

The Farmer's Advocate AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL IN THE
DOMINION.

Published weekly by
THE WILLIAM WELD COMPANY (Limited).

JOHN WELD, Manager.
Agents for "The Farmer's Advocate and Home Journal,"
Winnipeg, Man.

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THE WILLIAM WELD COMPANY (Limited),
London, Canada.

peg, Calgary and Edmonton, from January 1 to September 1, 1920, amounted to 18,178, or 3.9 per cent. of the total offerings of hogs. During the month of August, 1920, 8.5 per cent. of the total hog offering were sows. It is peculiar indeed that there should be so little interest taken in swine breeding when the outlook is good, as it is at present. There is a vast market overseas for Canadian bacon, which in the years to come would mean millions of dollars to Canada and thousands of dollars to each individual grower. We are allowing this market to slip away, because if we do not supply it some other country will. We are obscuring ourselves in the eyes of the world, and at the present time there is no good practical reason for this lethargy in hog production. Sows should be bred rather than slaughtered and an effort made to get back into the hog business in earnest.

Nature's Diary.

BY A. BROOKER KLUGH, M. A.
THE ATLANTIC SALMON.

There are many fish which are extremely important commercially, such as the Cod, Haddock and Herring, and there are others which are considered as being premier game fish, as the Brook Trout and Bass, but there are few which are accorded first rank from both standpoints. Such a fish, however, is the Atlantic Salmon, *Salmo salar*. This species, which occurs on both sides of the Atlantic and ascends streams both of Europe and America, is regarded in both countries as a superb game fish, and in some of the rivers of our Maritime Provinces, such as the Miramichi, Restigouche, and St. John, it is of great commercial importance. To realize the importance of the Salmon one must be at some port along one of these rivers during the season. From the little village of Loggieville, New Brunswick, on the Miramichi, I saw three freight cars packed full of boxes of salmon, shipped out as the result of one evening's landing, and Loggieville is only one of several landing-places along the Miramichi. The run of Salmon, as they are taken on the Miramichi, average 20 pounds each with striking uniformity. They are taken in trap-nests, which jut out from the shores of the Miramichi, from its wide mouth to many miles up the stream.

In the early days of settlement the Salmon were abundant in most of the rivers of New England and the Maritime Provinces, and this species was a common item of diet among the inhabitants along the coasts. But the dams erected in many of the New England rivers, and the pollution of their waters by the waste from factories, has precluded the breeding of this species in nearly all these rivers. The same has been

true of some of our rivers, but we still have many streams, such as those mentioned above, which are important breeding-grounds.

A good deal has been done in the investigation of the life-history of this important species, and the main facts are as follows:—

The Salmon spawns only in fresh water, both the eggs and the young, while in the parr stage, being destroyed by contact with salt water.

The eggs are deposited in gravelly shallows, where they hatch in from eighty to one hundred and forty days, depending on the temperature of the water. The eggs are deposited and impregnated in grooves dug out in the gravel by the fish, and are then covered over by them.

The fry remain one, two, or sometimes three years as parr before going down to the sea, about half taking their departure at one year, and nearly all the others at two years.

All the young salmon fry are marked with bluish bars on the sides, (called parr marks), until shortly before their migration to the sea. They then invariably assume a more or less complete covering of silvery scales, and are then termed smolts. Unless the young fish put on their smolt dress in May or early June, and thereupon go down to the sea, they remain as parrs another year, and without the smolt scales they cannot exist in salt water.

The length of the parr at six weeks old is about an inch and a half to two inches.

Many of these parr which migrate to the sea in August or September, weighing then but from one to two ounces, return to the stream as grilse within ten months, and then weigh from two to ten pounds. This surprisingly rapid growth has been definitely proven by marked fish, and it has been found that one salmon, marked in April and marked when going to the sea in the summer of the next year, was caught the following year and weighed twenty-two pounds.

The young salmon, when it returns for the first time to fresh water is called a grilse (usually pronounced "gril-sy"), and may be distinguished from an older salmon by the following points: The scales are smaller, and more loosely set, the fins are relatively longer and larger, the tail is more forked, and the diameter of the base of the tail is relatively less. The proportion of grilse to adult salmon varies a good deal with different streams. Dean Sage says that the proportion of grilse in the Restigouche is 8.4 per cent.

The grilse and the adult salmon return to the same stream, and often to the identical spot in which they were hatched, to spawn, unless they are prevented by artificial obstructions. If they are prevented from thus returning the Atlantic Salmon will apparently ascend some other stream, and in this respect they differ from the Pacific Salmon, which will try to overcome the obstacle until they become exhausted and die, but will not descend and seek another stream. It seems to be well established that a certain proportion of the Salmon of all rivers remain in the sea during each year.

The habits of the Atlantic Salmon in ascending streams differ considerably with different rivers. In some there is a run of large fish, entirely females, which enter the fresh water as soon as the ice is out and go straight through to the head-waters of the river, this being followed by a run of smaller fish, and then by a run of grilse. On other rivers no fish come in until about the first of July, large and small coming together.

Is Pure-Bred Live Stock a Gamble?

BY ALLAN MCDIARMID.

A number of years ago I got into the game of pure-bred stock-raising in a small way and ever since I have been wanting to say a few words on the subject to farmers in general, possibly for their benefit but more likely for the sake of relieving my own feelings. When a man can share his troubles with some friend or neighbor the natural tendency is to take advantage of the opportunity.

