712

THE FARMER'S ADVOCATE.

in flesh, but such management did not prove most satisfactory, as it was difficult to keep them thriving well when in rather thin condition. This year we have made it a point never to lose the early calf-flesh, and, while not making them fat, we have fed them so that their ribs appeared always reasonably well covered, and we have kept them, therefore, in a hearty, vigorous condition. This has proven much the more satisfactory system, and the calves have, during the past months, been the best feeders, and, I think, the best doers in the stable. We do not expect that this will detract at all from the milking capacity of the heifer calves.

Recently we purchased some grade Shorthorn cows, and are mating them to the dairy Shorthorn bull, and later on we expect to buy a few more of these grade cows for experimental purposes. The heifers will be raised as milkers, and the bulls will be steered and fed. We think, from this latter experiment, we may be able to obtain some useful information as touching the fattening abilities of such cattle.

Macdonald College. H. S. ARKELL.

Bacon Industry Again.

Editor "The Farmer's Advocate ":

Your issue of April 8th contained correspondence from "Chronicle" and J. E. Brethour on this much-talked-of and much-abused industry. With respect to sending a commission of Ontario farmers to Denmark to investigate along that line, it would no doubt be censured by some, while approved by others. The industry is truthfully in a deplorable condition, and reasons have been given, and some rather warm discussions have followed in the columns of your valuable paper from time to time, and still the industry is gradually on the decline, and there are to-day fewer hogs in the country than reports indicate.

Where lies the fault, and what can be done to reverse the conditions? Without a doubt, a commission of competent farmers sent to Denmark would bring back a number of profitable ideas on breeding, feeding, and more especially on the cooperating end, in the placing of the products on the market.

What the Ontario farmer has done in co-operation in the cheese industry, might also be done That is where the Denmark farmers with hogs. " shine," for they are living in a dairy country, and hogs are the by-product to dairying. But we must remember that the Ontario farmer does not carry his eggs to market in one basket, and hence the main reason of the decline in hogs. When we know it to be a fact that the packers took from the farmers most exorbitant profits, and right in the years when the majority of us had to struggle and economize at every point to make ends meet, is it any wonder that producers are soured ? Doubtless, the packers are losing money at the export end, and we extend to them our sympathy, for we have been there. In the years from 1895 to 1902 they raised and lowered the prices to their own free will, and the years that followed they seemed to forget everything but self.

The bacon hog of to-day is a paying proposion on every farm, as the feeding experiments of **Dairy By-products for Swine.** The relation of the feeding value of whey fat to

the business of whey-butter making has pointed attention during the past winter to the results of an experiment conducted last summer by Prof. G. E. Day, O. A. C., Guelph, comparing skimmed with unskimmed whey. Our readers have been already informed in this connection that the experiment in question indicated a value twentyfive per cent. greater for unskimmed whey than for whey that had been run through a cream In addition to comparing these two separator. kinds of whey, skim milk and buttermilk were also compared with the whey. From the annual College report we now quote the details of the whole experiment, together with Prof. Day's conclusions

Plan of Experiment.—Originally, 60 pigs were divided into five groups of twelve pigs each, but it was thought advisable to discard certain pigs as unfit for experimental work, and the experiment was completed with the number of pigs in each group indicated in the table which follows : Group I, was fed skim milk and meal; Group

II., buttermilk and meal; Group III., ordinary whey and meal; Group IV., separated whey and meal; and Group V. was a check group, fed water and meal.

The grain ration consisted of barley and frozen wheat, to which wheat middlings were added in the following proportions, by weight: 1st, 30 days, 3 parts middlings to 1 part ground grain; 2nd, 30 days, 2 parts middlings to 1 part ground grain; 3rd, 30 days, 1 part middlings to 1 part ground grain; 4th, 30 days, 1 part middlings to 2 parts ground grain.

Nearly two and a half pounds of milk and buttermilk were fed with each pound of meal, and about two and three-quarters pounds of whey with each pound of meal.

The	Dual-purpose	Cow.

P. McConnell, B. Sc., in the English Livestock Journal, discusses the practicability of maintaining a class of profitable general-purpose cattle, and undertakes to show that such can not only be developed, but is even now in existence. He writes as follows:

Without disparaging any other breeds which are noted for both beef and milk, it may be pointed out that the Shorthorn has always been famous for both qualities right through its history. To quote from the exhaustive " llistory of Shorthorn Cattle," recently issued : " The improved Shorthorn has achieved its predominant position by reason of its remarkable combination of the properties of beef-making and milk-producing," and a long list of deep-milking cows of pedigreed ancestry which have lived at various Taking the last six years at the times is given. Dairy Show at London, the average Shorthorn has yielded 49.2 pounds of milk in a day, with 3.91 per cent. of butter-fat, while the official standard of the Society (issued some years ago) is 8,500 pounds of milk per annum-greater than that allowed for any other breed, excepting the Dutch-and the butter yield per day is put down at the same figure as the Jersey and the Guern-

The above figures apply to ordinary Shorthorns—that is, to those that have been more particularly bred or kept for milk—while not losing sight of their value for beef afterwards; in other words, the non-pedigreed dairy variety. Shorthorn men, however, began to bethink themselves, about a dozen years ago, that even the pedigreed animal had not lost is milking power, and that this might be brought out a little more in these days, when milk was as valuable as beef. Ac-

TABLE SHOWING WEIGHTS, GAINS, AND FOOD CONSUMED.

