

American farms as a grade of mixed lineage, but usually showing a predominance of Shorthorn blood. That the dual purpose type is of late becoming more popular is believed by many who are in a position to feel the pulse of agricultural sentiment. It is not the purpose of the writer to champion the cause of the dual purpose cow. She exists in this country, and judging from her long continued popularity in Great Britain, she will continue to figure as a factor in American cattledom for generations to come. A partial excuse for her existence, if one is needed, is that not only she but her offspring have the capacity for making beef. The dual purpose cow bears, then, at the present time and is likely to for some years to come, a very direct relation to the beef producing industry of the United States. The writer will not long hesitate to advocate the general adoption of the dual purpose type by the beef producers outside the range country, if thorough investigation prove this the most profitable type. Certain it is that the abandonment of beef cattle breeding and eventually of cattle breeding over a large area of the States, is a problem that this generation must meet unless some practicable solution is soon found that will render the business more financially attractive. Other conditions surrounding the industry may change in such a way as to relieve the necessity for change in the type of cattle producing our beef supplies.

"It is because of the repeated statements of experienced beef producers and breeders of beef cattle that the future supply of beef cattle must be bred from cows that are milked, that the writer deemed it essential to consider briefly the subject of this discussion, leaving the reader to adapt the facts presented to local conditions.

"Some of the pertinent points for consideration are:—

1. Can cows be found that will produce an ample milk flow, ample to throw them into the class of profitable dairy cows, and at the same time when bred to bulls of beef breeding, produce steers that will make, when properly fattened, a satisfactory grade of beef?

2. What average capacity for production of milk and butter fat may be reasonably expected of such cows, and the value of such products?

3. The standard of excellence possible in the steers bred from such cows, and the value of the calves produced on supplemented skim milk?

4. Knowing approximately present possibilities of production, what is the probable expense including feed and labor, of accomplishing certain dual results?

5. Lastly, what are the possibilities of improvement in performance and economy of production in dual purpose types? There is, of course some limit to the development of the dual capacity. If that limit has been reached in this country, it must be admitted that it has been reached quickly and without much concerted action upon the part of any large number of breeders.

"Definite data bearing directly upon the possibilities of profit in handling of the dual purpose type of cattle are scarce.

1. In the introduction the writer has declared that individual animals of the dual purpose type, the desirable characteristics of which are generally understood, exist.

Performance of grade and registered Shorthorns at the Michigan Experimental Station, grade Shorthorns at the Wisconsin station, and again registered Shorthorns at the Nebraska station, to say nothing of numerous breeders and farmers throughout the country, should be sufficient to prove the possibility of dairy excellence in cows of somewhat pronounced beef type. The Iowa station, as well as breeders and farmers, have fattened and marketed steers from such cows, in some instances the produce of cows with which satisfactory dairy records have been made, that have sold well up to the top of the market. While 'topping the market' is not necessarily an index of the highest quality, it usually accompanies the sale of bullocks very satisfactory to the slaughterer.

2. Daily performance.—The Kansas station has shown that a herd of grade cows produced in one year an average of 6,288.58 pounds milk containing 251.24 pounds butter fat per

cow. The Michigan station published the dairy performance of a herd of twenty-seven grade cows, the average production of which was 7,009 pounds of milk, containing 259.91 pounds butter fat.

The writer is familiar with the type of cows used in this latter demonstration test, and they were, with a possible few exceptions, such as would produce a good to choice grade of feeding cattle when mated with beef bred bulls of merit. Butter fat is commonly worth at least 20 cents per pound and skim milk 15 cents per cwt.

3. The Michigan station has shown that the calf from such cows may be made to weigh 380 pounds at six months of age, when fed upon a ration of skim milk valued at 20 cents per cwt. and corn bran oats, and oil meal at prevailing prices, used as supplements to the skim milk and at a cost of \$3.42 per cwt., not counting labor.

"The items of labor and feed in caring for the cow, including milking and calf, will vary widely in different sections. The labor involved would amount approximately to \$25. The feed for the cow twelve months and the calf six, from \$45 to \$50.

"In the above statements no account is taken of the fertilizer produced by the cow and calf, and this is by no means an inconsiderable item. Nor is any interest on the investment charged. It must, be admitted that in the light of available definite experimental data on the subject under discussion it is impossible to present a very satisfactory statement and it is not claimed that the one outlined is more than approximately correct. It will be noted that a very large item in the above expense account is for labor. This must, necessarily, be true when the cows are milked and the calves fed by hand.

