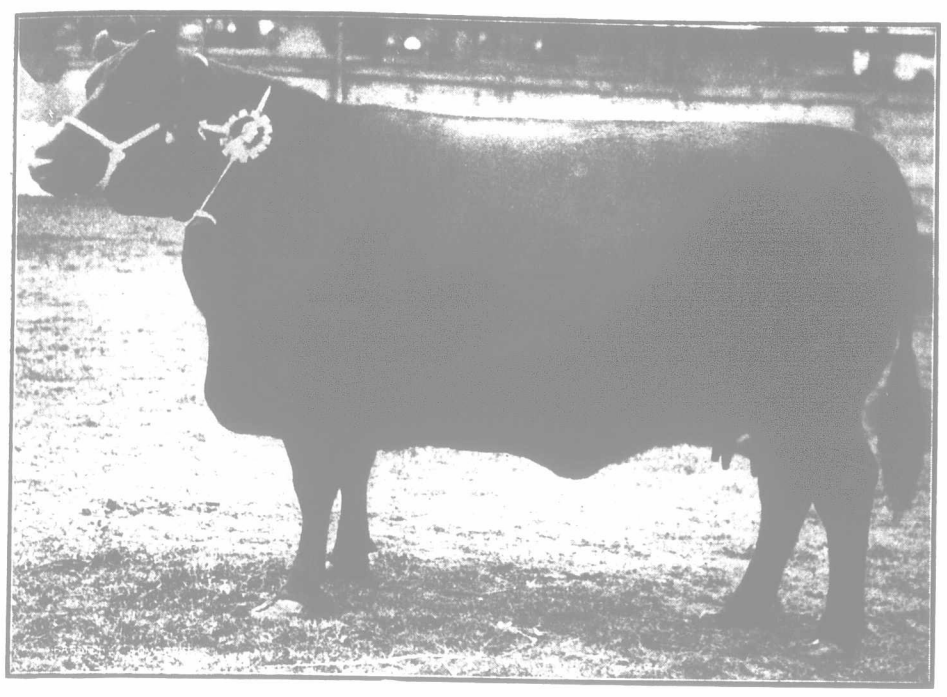


Juniana Erica.

Aberdeen-Angus cow; first and champion, Royal Show, 1907. Owner, J. Ernest Kerr.

GASOLINE FOR STOMACH WORMS IN SHEEP.

Editor "The Farmer's Advocate":

Having been a subscriber to "The Farmer's Advocate" for a number of years, I want to thank you for the valuable reading it contains every week. One thing which caught my attention recently was an article headed "Stomach Worms in Sheep." My sheep and lambs have been dying off for the last two years, and I could not tell the cause until I saw that article, which described them exactly. I used the gasoline treatment, as described, and my lambs have done well ever since, as I have not lost any of them. Will they need another dose in the fall? S. J. WATTS.

Frontenac Co., Ont.

A FEW PROBLEMS IN CATTLE-BREEDING.

Many and varied are the problems facing the breeder of live stock. It is not the intention of this article to attempt a solution of any of these problems, but rather to call attention to a few which face the cattle-breeder, with a view to aiding the beginner to understand more clearly what confronts him, and perhaps stir up some veterans to give the public the benefit of their experience.

