

The Farmer's Advocate and Home Magazine.

THE LEADING AGRICULTURAL JOURNAL IN THE
DOMINION.

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February, 1919, it was 55,000 pounds, or less than half of pre-war receipts. A French investigator sent to one of the large dairying provinces, Normandy, reported that the shortage was caused by the slaughter of cows for meat, which brings relatively higher prices than milk."

The foregoing gives some indication of conditions in Europe, where a large volume of our dairy products are now going. The Minister of Labor says that if Canada produces this year the same quantity of butter that she produced in 1918, with our army returning and our increased consumption, we shall be about 15,000,000 pounds short of our requirements.

Fair price committees have proved themselves of very little value, but if it is the Government's intention to continue them they might be serving a useful purpose by investigating such conditions as the Minister of Labor commented on in his address before the Senate on May 15, when he said: "Perhaps we shall have to ask some people in this country why it is that a pair of shoes that the manufacturer sells for \$6 is sold to the consumer for \$12. It may be necessary to ascertain from some gentlemen why it is that the profit on certain plumbing supplies exceeds the sale price of the manufacturer. It may be desirable and necessary to ascertain from some gentlemen in certain classes of trade why a lady's gown sold by the manufacturer for probably from \$16 to \$18, is sold for twice that amount to the consumer."

A Plea for More Thought.

BY ALLAN MCDIARMID.

In a world where life is so short and time so valuable and money so hard to get it seems a pity that so many of us do so much work for nothing. The majority of mankind learn mainly through hard experience I suppose, but there ought to be a quicker way, one would think, now that humanity has developed a brain that can be used for such a purpose as the reasoning out of our problems and coming to a correct conclusion in regard to them.

But here is just where so many of us fall short. We run along in the "good old way that our fathers trod" and never think of stopping to find out if there isn't a better way of doing the particular piece of work that we happen to have on hand. We're as strong on "precedent" as most of the judges and lawyers in our law courts. We stay in the rut that has been made by the generations of the past. Only once in a while does some

one develop originality enough to bring out a new idea in connection with our farm practice.

If the long working day of the farmer, that we hear so much about, were cut down by about one-third and these extra hours given to the study of our problems and to thinking out a practical solution for them, there isn't much question but that we would be further ahead at the end of each year than we are.

A man who works too long and too hard with his muscle destroys, to a great extent, his power to work with his brain. As a consequence he doesn't "get ahead" as he should and becomes a sort of slave to his farm, or whatever branch of labor he may be engaged in.

I have known men who were habitually "too tired to think" and who did practically nothing but work and eat and sleep. Anything in the line of thinking out the best way to do the work they were so earnestly engaged in wasn't for them. They just worked and let someone else do the thinking. They are something like the men that St. Paul speaks about who, he says, have a zeal, but not according to knowledge. Or as the broker on the Stock-Exchange would put it, they are "long" on muscle but "short" on brains.

Now it is only fair after making these charges, as we might call them, that we should give a few examples of this lack of thought in the way the work of the farm is so often carried on. A statement isn't of much value unless one can back it up by a fact.

Well, for instance, have we not all seen the man who, when getting a field ready for corn, will spread a light coat of manure on a three-year sod and then plow the whole thing down, perhaps six or eight inches deep. The next year's crop may get some of this buried fertilizer when it is turned up again but the corn never does. And a good part of it has leached down so far that it may be said to be gone for good. A little thought would have helped this man to see that the common-sense place to keep the manure was in the upper two or three inches of the soil and then as it decomposed it would be taken up by the roots of his corn plants.

Then there is the occasional farmer who practices "green manuring" as it is called. He takes a whole year to grow a crop that has comparatively little fertilizing material in it, and then plows it down and the part of his field that has least need of it gets the most and the poorer soil, that can only grow a very light crop of this "green manure," gets the least. As is usually practiced, this system of renewing soil fertility is expensive and not very efficient. And the reason ought to be plain to the man who thinks.

A third source of loss is along much the same line. It is the use of the commercial fertilizer. We have had first hand experience on this score ourselves, so we can speak with some feeling. The man who buys nitrates and potash and phosphates at present prices and who hasn't a thorough knowledge of the whole subject, such as the varied requirements of particular fields and the exact time to apply the fertilizer and so on, needs to give the matter more study or he will find that he has thrown away a lot of good money. Commercial fertilizers have their place but it isn't on the farm of the man who won't take the time to learn something about them.

Another individual with a sort of automatic brain that keeps him travelling over the same road year after year is the man who thinks so much of his horses that he keeps them eating hay continually when they are not working. If all the good hay that has been wasted in this way during the past twelve months were still in the country it would not be selling at forty dollars a ton, as it is in some places at the present time. It has been proved that twenty-five pounds a day is enough hay for the average horse while at steady work and that he will remain in better condition on this amount than he will if he is fed more. But it is the habit for some men to keep the mangers full and as it was the custom of their fathers they never stop to think out a better and more common-sense method for themselves. They believe in economy all right and practice it to the limit in some lines but it seems hard for them to be consistent.