The other day I ran across the following paragraph in one of our eastern farm papers:

"When farmers and others, begin to call any branch of pure-bred stock-raising a 'game', a 'gamble', or a 'graft', it is time for the real friends of the industry to indulge in plain speaking and prompt and effective action."

Now I don't want to make any unwarranted charges or insinuations, but the old saying that "where there's smoke there must be fire" has generally been found to be true, and when a man calls anything a "gamble" or a "graft" it's usually because he has been taken in by somebody. Of course a person may lose money in the pure-bred-stock business through his own carelessness, but I happen to know that all losses cannot be accounted for in that way.

One of my first ventures was in the purchase of a couple of pure-bred mares, one of them being only about six months old. The oldest one proved to be subject to an itchiiness of the legs which, I believe, she recovered from after the man I sold her to had taken her out West. The younger mare developed a case of what the "Vet" said was "periodic ophthalmia" and at four years of age she was stone blind. To this she had the added misfortune of a skin that wouldn't stand the collar. In spite of all we could do her shoulders would become raw in a day or two after she began work. In the final scene of the play in which she figured, a man with a rifle was the most prominent actor and all the good money I had paid for her, and spent on her, had to be charged up to experience.

In the above case I'm not blaming particularly

the man who sold me the mares. The trouble lay in the fact, I think, that many generations of unnatural conditions and surroundings, and a lot of what one might call "babying," had brought on a sort of degeneration and lowering of vitality, with the result that was to be expected. They had become subject to all sorts of diseases and injuries. Hardy plants are never developed in a hot-house and vigorous live stock are the results of the out-door life and exercise. The pedigree papers should give a guarantee of constitution as well as furnishing the names of the ancestors of an animal.

But I've had a little more to do with pure-bred cattle than I have had with horses. One of my first experiences was in the buying of a heifer calf which I paid a fancy price for and which I found out later was only sold to me because her dam was "not so good as the other cows in the stable." She turned out to be practically worthless, as was to be expected. Here is where the weakness of the pure-bred business lies. Nearly all the young stock that comes is raised and the poorest individuals, as well as those with the poorest ancestry, are sold to beginners in the game, who have to pocket the loss and console themselves with the thought of the knowledge of human nature that they have acquired. In this connection I call to mind a case where a calf was sold as a pure-bred whose only claim to the title lay in the fact that it had been born the same night as one that actually was pure-bred and the owner thought it desirable to change them, the real pure-bred being of the masculine persuasion. I have also happened to witness other little mix-ups of a similar nature, such as pure-bred Holstein cows that had been sold by auction in the fall giving birth, the next spring, to calves that looked more like the descendants of a red Shorthorn than anything else. Buying from a breeder of that class might well, I think, be termed a "gamble" and the whole thing a "graft."

Another thing, it seems to me that too many breeders are, what might be called, trading on a name. One of the cows in their herd has made a great record and, at once, the price of every individual in that herd jumps a few hundreds or thousands of dollars, as the case may be. And not one of them is actually worth any more than they were. The owner has simply seen the chance to get it. The word "graft" seems to apply even better in this case. These cows have what I have heard called a "fictitious value." In other words, their price is above their actual value as money-makers.

But, as I have said, the great weakness in the business is this tendency to raise everything that comes, be it good or bad, and to retain it in the herd or to sell it for breeding purposes. I believe there are more actual culls in the pure-bred herds of the country than there are in the herds that are known as "grades." There is not the same temptation to raise a poor grade calf, or one from a poor dam, for the reason that there is no chance of selling it at once for a fancy price. Some of the best cows I ever knew were members of a grade herd and were developed just by the process of selection; weeding out the culls and retaining the "firsts."

I'm not trying in any way to discourage the pure-bred cattle industry. What I want is to see it built up on a solid foundation and the only means to this end that I know of is for the leaders of our different Associations to start a campaign of education among their members, that will lead them, through time, to the point where they would as soon put their hand in their neighbor's pocket as sell him a pure-bred "cull" calf, and where the cow that hasn't made good will go to the butcher rather than to some young farmer who is trying to build up a herd without "going broke" in the process.

Some have the idea that farmers are not very susceptible to education, especially where the result of it might be to decrease their income, but I think that when it is seen that there are things in the present system that tend to hurt business the average breeder will try to do what he can to rectify matters and to make the raising of pure-bred live stock the honorable as well as profitable industry that it has generally been in the past. Some men have never thought of certain practices as being "crooked". Calling their attention to the fact is all that is required to work a reformation. A little education may be "a dangerous thing" as we have been told, but it isn't likely that it would do any great harm in this case, where the morals and reputation of the men in one of our greatest industries are concerned.

If all hogs were marketed systematically on an open market there would be some chance of obtaining payment according to quality, for which producers have long been clamoring, and to which end little has been done. Furthermore, we should distribute our offerings of hogs more evenly over the season, and not make spring and fall seasons of surpluses, while summers and winters are periods of scarcity. Here is where seasonal conditions exert a powerful influence, but successful farmers are those who branch off occasionally from the beaten paths and run, perhaps, when others walk.

Since the railroads faired so bounteously at the hands of the Railway Board, the Bell Telephone Company will, no doubt, await the result of their requests with a great deal of confidence. To them that hath (the big corporations) shall be given, and from them that hath not (the people) shall be taken away even that which they seemeth to have.