

hides, skins and cheese being prominent items. Forest products amounted in value to \$11,603. Manufactures to \$41,283.

BETTER BUTTER.

Why is it, that when Canada makes such excellent cheese and exports so much of it—her exports of that article in 1886 were 78,112,000 pounds valued at \$6,754,000, or an average of nearly nine cents per pound—her butter is of so low an average quality as is proven by the price obtained for last year's exports, 17.8 cents per pound, or say \$832,000 for 4,668,000 pounds, which, according to the Blue Book is all we exported. Have climatic conditions anything to do with the answer? We know it to be the opinion of some that carting milk to a creamery under the heat of our summer sun is enough to prejudice the chances of making butter from it that will compare with Danish. But as against this, have we not the experience of the Eastern and Western States, in latitudes similar to ours? And in them the quality of creamery butter is certainly better and brings higher prices than average dairy. Nay, have we not the experience of Canadian creameries whose product brings six to ten cents per pound more than dairy, whether sold at home or abroad?

We have recently seen a circular addressed to farmers and dairymen by Mr. Valancy E. Fuller, of the Ontario Creameries Association. Mr. Fuller deems it useless to send a lecturer round to address meetings of farmers and tell them how to make good butter. He also thinks the proposal to send an instructor among the farm-houses impracticable. His argument is: "Establish creameries which shall show the farmer how more money can be got for butter; the creamery is the best educator; wherever in the United States one has been established for any length of time, an improvement is observable in the quality of the dairy butter in its vicinity. Therefore, establish creameries." For this purpose he proposes to send a competent instructor to any community which desires to erect a creamery; or to any creamery already built whose proprietor gets unsatisfactory returns or finds difficulty in working. All the charge for his services will be the travelling expenses and board of the instructor. The average farmer's wife has not, Mr. Fuller contends, time enough to devote to the requisite care of milk and cream or the manipulation of butter to produce it of proper flavor and keeping quality. And this appears a reasonable contention. He says, besides, what is quite true, that "to ensure the highest prices being paid for export butter, it must possess a uniformity which cannot be claimed for various packages made by many people under many systems or wanting system."

Another interesting contribution to the subject is an open letter to the dairymen and farmers of Ontario from Mr. James Cheesman, many of whose articles on this and kindred subjects have appeared in this journal. He calls attention to the fact that butter from Canada brought in the British market of 1885 no better price than

Australian, and that it was but a trifle better than East India; while the Scandinavian countries, the low countries and even Mediterranean countries obtained from two cents to six cents per pound more for their butter than we. Here is the table:

IMPORTS OF BUTTER AND BUTTERINE INTO GREAT BRITAIN, 1885.

	Pounds.	Value.	Price.
Russia.....	1,656,816	\$ 196,059	12c.
Sweden	13,444,888	3,517,433	26½
Norway	2,430,054	453,281	22½
Denmark	42,289,642	10,305,675	24½
Germany.....	13,346,226	3,882,440	23
Holland	121,061,248	21,682,667	18
Belgium	6,908,372	1,308,167	20
France.....	50,506,388	12,545,234	25
Italy.....	196,560	45,998	23½
United States....	8,807,922	1,544,768	18
Other European countries.....	1,008	170	17
Channel Islands..	80,416	18,563	22
Brit. E. Indies...	113,668	19,372	17
Australia	165,188	29,379	18
Canada	4,049,876	707,723	18
Other British Possessions ..	112	24	21

Total 268,953,876 \$56,256,466

Average price, 20½c.

From this return it appears that the import from Denmark was "just eleven million pounds more than the entire make of Ontario from all sources, and the price six cents a pound more than ours." The price paid by Great Britain for our dairy and creamery exports was no higher than that paid to Holland and the United States, whence are drawn large quantities of butterine. "Artificial butter competes with only high grades of dairy butter," says Mr. Cheesman, "because competition with low grades means accepting a low price; but so far as I can learn, it has never attacked us, as our dairy products were of too low a character."