One more instance of how we seem to have wasted effort and time through our thoughtlessness and lack of observation. During the past twenty years or so the disc-harrow and other deep running cultivators have come into general use. And it is beginning to be realized by some farmers that we are overworking them. This applies to the case of the loose porous soil in particular. We cultivate and stir it up to such a depth that the upper part of the ground is dried out and the water is kept at such a depth that the roots of the plants cannot reach it. I can recall working the soil to such an extent with the disc-harrow that the axle would be covered as the horses dragged the machine along and I used to be very much surprised that I didn't get results to justify me for all my effort to say nothing of my horses who must have found it considerably worse than even I did. I feel sure now that a lot of this extra work did harm, rather than good. On the grain-fields of the West they now use the packer, a machine that firms the soil instead of loosening it, that is, all but an inch or two on the surface. We've got to get the moisture to the seed and in contact with the roots of the plant if we are to expect the best results.

Now if this idea has some foundation in fact one can form some sort of an estimate of how much time he may have put in following a disc-harrow and a team of over-worked horses, when he might better have been sitting on the back porch, smoking his pipe.

The disc-harrow is all right. It is a good machine in its place. But if our ground was plowed in the fall and the frost has loosened it up and given us a good bed for our seed, we want to "think" before we go to undoing Nature's work that it has taken her all winter

to accomplish in our behalf. The drag-harrow may be all that is needed to leave things ready for the seeder.

Most of us have heard about the small boy who was learning his Catechism and being asked by the minister what was "the chief end of man," said, "the end with the head on." Mankind would be lucky if that was true of them all.

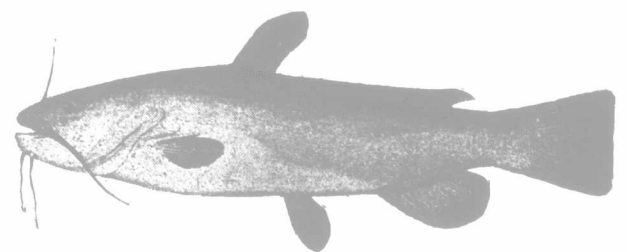
Nature's Diary.

A. B. KLUGH, M. A.

Some fish are very fastidious in regard to the water in which they live, some demanding clear, rapidly running streams, others clear lakes with considerable depth to which they can descend in the heat of the summer, and so on. But there is one species which is very easily satisfied, which will live in any body of water no matter how stagnant or warm, and yet which is a valuable food-fish—the Common Catfish.

This species, which is otherwise known as the Bull-head, Bull-pout, Mud-pout and Horned Pout, is common in ponds, lakes and slow-flowing streams, particular in those with a muddy bottom, from the Maritime Provinces to Manitoba. It attains a maximum length of eighteen inches and a maximum weight of four pounds, but the average size is a good deal less.

The Common Catfish will live and thrive in the muddiest and most stagnant waters. If the air-supply of the water becomes insufficient it will rise to the surface and take in air through the mouth. If the pond dries up it remains buried in the mud at the bottom, sometimes for weeks. A water temperature of 79 degrees F, which is fatal to most northern species of fish, suits the Catfish admirably and is favorable to the development of its eggs and young.



The Common Catfish.

During the winter this species hibernates in the mud at the bottom, the scaleless, highly vascular skin undoubtedly functioning in respiration in the same manner as the skin of frogs under similar circumstances. It emerges early in the spring, lean and hungry, and swims about seeking what it may devour. It is omnivorous but prefers animal food, feeding mainly on small mollusks (clams and snails), aquatic insects, etc., though it also eats the spawn of other fishes. Because of this latter food-habit, a habit which by-the-way, is quite common among a good many fishes, it should not be introduced into waters in which it is desired to raise other species of fish. It has been found that Catfish reared in ponds do very well on entirely vegetable food, such as corn, wheat, shorts and apples. It feeds very largely at night, and the long, sensitive barbels about the mouth are probably of assistance in locating its food.

The Common Catfish spawns early in June. It makes a nest among aquatic plants in water from 1.5 to 6 decimetres (6-18 inches) deep by clearing out an oblong depression in the mud, both sexes taking part in this operation. In this depression about 2,000 eggs are laid in a gelatinous, adhesive mass about 10 cm (4 ins.) wide, 13 cm (5 ins.) long and 2 cm (¾ ins.) thick. The eggs are light orange in color and one-eighth of an inch in diameter. The eggs are constantly tended by the parents, who not only fan them with their fins, and stir them with their barbels to aerate them, but take them into the mouth and force them out again to further aid in aeration. In water at a temperature of 79 degrees F the eggs hatch in about twenty hours, the period being more prolonged the colder the water. The young are 4 millimetres (1/6 in.) long when newly hatched, and for about 6 days they remain in a dense mass at the bottom, the parents continuing their fanning and mouthing operations. In about a week they are about ¾ inches long, and are led about in a school by the female, who keeps them rounded up, and stirs up the bottom to provide food for them, until they are about one and a half inches long when they join with other families of their own age. They attain maturity in three years.

The Catfish is not of a prepossessing appearance and its appearance seems to militate against its use as food. As a matter of fact, it is a food fish of high quality, the flesh being firm and of good flavor, while it is more free from bones than any other species of fresh-water fish.

Its hardness makes it an extremely easy fish to raise, and those who have tried raising this species, whether in natural or artificial ponds report that it provides them with a plentiful supply of fresh fish at very little cost. As we have mentioned above it should not be introduced into waters containing game fishes which it is desired to conserve, on account of the possibility of harm through its spawn-eating habits, but in the case of stagnant ponds there cannot be the slightest objection to its introduction. It is moreover very easy to obtain adults with which to stock such ponds, as they may be caught in almost any creek or muddy lake.