One of the perplexing problems facing the breeder of cattle is the question of fashion in pedigrees, and he may find himself sometimes driven to follow a course which his reason tells him is not the best. Fashion has had its sway among horses, cattle, sheep and swine, and while it has had a more powerful influence in some breeds than in others, there are few breeds which have not, at one time or another, came more or less under its spell. At the present time there is a tendency in some quarters to rebel against the decrees of fashion, and a good deal of discussion regarding the matter has occurred of late, especially among American Shorthorn breeders. Just what will be the outcome, it is hard to say, but it is useless for the small breeder to attempt the overthrow of established customs, or prejudices. If anything is accomplished in gaining recognition for what are commonly called "plainly-bred" cattle, it must be through the concerted action of some of the most influential breeders. It will not do to be too radical in such matters, and it must be remembered that the fashions of to-day are usually based upon a pretty sound foundation, namely, actual merit. It does seem too bad, however, that so many really excellent cattle should be slightingly passed over and dubbed "plainly-bred," no matter how many sires of unsurpassed breeding and excellence appear in the pedigree, merely because the nearest imported cow appears a long way from the top of the pedigree, and does not boast any of the blood which is most popular to-day. Surely the crosses subsequently introduced have long since obliterated any trace of the original blood; and if the sires have been wisely chosen, why should such an animal be discounted? When we learn to study the law of heredity intelligently, and are able to understand clearly just what a tabulated pedigree means, we shall be apt to lose a good deal of respect for the average breeder's method of deciding upon the merits of a pedigree. We sometimes forget that, no matter how "blue" may be the blood employed, there can be no sound work done in animal breeding which is not based upon utility. We are also apt to deal too much in names, and lose sight of the merit which made those names famous. If the merit has come down with the names, then we certainly have something to be proud of; but if much if not all the merit has been lost in transit, of what value to us are the names, so far as improving our stock is concerned? So long as certain families of cattle show superior merit to all others, it is only right that they should meet with popular favor; but when another family demonstrates its ability to produce equally good animals, why should it not be accorded equal favor? In the face of these problems, experiment stations stand helpless, for it is only the breeders themselves who can work out the solution.

Another problem of great importance is the development of milk production among beef cattle. All are agreed that the ability to give a large flow of milk is a valuable accomplishment on the part of any cow, and it is a very common thing to find the best milkers the best breeders in the herd. But how is the milk-producing propensity to be developed? How much depends upon breeding, and how much upon management? If it is mainly a question of breeding, where are the bulls to be obtained to assist with the work? It is hard enough as it is for the breeder of beef animals to secure a bull good enough to head his herd, without having to restrict his selection to milking strains. If, in developing the milking qualities of our beef cattle, we lose much of that tendency to fatten, which has taken generations to develop, would such a result be a really desirable attainment? These are problems which are worrying many thoughtful breeders, and which are frequently lightly discussed by people who fail to look at all sides of the question. There is room here for research work on the part of experiment stations, and work in connection with some phases of the problem has been planned for immediate undertaking at Guelph. It is a large order, and means years of patient work, and probably more space than we can afford, to carry out the work thoroughly. The public need not look for results for some years to come, and it is quite possible that the main issues may never be settled. At the same time, there are many minor points of interest upon which some light may be thrown, and thus make the enterprise worth while.

Closely associated with the problem just mentioned, comes the question of the dual-purpose cow. We know that such cows exist, but are they more desirable or less desirable than the special dairy cow? Also, what about the man carrying on mixed farming, under conditions not the most suitable for making the largest profits out of dairying? There are so many varying conditions, and, as in all other live-stock investigations, so many variations arising from the individuality of the animals employed, that it seems almost hopeless to attempt anything like systematic investigation. But, possibly a little light is better than no light, and there are probably enough side issues to make the undertaking worth while. Be that as it may, we think we can safely promise the public some work along this line, though, as in the other case, years will be required to get results.

Space will not admit of the introduction of further cattle-breeding problems in this article, but the ones mentioned are sufficiently serious to furnish food for thought for some time, and we would like to hear from anyone who has worked out even a partial solution of any one of them.

Ontario Agricultural College. G. E. DAY.

