomargarine and butterine is made in Canada? The American oleo manufacturer pays a yearly tax of six hundred dollars; wholesale dealers a tax of four hundred and eighty dollars; retail dealers a tax of forty-eight dollars. He who affords to pay $600 per year to manufacture in the United States, can he not afford to stand the chance of detection and fine of from $200 to $400 to manufacture in Canada? The butter exporter is trying to raise the standard of Canadian butter on the British market. If sophistication, due to lard or oleo, is detected in our butter when sent abroad, the result will be disastrous.

For the CANADIAN LIVE-STOCK AND FARM JOURNAL.

Fodder Growing and Food Supplies.

BY JAMES CHEESMAN, TORONTO.

Most dairy reformers agree that the weakest element of dairying on the factory plan is the absence of provision on the average farm for a regular supply of succulent food of high nutritive value throughout the entire year. This defect, more than any other, has probably had the greatest influence in retarding the development of winter dairying. Canada is not worse off in the matter of climate than most of the northern States, and is perhaps rather better circumstanced than Iowa, Minnesota and Wisconsin, whose winter temperatures are lower than in Ontario and Quebec, and who occasionally suffer the paralyzing effects of blizzards. It is well known that these north-western States have distinguished themselves in all the year round dairying, and that it is chiefly owing to the provision they have made for food supplementary to pasture and dry fodder in winter.

The associated method of calving the best and largest number of cows in the fall of the year rather than in the spring, gives the largest and best supply of milk in winter, when its products, cream and butter, are of most value. Having learned the necessity of feeding rations in winter of a high nutritive ratio to secure greater economy of food, higher-flavored butter and firmer-bodied goods, they naturally reasoned that the basis of success in winter suggested the cause of much failure in summer. The best feeding during summer is the most economical, and when the natural herbage of the pastures fail to provide a plentiful supply of complete rations, economy steps in with soiling crops of rye, fall wheat, tares, cow pea, lucerne, saintfoin and fodder corn; and a morning and evening feed of a few pounds of bran. The almost world-wide experiments in bran feeding give the manurial residues a value of from $10 to $13 per ton in various parts of Canada and the northern States. Many feeders have obtained within certain limits an increase of one pound of milk for every pound of bran used with cut fodder, and an increased quality of product. In many parts of the country bran can be bought at less than $15 per ton or ¾c. per pound the year round. There are few farmers whose milk is worth less than 75c. a hundred to either cheese factory or creamery, so that the man buying bran can pay for every pound of it from the increased income from the enlarged yield of milk, and realize a profit of ½c. a pound on the bran as fertilizer, which may be used to feed the soiling crops.

A recent tour through seven of the eastern States indicates a large annual increase in the practice of stall feeding of green crops in summer. Much of the milk I examined in New York, Philadelphia, Jersey City, Baltimore, Washington and Richmond, Va., satisfies me that the farms could never be kept up without the extensive use of soiling. As one glides over the easy road-beds of the finely equipped Pennsylvania Railroad, and the Baltimore and Ohio, he is forced to notice the steady disappearance of the beef breeds and their grades, and the large preponderance of dairy animals, and especially the Channel Island cows and their grades. The increasing prominence of Guernsey and Jersey milk on the hotel tables of the towns and cities is very marked. These animals have greatly influenced the public taste for better milk, and I am pleased to notice that the oldest and best Holstein-Friesian breeders are claiming and demonstrating butter quality for their animals. The modifications of fertility induced by this practice is clearly seen in the enormous increase of food grown. A great fact often left out of sight by the man of muscle, who toils early and late, is the increased value of fertility induced by more active nitrification of the soil induced by this method of cropping. The enormous advantage of being able to husband the grasses for hay, to increase the diversity of crops, and to augment the aggregate returns from the whole farm, are features difficult to understand, and impossible to appreciate by those who have had no experience of the system. Those who have practiced these methods for several years have so enriched their lands by accumulations of fertility as to enable them to carry more than one head of stock per acre. To plan and execute the system intelligently implies experience, judgment and skill in tillage and the management of live-stock. The highest test of merit any man can apply to this system is the agricultural value of the land three or four years after the farm has been brought under the new method of cropping. I know of several examples in high dairy districts in New York, Massachusetts and Wisconsin, where land so farmed is valued at from $90 to $160 per acre, side by side with farms of half or two-fifths of these figures. It is within the experience of every Ontario man that the western counties cow only average 3,000 lbs. of milk while the eastern counties cow does not exceed 2,700 lbs. He also knows that in the Brockville, Ingersoll, and Belleville districts owners spend more than $30 a year on feed. The man who keeps $60, $70 and $85 a year animals makes a greater net profit than the gross returns of the 3.000 lbs. of milk cows, and the greatest earners are those fed on soiled crops.

The foundation for this system is the silo, for with-