The make of this province, according to the Ontario Bureau of Statistics, is about thirty-two million pounds per year, and its average home price 12½ cts. Now, the letter from which we quote declares that while the total creamery out-put is only about a million and a quarter pounds, the price paid for it is 20 cts. This, continues Mr. Cheesman, is "just 7½c. more per lb. than that made by thousands of pairs of hands in who knows how many different churns, washed and unwashed, colored and uncolored, colored too much or not enough, worked or unworked, and packed away in layers, each one a different shade to the other, and no two of them having the same flavor or keeping qualities." The following figures are quoted as showing prices for different grades of Ontario butter:

Low Grades.....	14 to 15c.	per lb.
Western	15½ to 17c.	"
Morrisburg	16 to 21c.	"
Brockville	16 to 20c.	"
Creamery.....	22 to 25c.	"

"How long shall we continue to allow such a difference as 11c. per pound to exist between the best and the poorest quality of butter? We have only thirty-five creameries in Ontario at present, and these make less than four per cent. of the provincial product, but they earn over eight per cent. of the butter revenue."

—A high tribute is paid Manitoba wheat in their annual grain and flour report issued for the year just closed by Messrs. Dunlop Bros., of Glasgow, they say: "It should be noted that perhaps the finest wheat of the year was received from the rising territory of Manitoba."

SOLE LEATHER.

The prices of sole leather in America have shown some remarkable variations during the last quarter century. Between twenty cents per pound and forty-seven cents there is surely a great difference. Yet good hemlock sole brought that price in the United States once during the war. In a brief review of sole leather history the *Shoe and Leather Reporter* declares that hemlock leather made from dry hides has never been so low but once during the past twenty-six years as it is today. "When the civil war began in 1861 prices were about the same as they are now, possibly a little lower on the average. The demand caused by the necessities for equipments for armies was followed by a rise in values, which continued until peace was restored, and extended so far that in August, 1864, good stamp hemlock brought 47c.; that was the highest figure ever reached for leather. Prices receded somewhat during the succeeding eight months, but after the surrender of Lee they went down with a run for a while. The lowest point reached subsequently was in the summer of 1876, when the quotations were very little higher than they are now. In November of that year there was an advance of 25 or 30 per cent., but it proved premature, and most of it was lost the following year. In the summer of 1879 leather was sold for 20½c. Sixty days later it brought 30c. readily." The price at that period went up as much too high as it had gone down too low, and it settled back again gradually to about half way between the minimum and maximum figures. For five years past the value appears to have been steadily shrinking, until it has reached within a shade of what it was before the last reaction. The journal quoted makes no prediction in the premises and leaves the moral to be pointed by every tanner for himself.

Canadian tanners do not need to be told, probably that prices of product are low, relatively to those of hides. Green hides are one and a half to two cents lower, per pound, than they were last year, and much benefit was expected by the tanner from the change. But the margin of profit to the maker of leather is as low as before, and it is not easy to see how an improvement can be brought about.

MANUFACTURERS' NOTES.

An English scientific journal enumerates the following as among the inventions which are specially needed at the present time: Macaroni machinery, good red lead-pencils, type writers that will work on account books and record books, indelible stamp cancelling ink, a practical car-starter, a good railway-car ventilator, better horseshoes, locomotive headlights, an instrument for measuring the velocity of wind currents, apparatus for measuring the depth of the sea without sounding by line, piano-lid hinge which shall be flush on the outside, good fluid India ink for draughtsmen, a good metallic railway tie, an effective cut-off for locomotives, a method of alloying copper and iron, and a moulding material for iron and brass casting capable of giving a mold that can be used over and over again.

The question whether steel or iron rivets are preferable in riveting together steel plates was discussed at the last meeting of the Engineers' Society of Western Pennsylvania. The experience cited by Mr. Metcalf, a prominent steel manufacturer and expert, of Pittsburgh, that numerous steel rivets for boilers