

The Butter Dairy.

In speaking of the butter dairy once, Mr. C. C. Buel expressed the opinion, that the maximum of profit in a dairy cannot be reached with less than twenty cows. Probably the number should be no larger. The number should be large enough so that the business shall continue the leading business of the manager and command his best thought and attention. It should be of sufficient magnitude to warrant the principal procuring and reading the best daily literature current, in spending the necessary time and money in attending the dairy-men's conventions and in thoroughly posting himself in the various lines of thought and investigation pertaining to the business. We believe the five and ten cow dairy will, except under peculiar circumstances, labor under disadvantages. The milk of such, as a rule, had better go to the factory or the cream to the creamery. In general, it is to be remembered, the larger dairy the less in proportion the cost of building, fixtures and labor for running it.

Assuming, then, that we have a dairy of standard quality, numbering say 20 to 100 cows, let us proceed to show how it can be managed at a profit. Taking the Swartz system of cream raising as the key to the situation, let us proceed. In the first place, we must have a dairy building—but not necessarily an expensive building. But we must have an abundance of water. We have seen springs that were valuable, but the best thing usually available is a good well. If you have not this at least don't go into the dairy business. Select a site for dairy building which has good natural drainage, and as most farmers need the waste water for stock watering purposes either in summer or winter, or both, let the drainage be towards the cattle yard. Erect a building say 16x24 with a one foundation walls. Eight foot posts will be high enough. Cover the sides with good drop siding and the roof with good shingles, leaving ample openings for windows and doors. If well built, no further expense on wall and roof is necessary. Floor one-half of this building with good cement, from which water will readily flow into a good drain. Cover the remaining part with good wood floor draining towards the cemented part. At the cemented end erect an elevated tank large enough for supplying all needs in the dairy room as well as the stock in yard. Locate the well just outside (or inside) convenient to supply this tank with water by a force pump run by a cheap horse power. Locate the horse power at the other end of building and

just outside, the shafting to run churn and pump being overhead and just inside or outside the building, according to the notion of the builder. The wood floor makes an appropriate place for churn, butter worker and stove. The cemented floor will accommodate the small water tanks or milk coolers. No better cream can be produced than with the common settler standing in a pool of cold water. If the settler is used let these stand in small pools of proper size, with covers for proper protection against flies or dust in summer and against freezing in winter, these pools being supplied by the larger and elevated tank before described. If any of the labor saving devices for cream raising are used (and some of them are really labor saving) they can be supplied in the same way, the water going to the stock yard. A cheap pipe for this purpose, which can be laid underground with a constant descent, is a 4x4 scantling with a channel sawed in one side and covered with a band.

With these figures the daily routine of work in summer would be about as follows: At milking time in the morning a horse with good spirit and hood-winked, would be hitched to the power and the pump put to work. Water enough for the entire day would be pumped during the milking time. The churning could also be done at the same time or afterward, as convenient. The horse power would be available in the same manner at evening, and thus there would never be a lack of pure cool water to control the temperature of milk or cream. The abundance of pure, cold water thus supplied would contribute largely to the purity and sweetness of the entire dairy room. We have seen a few establishments built on the economical plan we have described, which were turning out just as good product as can be made and at the minimum of cost in labor and expenditure. This arrangement leaves no place for the use of ice, and indeed the cost of a good ice house would go far towards providing the whole thing. We have here made no provision for the keeping of butter, for which, of course, special provision, as in other cases, would have to be made.

If we summarize, the expense of outfit would stand about as follows:

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| Cost of building and elevated tank not to exceed..... | \$100 |
| Cost of force pump and say 60 feet of pipe..... | 20 |
| Cost of power and necessary shafting..... | 60 |
| Cost of churn and attachments..... | 30 |
| Cost of butter worker..... | 10 |
| Cost of cooler and cans..... | 40 |
| Total | \$260 |

We have purposely omitted the cost of well and tower fixtures of pump, as these are so variable. We have also omitted

water heating arrangements. A common cook stove (unless for other purposes, perhaps), with a large, square, galvanized iron boiler, and costing altogether less than ten dollars, has done very efficient work in such a place. A small feed-cooking steamer would be better.

The estimate we have made we consider ample for a dairy of fifty cows, and we believe they would meet the needs of a still larger dairy. They amount to only about fifty dollars a cow, all told. Something should be credited for the value of the waste water for stock.—*Western Rural.*

POTATO.**A Test of Varieties, and Report of Experiments.**

[By E. S. Gorr, Wisconsin.]

Of 122 varieties and seedlings of the potato tested last season, the following, ten were most productive, yielding in the order named. Seedling from C. E. Angell, Rose Beauty, Monarch, Duplex, Late Beauty of Hebron, Mullaly, Alexander's Prolific, Seneca Red Jacket, White Beauty of Hebron and Wisconsin Beauty. Placed in the order of their table quality, these varieties would rank as follows; Alexander's Prolific, White Beauty of Hebron, Late Beauty of Hebron, Duplex, Monarch, Wisconsin Beauty, Seneca Red Jacket, Rose Beauty Mullaly, seedling from C. E. Angell. Both with cuttings and whole tubers, the largest merchantable yield came from the heaviest seedling, though the increase of merchantable yield was by no means in proportion to the increase of seed. The proportion of small potatoes increased with the increase of seed. The smaller whole potatoes gave inferior results to the smaller cuttings. Two single eyes in a hill yielded decidedly more than one, without a corresponding increase in small potatoes. No loss in yield followed planting in hills as compared with drills. The results were clearly opposed to cutting off the "seed-end" of the potato before planting. No advantage followed sprinkling the cuttings with land plaster before planting.

Quitters He Said,

Graves—Look here, Tattler! I just called on Gibbs, and find him to be the same incorrigible sinner he always was. You told me he'd met with a change of heart.

Tattler—So he has.

Graves—What makes you think so?

Tattler—Why, he has been divorced from one wife and married another; considerable change of heart about that isn't there?