

Cash and Capital, Present and Future, and, if possible, *Progressive*. This and no other idea will satisfy the young, ambitious Canadian or the foreign emigrant, and is along the only lines on which our agricultural education should be directed and disciplined by the advanced thinkers of the country. From these observations it must be apparent that the intensive farming which will interest practical farmers and attract the immigrant, for the present and in the future, is "Profitable farming."

What is profitable farming?

My definition and answer is: "The producing from year to year, progressively, the highest possible cash profit on capital invested, and at the same time creating the highest possible value in the land producing this profit. If this last definition of intensive farming is the correct one, then it must be clear that maximum profit rather than maximum product or food is the true ideal and practical definition.

To show and prove that the first-mentioned definition is Mr. Wallace's theory and practice is clearly shown by the analysis given, and the reference stated in connection with my farm practice.

Mr. Wallace states: "When we apply the term, intensive farming, to a stock farm we mean that the greatest number of head per acre are properly fed from the land." This means, if I understand Mr. Wallace rightly, that all the requirements of food for a balanced productive ration must be produced on the farm maintaining such animals. In support of this he ventures the opinion that a large part of the hard cash which I yearly paid out for feed could be saved. From this it is quite evident that Mr. Wallace insists that a balanced productive ration should be produced within the farm itself, and also a strong inference is made that the stock of such farms should be raised on the farm as well as the feed.

It is quite evident from these quotations and a careful analysis of Mr. Wallace's writing that he has not mastered the science and art of true business farming.

It must be clear to any business man or farmer that everything a farmer produces on his farm, whether it is grain, hay, cattle or horses, is purchased just as well as if he paid his money to purchase them from his neighbor. The farmer raising young stock and growing grain purchases these by the use of his capital and labor. And it is a vital question to him whether he can purchase them cheaper with the use of his own capital and labor, or whether he can purchase them from his neighbor cheaper. There is not a particle of difference so far as a transaction is concerned, and the honest possession of live stock or stock feed, whether a farmer raises his own stock or possesses the stock raised by another farmer. In both cases they are purchased, only in different forms. But the great difference is, from a financial point of view, to the purchaser which form costs the most or least. Therefore the farmer, who expects to be financially successful, must practise the new school of farm economics and carry out the same principles in practice which the advanced manufacturer in the industrial pursuits carries out, and which are, to purchase his raw material in the cheapest market, to manufacture

his finished product to the largest extent of the best quality and at the least cost, and to sell his finished product at the highest price, aiming thereby to obtain the greatest cash profit and added capital value.

To illustrate these principles more clearly allow me to give a few practical illustrations which have come within my own personal knowledge, and which are now practised and carried out on my own farm. My finished products are milk, beef, bacon, and pork. To obtain milk I require a milch cow and milk feed. Should the cow be raised or purchased on my own farm she would cost sixty dollars at standard productive age. The same kind of a cow can be purchased in the open market for thirty dollars. Again, the milk food required for a milch cow must contain flesh formers and heat producers—in certain proportions along with a certain amount of bulk. From carefully collected data I find that the flesh former part of food can be purchased in the open market for one and one-half cents per pound, and it costs three cents per pound to obtain it by producing it on my own farm. Again, the heat producers and bulky parts of a milk food costs in the open market to purchase about one cent per pound; but on the other hand this heat and bulk food can be produced or purchased on my own farm for less than a half cent per pound. This same thing occurs in all foods required for milk, beef, and pork production. A store steer weighing one thousand pounds costs in the open market about thirty dollars. This same steer would cost on my own farm to produce sixty dollars. Again, a young pig four weeks old will cost in the open market about \$2, and the same kind of a pig can be produced or purchased on my own farm for 50 cents.\*

The practice to follow from these given data is to purchase the milch cow in the open market so long as she can be had at less cost than raising her; the milk food, to buy those parts also which cost less, and produce those parts on the farm which cost less than to purchase them in the open market. Hence, at the present productive cost and market values, I purchase the milch cow and the flesh-formers of milk food, and produce or purchase on the farm the heat-producers and bulk foods. For the acquirement of feeding steers for finished beef production the same practice is carried out. The steers are purchased in the open market, as well as the flesh-former of beef food, and I produce the heat-producers and bulk foods. But with finished bacon pork production, the pigs are produced or purchased on the farm as well as the heat and bulk foods, and the flesh-formers of pork food are purchased in the open market. In this way the greatest amount of milk, beef, and pork is produced per acre at the least cost, giving the maximum profit per acre of land.

Again, in the feeding of all plants grown on the farm, a balanced plant food must contain nitrogen, potash, phosphate, lime, and a number of other mineral ingredients. In selling the finished animal products off a farm it

is quite evident that a quantity of plant food, more or less, is sold off; and therefore to retain or increase the store of plant food in the soil of a farm it must also be evident that an equal amount of these above-mentioned ingredients, which are sold off the farm in "animal products," must be purchased and replaced, for they cannot be ordinarily produced on the farm except nitrogen. Then, if this is so, the same economic principle must be practised, which is, that the greatest amount of these mineral constituents of plant food must be purchased in the cheapest form and sold off the farm to the least extent.