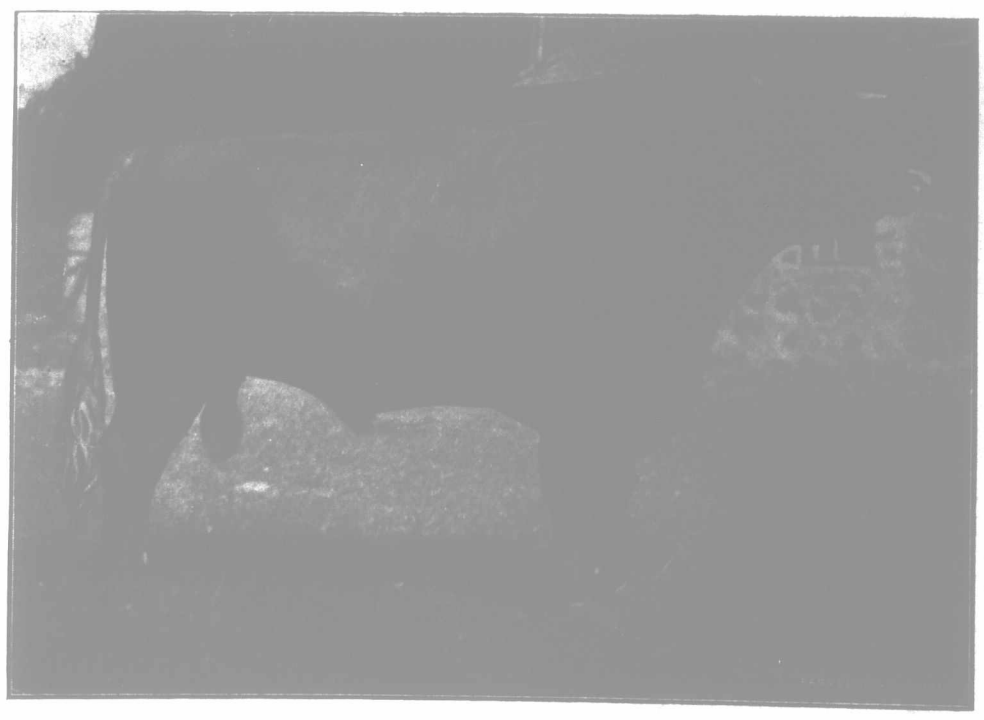
THE FARM.

GASOLINE ENGINES FOR FARM USE.

That the modern gasoline engine is the ideal power for farm use under most circumstances, has been recognized ever since its appearance as a commercial success, and its use at the present time for almost every job which can be handled by power to advantage, shows that progressive farmers appreciate its value. In some situations an engine can serve its purpose best by being installed as a stationary plant, and the different jobs reached by means of line shafting, but this always requires the use of a larger engine, because of the extra work of running the shafting and belting. Smaller-sized engines can be semi-portable; that is, mounted on a skid, which can be hitched to and readily moved from one place to another, anywhere around the farm. Where larger sizes are required to be moved around, it is necessary to mount them on trucks, and very complete outfits of this character are in use very successfully all over America.

There is no farm work, from running a cream separator to threshing and plowing, that they are not doing successfully, when intelligently cared for. The adapting of the gasoline engine to different farm purposes has been a gradual evolution from the original heavy engines, with large water-tanks and outside gasoline tanks, while at present engines for farm work can be had very much lighter in weight and with special cooling devices for water that makes it possible now to run on a few pails of water, where it formerly took the same number of barrels. In almost all cases where the engine has to be moved around the gasoline is now carried in the engine base, except in the largest portable and traction sizes, when the gasoline tank is carried on the steel frame. The past five years has seen a great advance in the quality of the detail parts, particularly in the ignition, which has always been the weakest part, and has been the cause of a large part of the trouble that users have experienced in the past. Batteries are better; the ignitor itself is better made than formerly; spark coils are more economical of battery current; piston rings are more carefully made, and hold the compression better; and general designs are better, which has allowed of more compression and higher speeds, which means more power than formerly from the same-sized cylinder.

As stated, one can find engines now at work on any of the farm jobs. In pumping water, there are all sizes of outfits, from the 1½-horse-power combined engine and pump, up to the largest sizes for irrigation. In dairy work, they operate separator, churns and butter-worker. It had been a difficult matter to properly run a cream separator with a gasoline engine of the ordinary type, for the reason that, with the "hit-and-miss" system of governing, each impulse was felt at the separator, by causing a very uneven speed. The introduction of the automatic friction-pulley, which can be attached to any make of separator, has overcome that drawback, and by its use an even speed is maintained, no matter how uneven the regulation of the engine may be. For saw-



Royal Bruce (imp.) =55038= 273853 (12023).

Shorthorn bull; calved Jan. 19th, 1904. Property of R. J. Doyle, Owen Sound, Ont.