

and still have three or four feet in the bottom (partly underground) for use during July and August. The compact silage left over in the bottom of a deep silo will not spoil, to a depth of more than about four inches between early May and July, and when this is thrown off there will be less deterioration from day to day than there would be near the top of an extra silo of smaller diameter. In economy of construction and in settling capacity, there is decided advantage in one large silo over two smaller ones. The only disadvantages are a slightly greater maximum of power at filling, and the possibility of the proprietor subsequently wishing to reduce his stock and grow corn enough to fill only one small silo. In that case a large one half filled might present too large a feeding surface to be lowered at a satisfactory rate from day to day. The latter objection, however, is problematical, and the first may be largely obviated by an extra filling window part way down from the top. All things considered, our preference is very much for the large, and especially for the deep silo. In any case make it round. One 10 by 40 or 16 by 45 should meet your needs. If, however, you should decide to build two smaller ones, do not on any account make them less than 30 feet deep, more rather than less. Two silos 12 by 30 would not hold nearly as much corn as one 16 by 40. Their relative capacity would be about 70 tons apiece for the smaller ones to 180 or 200 tons for the large ones. The extra settling capacity of a deep silo is almost incredible to those who have never had any experience in filling.

Big vs. Small Farms.

A great deal of difference of opinion exists regarding small farms and large farms. One man, well versed in agriculture and familiar with all its problems in the twentieth century, will in all earnestness state, fully believing that he is right, that the small farm worked on an intensive plan is the surest money maker. Another person, possessing an equally well-trained agricultural mind, and understanding present-day conditions just as well will just as earnestly plead the cause of the large farm and its possibilities for yielding profits. In conversation not long ago with a young farmer who had studied the question with regard to his own district, an inland county in Western Ontario, he pointed out that to make money on the farm it was necessary to employ labor and reap a profit from it, as is done by large concerns operating in the city. Each class of farm (the small and the large) offers an opportunity to do this. And he also pointed out that the class of farm which can be properly operated depends to a large extent upon the location of the farm and its soil conditions. The man situated where fruit growing is a success, can very profitably devote his time to intensive fruit growing, and a comparatively small acreage may be used to employ a large number of men. Likewise, land suited for vegetable growing, and situated close to a large city, may be intensively farmed. Poultry keeping, bee-keeping, and such sidelines may be operated to advantage with this class of farms. But land not close to any city, and not adapted to fruit culture either small or large, and not vegetable land, must be operated on a different basis. Live stock of some kind is necessary. Dairying, beef cattle, pigs, sheep, or horses must be kept to keep up soil fertility, and must form a large part of the income of the farm. In short, the farm must be a mixed farm, with perhaps some line of stock as a specialty, or it may be that pure seed of some kind is made a leading feature. In any case stock is kept to maintain fertility. Under such conditions as these the man with whom we were talking believes that the best chance comes with the large farm, or, as he put it "intensive farming extensively." The question is—Where will the labor come from? A large farm, well managed, is in reality farmed intensively. All the by-products are utilized, and all the side-lines operated to best advantage. The varying conditions in different sections almost seem to demand each class of farm, and in some places one will prove the better, while in other places the other will be more profitable. If some one would just evolve a means by which so many of those people now in the cities, and who are said to be hankering after farm life, could be successfully transplanted on the intensive farms of the country, and include in the same system something to turn the tide of rural population cityward back to the country where it belongs, and where more good would be accomplished for the nation, and for the laborer as well, each class of farm properly situated would prove profitable. Labor is necessary for the large or the small farm well filled.

Windmill for Pumping.

Editor "The Farmer's Advocate":

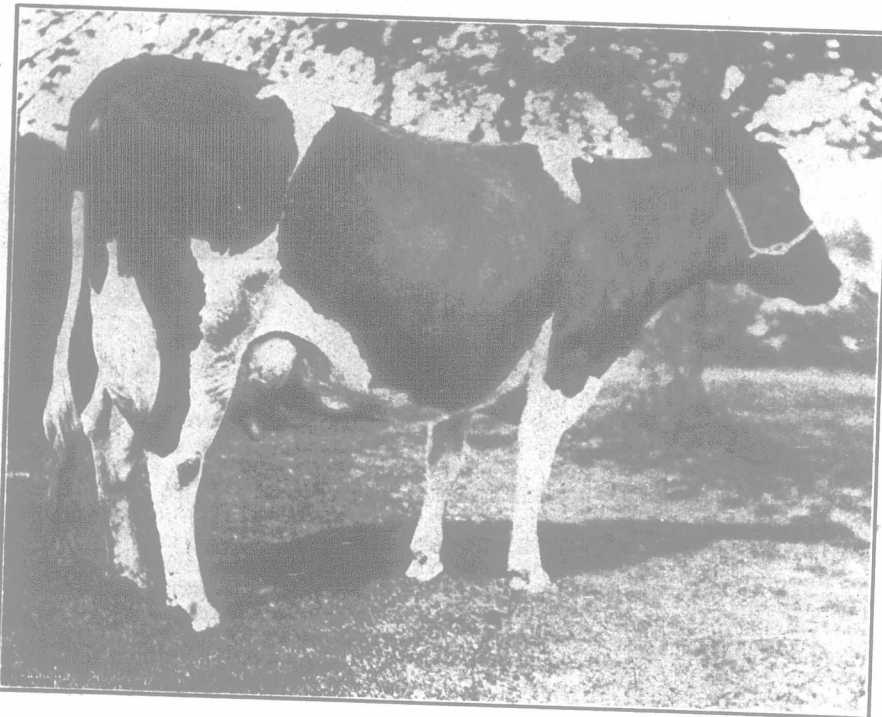
"Does a gasoline engine pay?" is a question, sometimes asked. To answer this question, "yes" or "no" does not do. Much depends upon the conditions. The average dairy farmer who has much work for his engine as pumping water, grinding grain, cutting roots, and ensilage, separating milk, churning, etc., cannot afford to be without one. But if a man simply requires an engine to pump water he would do better in many respects to erect a windmill. There are very few days without sufficient wind, and, if a man keeping from fifteen to forty head of live stock, has a tank holding about six hundred gallons he can almost be assured that he never has to pump water by hand, provided, however, the proper care is given, that is, letting mill run to keep the tanks full all the time so that he is prepared for calm days and oiling it at least once per week.