"There are those who have settled to their own satisfaction that the dual purpose cow must yearly become a more important factor in the beef producing industry."

### Bob, Son of Battle.

in the gloom, passing close to the two men and yet not observing them.

"What's up, I wonder?" mused the postman.

"The fox set 'em clackerin', I reckon," said the Master.

"No he; he was scared 'maist oot o' his skin," the other answered. Then in tones of suppressed excitement, with his hand on James Moore's arm: "And, look 'ee, there's ma Gyp a-beck-onin' on us!"

There, indeed, on the crest of the rise beside the wood, was the little lurcher, now looking back at his master, now creeping stealthily forward.

"Ma word! there's summat wrong yonder!" cried Jim, and jerked the post-bags off his shoulder. "Coom on, Master!"—and he set off running toward the dog; while James Moore, himself excited now, followed with an agility that belied his years.

Some score yards from the lower edge of the spinney, upon the farther side of the ridge, a tiny beck babbled through its bed of peat. The two men as they topped the rise, noticed a flock of black-faced mountain-sheep clustered in the dip 'twixt wood and stream. They stood marshalled in close array, facing half toward the wood, half toward the newcomers, heads up, eyes glaring, handsome as sheep only look when scared.

On the crest of the ridge the two men halted beside Gyp. The postman stood with his head a little forward, listening intently. Then he dropped in the heather like a dead man, pulling the other with him.

"Doon, mon!" he whispered, clutching at Gyp with his spare hand.

"What is't Jim?" asked the Master, now thoroughly roused.

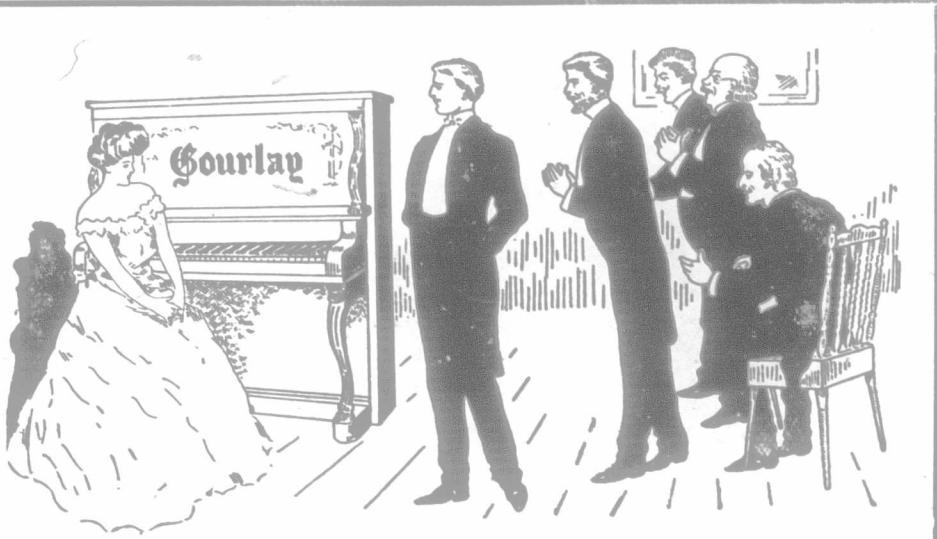
"Summat movin' i' th' wood," the other whispered, listening weasel-eared.

So they lay motionless for a while; but there came no sound from the copse.

"Appen 'twas nowt," the postman at length allowed, peering cautiously about. "And yet I thowt—I dunno rectly what I thowt."

Then, starting to his knees with a hoarse cry of terror, "Save us! what's yon there?"

Then for the first time the Master



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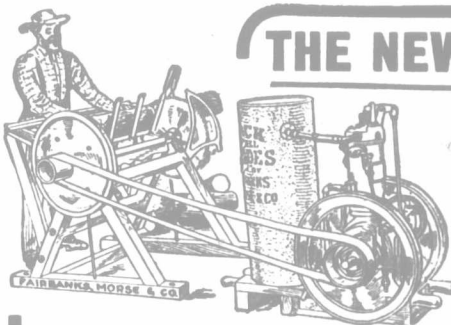
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