

In exchange for the products of the fields and animals, the farmer obtains what may be called here, "Gross Receipts." The "Gross Receipts" may include, cash, goods received in trade or exchange, house-rent, board, lodging, the use of horses for pleasure and work, etc., etc. A large proportion of the "Gross Receipts" of most men, except farmers, must go out as "Expenditure" for those things which the farmer gets from his products over and above the cash which he handles. A small cash income does not always mean a small income nor does a large sum as "Gross Receipts" always indicate a large profit. The measure of profit is the difference between "Receipts" and "Expenditure." All experimental work that helps to show how "Expenditure" or cost may be reduced, without lessening the quantity or degrading the quality of the products in dairying, is legitimate work worthy of your Union.

Investigation may be directed profitably by one or more members, towards the discovery of how far and in what ways, "Expenditure" or "Cost of Production" can be lessened under the following heads:

I. *The use of feed of cheaper sorts.*—Can corn ensilage be produced at a cost of \$1.75 per ton on the ordinary farm? How much of it will produce as much milk as one ton of hay? How does the cost of soiling compare with that of pasturing for milk production in different districts of the Province? Are roots as economical for a succulent feed as corn or other ensilage?

II. *The mixing of feeds into the best combinations.* Is the nutritive ratio theory sound, when acceptability of flavor is ignored?

III. *Providing and preserving fodders and grain in the most acceptable condition of flavor.*—What is the worth of a ton of hay, that has been exposed in the feeding passage for a day and mused over, compared with a ton of hay of equal quality fresh from a compact mow? Does digestibility of feed depend in any degree upon its palatability?

IV. *A reduction in the quantity of feed offered to cattle.*—When a cow eats too much rich feed, an immediate consequence is a lessened flow of milk of impoverished quality. Are many cows spoiled by over-feeding?

V. *A lessening of the cost of labor and expense in producing, manufacturing and marketing.*—Is there an advantage in carrying on dairying in winter in respect to the labor available on the farm during that season? Can butter and cheese be made as economically in small lots in private dairies as in co-operative factories? Can dairy goods for the home market be sold best direct into the consumers' homes from the producers? Will it pay the producer to sell always, when perishable goods are in the best condition, regardless of the current or prospective price?

I have used a great many interrogation points. In trying to answer the enquiries, every honest investigator will learn much and to some extent become a teacher to instruct and stimulate others.

The tendency to devote one's whole attention to the "Receipts" as the source whence may be obtained an increased profit is a common weakness of judgment, when a business calculation is being made. The reduction of "Expenditure" or "Cost of Production" is a more controllable factor in profit-making, and still there are safe and economical ways in which "Receipts" can be legitimately and certainly augmented. Practical enquiry may seek to learn from experimental investigation, to what extent that may be accomplished under the following heads:—

I. *Enlargement of the capacity of the animal.* May not the capacity of every dairy cow be enlarged, until she gives annually as many pounds of solids in her milk as her live weight?

II. *Improvement in the quality of the product.*—How far can the quality of milk as to its per cent. of solids be varied by feed and treatment of the animal? How far does the quality and the kind of feed influence and affect the flavor of animal products. The quality of all food products not only modifies the market price, but gives stability or uncertainty to the demand in degree as it is uniformly fine or irregular and inferior.

III. *Selling most of the product at a season of the year when prices rule highest.*—Is cheese-making in summer and butter-making in winter the best dairy practice for the farmer, under ordinary conditions in Ontario?

IV. *Marketing products in the best concentrated form.*—Will the labor and expense of special preparation, in giving products an attractive appearance for the market, add more to their value than the extra cost involved? Will such a preparation help to secure a class of customers able and willing to pay the highest current prices.

V. *Making the most of by-products.*—Animal products from the dairy retain an average of less than 20 per cent. of the total nitrogen, phosphoric acid and potash in the feed consumed. The manure which contains the residue of these from the feed is the first by-product. Although it contains over 80 per cent. of the valuable constituents of the feed, it is not worth 80 per cent. of the original value. How can it be saved and used to yield the greatest value? Skim milk, butter-milk and whey are by-products. In what combinations can they be fed with most profit to calves, colts and swine?

The common dairy practice is—reproach to the business judgment of the farmers. Many cows are fed at an annual loss. They board on men who can ill afford to support indigent cows on the out-of-door-relief plan. Single cows in some herds, like the Egyptian lean Kine, in everything but appearance, swallow up the profits of two cows which are exercising the profit-making talent. Thoughtful experiment in any kind of a way, along the line indicated, cannot fail to convince any farmer of the possibility of realising some profit from dairying and may stir him up to try for more while helping him to succeed in getting it. An experimenter generally becomes enthusiastic; enthusiasm is contagious and practical investigations keep it operative in beneficial ways.

BETTER THINGS.

At a recent convention this was the subject of the last address. The speaker briefly pointed out the difficulties of the past, of the present, with the efforts that were being made to overcome them, and the success with which they were meeting, then drew a bright picture of the better things in store for his hearers. This was not at a dairy convention, yet it is just as applicable to the dairy industry as that to which it was applied. Do we need better things in the dairy? We do, without doubt, and in consideration of all that has been, and is being done to advance the dairy interests of the Province, we surely have a right to expect better things. Slowly but truly the Dairy Associations of our Province are extending their influence. Can this do anything else than bring about better things? Will not the dairy literature that is being spread broadcast through the country bring about better things? Combined with this we have a beginning of an awakening of the