Oiling windmills is on some farms a very neglected matter. Anyone can understand that this is hard on the machine. During harvest some farmers are very particular about oiling their machine every hour or so, however good; but let the windmill run, day for day till it finally calls for oil by "squeaking."

Let a gasoline engine, or, in fact any other machine run without oil and you will soon notice that it turns harder and harder. Windmills sometimes do not pump a whole day simply because the bearings are all dry and consequently turn hard. If any bearing has been neglected till it "squeaks" it is well to use a little graphite in the oil to smoothen the bearing. Graphite is obtainable from a drug store.

Windmills are, of course, exposed to the wind, but well-built machines and towers are seldom damaged. A windmill should never be left running through a storm. Many windmills are destroyed in this way.

Around here two windmill wheels were blown down by the storm on Good Friday, the owners of which did not take the proper care. It is well to see that all nuts are kept tight. This is true with all machinery. No machine can prove durable if bolts and rivets are loose.



Jennie Bonerges Ormsby.

The only two-year-old to make 832.9 lbs. of butter in twelve months, and qualify in the Canadian R. O. P. She is the only four-year-old in Canada to make 30.76 lbs. of butter in seven days, and 125.44 lbs. in thirty days, and the only cow to make 33 lbs. of butter in seven days, and 125.20 lbs. in thirty days. Owned by D. C. Platt & Son, Hamilton.

Care should be taken that the pull-in wire is in a good condition, especially if the windmill is of the old-fashioned type. By this I mean if the pull-in wire breaks, mill starts running. On many new makes if this wire breaks the mill stops. The wire should be a number nine, soft steel or, better still, copper wire, as galvanizing is sometimes poorly done and the wire corrodes. Breaking of this wire is one of the most frequent causes of storms destroying windmills.

As I was speaking of the storm of Good Friday I just remember the question in "The Farmer's Advocate": "Did your silo blow down?" in which readers were asked if they had heard of a cement silo giving way before the eighty mile gale. I must answer this, on my part, in the negative. Some stave silos went down in this locality, but no cement. I believe cement silos are fire and storm proof.

To get back to the windmill question I would say that my windmill stands right on the well, and the tank on the barn floor seventy-five feet

away. I use a double-action force pump, so that I can get water at the well for house purposes, and by turning a lever make the water go to the tank. I have seldom experienced being short of water. S. K. Waterloo Co., Ont.

THE DAIRY.

Decrease Dairy Labor.

A decrease of labor with no diminution of income, but with general improvement of results, is a combination which appeals to any one. Labor-saving machinery and thoroughly efficient machines might just as well be used by dairy farmers as by any manufacturer. So the questions come: Have we efficient cows? Do they save or make work? Are they so good that they decrease both comparatively and actually the necessary amount of labor in keeping cows, and at the same time increase the income? Every dairy farmer needs to answer such questions as applied to his herd, and he can answer them satisfactorily when he keeps dairy records.

A statement made by the Dairy Division, Ottawa, regarding Ontario cows last year, was that the dairymen are keeping sixteen cows to do the work of ten. So it is quite possible to cut down work one-third, and rejoice because possessing more efficient cows. To the scrap heap with the old junk!

A Quebec dairyman, after one year of cow-testing, writes the Dairy Division that he now gets as much milk from his thirty-two selected cows as he used to get from his larger herd of forty-two cows. Ten inefficients were befed. Dairy farmers have not time to waste working for poor cows, so make sure that each one pays. C. F. W.

Dairying and Grain Growing Not Incompatible.

The keeping of a small dairy herd, sufficient to meet current expenses, need not interfere with the grain-growing possibilities of the farm, says the United States Year Book. On the other hand, in good years the wheat crop can be sold for cash, and the proceeds invested in improvements instead of being needed to apply on old bills. Dairying will enhance the profits of grain-growing in several ways: First, in poor years, when it becomes apparent that the grain crop is going to be a failure as grain, it can be cut and harvested as hay, or pastured; or, if the grain is of a poor grade, it can be fed instead of marketed. Thus a total loss may be converted into only a partial failure, because of the dairy herd. Second, results at dry-land experiment stations show that following a cultivated crop like corn, the yield of wheat is as good, or better, than that following summer tillage. The expense of good summer fallowing is found equal to that of growing a crop of corn. Fed to a dairy herd as silage, the corn crop is likely to average as profitable as any product, and, in addition, the cost of wheat production is reduced to the extent of the expense of summer tillage. Third, most valuable of all results, though, will be the improved physical, chemical, and biological condition of the soil, because of the diversification of crops and the application of stable manure. In favorable years the yield and quality of grain will be improved, and in poor years drouth will be less disastrous.

Dairying can be conducted profitably on a small scale, and is possible to the settler with small capital. Sheep and beef cattle, to be handled with profit, require considerable investment of capital. A small dairy herd can be handled on every homestead, and the product, regardless of quantity, is marketable for cash at the nearest creamery. Cattle and sheep need to be shipped in carlots, and should be of a uniform grade to realize the best market.

Feed may be shoveled into cows by the bushel, but without good milking returns will disappoint.