		ev.	hey	
Duration of experiment 120	skim milk skim milk and meai. (troup 11., 12 pigs. and meal.	11. Crown 111., 11 pigs. 0.rdinary wh a und meal.	150 droup IV., 10 pigs, and meal.	150 (lroup V., Nater and meal.
Weight of pigs at commencement of experiment	lbs. 573 lbs.	450 lbs.	427 lbs.	541 lbs.
Weight of pigs at close of ex- periment 2,278	lbs. 2,480 lbs.	1,987 lbs.	1,713 lbs.	1,548 lbs.
Total gain in weight 1,793	lbs. 1,907 lbs.	1,537 lbs.	1,286 lbs.	1,007 lbs.
Average daily gain per pig 1.36	5 lb. 1.32 lb.	1.16 lb.	1.07 lb.	0.7 lb.
Total food consumed Me 4,553 Skim M 11,223	al, Meal, 3 lbs. 4,888 lbs. Milk, Buttermilk, 3 lbs. 12,042 lbs.	Meal, 4,142 lbs. Whey, 11,486 lbs.	Meal, 3,821 lbs. Whey, 9,959 lbs.	Meal, 4,331 lbs.
Food consumed per 100 pounds increase in weight	eal, Meal. lbs. 256 lbs.	Meal. 269 lbs.	Meål, 297 lbs.	Meal, 430 lbs.

FOUNDED 1866



Prof. Day will prove, and which can be voiced by every practical farmer, but there are other branches of stock-farming that yield equally as Consider the price of horses, comgood returns. pared with what they were ten years ago. Beefing cattle is a profitable branch, and we in this county have been realizing, the last few winter seasons, about 12 cents a pound for their gains; and, knowing the high price and scarcity of coarse grains and millfeeds, and that the bulk of the products used are silage, roots and clover hay, we feel we would be making a blunder if we kept more than a limited number of hogs in our stables. Although hogs can be raised and fed to a certain extent with rations from the dairy, kitchen and roots, we have the former generally only in limited quantities, and hence we feel justified in confining our numbers to a limit within that The population of our towns and cities sphere. is steadily increasing, which means an increased local demand for nearly everything our farms can produce. Wheat is also coming back to take a place in our crop rotation. So, taking all things into consideration, we must admit we are living in an era of milk and honey, and are not serious ly worrying over which supply will run dry first; but the day perhaps will come when we will see

our mistake, when too late. Waterloo Co., Ont. JOSEPH H. WOODS.

Favors Loose Feeding.

Our experience leads us to believe that it is more profitable to feed steers loose than to tie them in stalls, says Prof. G. E. Day, in his 1908 annual report, adding : "Loose steers are less easily surfeited, are less likely to become crippled or sore in their feet, and appear to shrink less when driven to market."

626 lbs.	631 Ibs.	PATTOS.	444 IDS.	

Whey,

POINTS OF INTEREST.

Skim Milk,

1. Skim milk gave the largest gain per pig, as well as the most economical gain.

2. Buttermilk came so close to skim milk in feeding value that it may be regarded as practically equal to skim milk, so far as this experiment goes.

3. Ordinary whey shows a distinct advantage over separated whey in this experiment.

4. If we compare each group with our check group, we find that if we represent the feeding value of separated whey by 100, the feeding value of ordinary whey would be approximately 125, buttermilk 160, and skim milk 163.5. That is to say, ordinary whey showed a feeding value 25 per cent. higher than that of separated whey in this experiment; buttermilk 60 per cent. higher, and skim milk $63\frac{1}{2}$ per cent. higher.

5. The feeding value of each kind of whey compared with skim milk, is much higher in this experiment than in any other we have conducted, and we feel sure that it is a great deal higher than may ordinarily be expected. It will be noticed that we fed a comparatively small proportion of whey to meal, and, under such conditions, whey will always show a much higher feeding value per 100 pounds than when fed in larger quantities The same is true of skim milk and buttermilk but perhaps not quite to the same extent. There is little doubt, bowever, that the use of small proportions of these dairy by-products has tended to bring them more closely together in feeding value. As ordinarily fed, whey seldom shows a alue higher than one half that of skim milk or

cordingly, some ten years ago, the Shorthorn Society began to offer prizes for the best milking animals of pedigree strain ; that is, for cows that were either registered in the herdbook, or eligible for entry therein. Now, it may be necessary to remind some people that a pedigreed Shorthorn is essentially a beef animal. The Brothers Colling, who first took up the scientific evolution of the breed out of the aboriginal "Teeswaters," applied the principle taught them by the great Bakewell, who worked with the Longhorns, and devoted themselves to the making of a superior beef-producer, to help to supply "the roast beef of Old England." Their successors for 100 years followed the same lines, and the milking capacity of the mothers of some of the mighty beeves of bygone generations were taken no notice of. Alongside of this, however, the unpedigreed Shorthorn was kept and developed for milking purposes, and herds of milking animals have been in the majority in many districts; and these animals, without any specialization in developing of beef tendency, were fatted off for the butcher after a milking career, and it was, and is, quite a common experience to realize for a fat cow only a few pounds less than she cost, or was worth, when " laid in " as a milker. first.

It occurred, therefore, to the leaders in the Shorthorn world, that, as their beef Shorthorns had not allogether lost the power of milking well, and as it might be developed, the above noted prizes were offered to various bodies for the best pedigreed milkers. The result has been so satisfactory that, to the mind of the present writer, it completely proves the possibility of