

Give it say two quarts of new, first drawn milk at a feed at first, increasing the quantity as the calf grows. Four quarts a day is sufficient for the first week, fed three times a day at equal intervals, in equal quantities. Let the calf take two of the fingers at first, as it would the natural teat. After feeding once or twice thus, the fingers may be gradually withdrawn while the calf is taking the milk, and the calf soon learns to drink without the fingers. A leather strap or artificial teat fastened to the pail so that the calf will suck in the milk slowly, will be the most natural, allowing the saliva to flow and mix with the milk to a greater degree.

Setting trouble aside, feeding instead of sucking is the better way, whether the calf is to be raised or fattened for the shambles. After the first week, a little oat or barley meal may be added to the milk, beginning with a tablespoonful at a feed and increasing to a pint a day at the end of six weeks. At the end of two weeks, two parts of skimmed to one of new milk may be fed with the meal instead of all new milk—the quantity being increased as the calf grows older. Judgment must be used here. If too much is given, the calf will grow pot-bellied; if not sufficient, the calf will be poor. After the calf is two weeks old, two feeds a day are sufficient, with a little clean water and a wisp of hay or grass within its reach. Hay tea may be substituted for milk, if the calf is raised, mixing a little larger portion of oat, barley or linseed meal than with the milk, gradually increasing its feed as the calf grows. Always give the calf a clean, dry bed and pen, with free air, without exposure to storms or the hot sun. The longer you feed the calf, the better the growth, up to six months or more; but usually the calf will gain its livelihood by grazing after reaching the age of 12 or 14 weeks. Water should be supplied so that they may drink at pleasure; and also, after the calf is two or three weeks old, a lump of chalk and one of rock salt for it to lick. If scours occur reduce the feed for a time; fasting is better than drugs or medicine.

TIME TO CUT GRASS.—The report of the analytical chemist of the Department of Agriculture, summing up the results of analyses of nearly all the cultivated grasses, says:—It is apparent, then, that in most cases the time of bloom or thereabouts is the fittest for cutting grasses in order to obtain the most nourishment and largest relatively profitable crops, and for the following reasons:—The amount of water has diminished, and the shrinkage will therefore be less. The weight of the crop will be largest in proportion to the nutritive value of its

constituents. The amount of nitrogen not present as albuminoids will be at its lowest point: fibre will not be so excessive as to prevent digestion, and the nutritive ratio will be more advantageous. If cut earlier the shrinkage is larger, although the fibre is less and albumen is a little larger. The palatability may be increased, but the total nutriment to the acre will not be so large, and the nutritive ratio will be more abnormal. The disadvantages of late cutting are evident in the increase of fibre, destroying the digestibility of the nutrients and the falling off of the albumen by conversion into amides. This is not made up by the larger crop cut.

ALTHOUGH the common horse bean of England has not been grown successfully either in the United States or Ontario, it has been proved by experiment to be well adapted to the cooler summer climate of Nova Scotia. The Board of Agriculture, being desirous of encouraging its cultivation, have imported a quantity of seed from England, which will be sold at cost and charges in limited quantities to agricultural societies and private persons.

SILAGE SANS SILO.

At a recent meeting of the Highland and Agricultural Society, a paper on the economical production of ensilage was read by Mr. J. Mackay, of Herriesdale, Dalbeattie, of which the following are the principal points:—

"Some years ago, when living abroad, I had a quantity of mangel leaves put into heaps and covered with earth in a way precisely similar to that adopted in covering potatoes. After standing about three months the heaps were opened, when the leaves were found to be sweet, and were eaten freely by cattle. Two years ago I tried a similar experiment here, and the result was equally satisfactory. As a further test I made another trial last season with lucerne. On July 17 I had two loads of this grass laid down in a heap. After being well trodden, some old bast matting was put over it, and then soil to the depth of from a foot to eighteen inches. The pit was opened on February 15 last. A layer of the lucerne next the matting was mouldy, and also a layer at the bottom; but the rest was perfectly sound. This experiment, I think, shows, first, that an expensively built silo is not necessary in order to get good ensilage; and second, that by pitting green food in the way I have mentioned, farmers may be able to get a supply of this valuable fodder at a minimum expense."

Mr. Mackay's experience beats even that of Dr. Foulis as related in his

pamphlet (*Ensilage, How to Make and How to Use it*. W. Blackwood & Sons) reviewed in the *Agricultural Gazette* of April 7. As the expense of constructing a silo has all along been one of the most serious obstacles to the tenant-farmer, the fact that silage can be made by simply pitting—like turnips or potatoes, with perhaps a little more care taken to exclude the air, would seem to bring it within the reach of all who wish to give it a trial. That it is a "valuable fodder," especially to the dairyman, seems to be pretty generally allowed, though a "critic" here and there may give an adverse opinion. "In multitude of counsellors there is safety," says the wise king, and as G. Gilbert remarks in the *Agricultural Gazette* of April 7, "I never recollect before seeing any process, agricultural or other, so thoroughly tested and sifted as the whole theory and practice of silo management."

Captain Carthew-Yorston, one of the earliest experimenters in Dumfriesshire, writes thus of ensilage:—"My own cows have been fed on grass silage since November 1 last, and the cream and butter is superior in quantity and quality to any I see elsewhere. My own experience is borne out by that of others. I have seen several byres in England where silage is used, and all report the same of its advantages. One large dairy of 300 cows, of which the milk is sent daily to London, is entirely fed on very inferior silage, and yet the report of the produce is the same—increased quantity and quality. I may mention that there is still considerable difference of opinion amongst silage users as to the proper quantity to give a milch cow every day. My own experience is that, when my cows get full feeding—i.e., from 72 lb. to 80 lb a day each—the cream and butter were perfection; and that when I reduced the quantity to about 50 lb. a day, with hay at night, and one ration of meal mash at mid-day, the quality became rather poorer, though still of a good class."

The quantity per day used by Captain Yorston thus tallies with Dr. Foulis' practice, who gave his "cow cattle" 70 lb. a piece daily, with a bran mash at night; "and the milk," he adds, "increased in quantity, and the butter was as good as the best summer butter."—A. L. O. S. in *Agricultural Gazette*.

FALL CALVES.—If the farmer has warm and comfortable stabling for his stock he will certainly find that fall calves can be raised more cheaply and with less risk than those dropped at any other time. We took occasion to urge this idea in these columns some two years ago. Since then we have been forced by circumstances to raise a good many calves at