In this connection, allow me to supply some information sought for by Mr. Wallace. I sold a total product value in milk, beef, pork, and veal—\$6,360.10, in the twelve months from November 1st, 1896, to November 1st, 1897—(cheese and butter \$3,250.50; veal, \$212.50; pork, \$1,265.70, and beef, \$1,631.40). A reasonable and fair estimate of plant food value in nitrogen, potash, phosphate and lime would be about \$600.00, as contained in all of the above-named products. In return for this there were purchased, 70 tons of bran, 60 tons of shorts, 60 tons of gluten meal, 10 tons of grain provender, and 30 tons of straw for bedding. The plant food value of the constituents of all these products, estimated on the same basis as the products sold, would be about \$2000.00; and, after deducting the fertility sold from the fertility purchased, there would be still in the neighborhood of \$1400.00 added to the stock of fertility of the soil to create increased results in cash and capital value for the future. These facts are given to prove that I practise what I preach, which is, to produce, manufacture and sell the largest amount of finished product which carries away the least amount of valuable mineral plant food, and at the same time enables me to purchase the largest amount of mineral plant food to return to the soil, thus effecting a minimum cost of production and creating thereby a maximum cash and capital profit. From this, Mr. Wallace will realize that his "ventured prediction" will not come to pass.

## CORRESPONDENCE.

### PAYING FOR MILK ACCORDING TO ITS QUALITY.

THE REASON FOR PAST FAILURES.—HOW SUCCESS MAY BE ATTAINED.

Editor FARMING:

I have read with very much interest the different articles in FARMING from time to time with reference to the experimental testing of milk with the Babcock tester, and also the expressions of correspondents in favor of paying for milk at cheese factories according to the quality of the milk. I am aware there is considerable diversity of views on this question, but I can not understand why there should be any opposition offered to this method of paying for milk by any honest person who desires his own and nothing more. I am not aware of any other produce of the farm or any other article of commerce, whether offered for sale over the counter, in the sale room, or at the factory, but the price of the article sold is entirely regulated with reference to the quality of the material of which that article may be composed. There are instances where poor articles have been sold for just as high prices as those of superior quality. No one will argue that the inferior article is equal in quality to the superior; neither should anyone attempt to argue that the manufacture of first-class articles

should cease on the ground that articles of poor quality have brought just as high price when placed on the market. The principles of an honest and successful business will warrant no such philosophy. The very highest and most reliable authorities in Canada and the United States unhesitatingly endorse the Babcock tester as a reliable instrument to determine the quality of milk when properly handled, and yet there are men of no experience whatever who say they do not believe anything these experts tell, but that one kind of milk is as good as another so long as it is not tampered with after taken from the cow. While another class, the more honest and greater of the two, admit there is a difference in the quality of everything, but in this milk business they do not believe "their cheesemaker a competent person to make a test."

Now, Mr. Editor, I believe this last reason is nearer the cause of opposition to paying for milk by quality than any other that has ever been advanced. If a lack of confidence in the cheesemaker is the chief cause, and I can show in this letter some way to strengthen that confidence between patron and maker, or drop some idea that those of greater experience than myself can take up and successfully bring about the desired results, I shall feel that I have assisted in a weak measure the upbuilding of Canada's greatest industry. I believe no one disputes the fact that, for any business to be a prosperous one financially, it must be managed by a man or firm who thoroughly understands every detail connected with the business, and employs only such men, if necessary to employ them, who are capable of doing the work.

Our provincial laws require trustees to employ competent teachers holding certificates, and the person practising one of the professions must, before doing so, prove himself or herself competent to do so by examination, while the Dominion laws protect the public by requiring engineers, masters and mates of vessels to prove their ability to discharge the duties of their profession by passing examinations. I would suggest that the Dominion or Ontario Government be asked to pass a law, or amend the present Act, prohibiting every proprietor or company running a factory from employing a cheese or buttermaker unless he has passed a satisfactory examination before a competent board of examiners appointed by the government making the law. The examination could be made free to the applicants, and would be a thorough test of knowledge in handling milk in different stages for manufacturing cheese or butter; the handling of these products in the factory until time of shipping; the care of factory and machinery, and a practical examination by test of the applicant's ability to make the various tests with the Babcock tester and lactometer in determining the butter-fat percentage, the detection of adulterations, and many other questions that might be necessary.

The certificate granted by the board to a successful applicant would be a sufficient guarantee of his ability to practise the profession of a cheese or butter-maker, and would insure the confidence of those who engaged his services that he knew his business. It would prevent incompetent cheese-makers being employed in factories, as only competent men could be employed, and no competent man would have trouble in getting his papers. It would improve the standing of our Canadian cheese, for every factory would have a certified maker. It would cause the patrons to entertain suspicion no longer as to the ability of the makers. Factories would be subject to inspection and heavy penalties would be imposed on those employing other than qualified makers, and whenever a change of makers was necessary at any factory there would be no chance of getting an incapable man, as his certificate would show his per cent. in the various subjects examined by the board. I hope, Mr. Editor, I have not trespassed too much on your space, and would be pleased to have your opinion and others who are interested in the dairy business upon what I believe a most valuable chance. Thanking you for space,

I am, yours, etc.,

W. E. ANDERSON.

Rossmore, June 27th, 1898.

Frank C. Bogart, Gosport, Ont., writes:

"Please find enclosed one dollar for FARMING, due last January. I think I will not do without your valuable paper, though every dollar seems spoken for before it comes."

\* All of the above are average market values in Eastern Ontario at present, and the productive farm values are given from actual tested data, as fixed by labor and capital costs at the present time.