

## The Farmer's Advocate AND HOME MAGAZINE.

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DOMINION.

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It is impartial and independent of all cliques and parties, handsomely illustrated with original engravings, and furnishes the most practical, reliable and profitable information for farmers, dairymen, gardeners, stockmen and home-makers, of any publication in Canada.
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fighting be done on these fields before July 1. Cultivate! Cultivate! Cultivate!

In the grain fields use the spud early, if it must be used on the weeds and thistles, while the grain is small and does not hide half of them from view. Grain fields should not be weedy.

Hoe the garden; harrow the corn and potatoes; cultivate the summer-fallow; plough the root ground; spud the thistles. Do it early. Give your enemies no time to entrench. Attack them while they are in the open, unprepared, and your mastery will be easy and complete.

### Out With Prejudice.

"I could build a silo each year and pay for it out of the increase in my cattle due to silage." These words emanated a few years ago from the lips of a well-known cattle feeder in Western Ontario. The utterance was made when many silos were already erected, and here and there they could be seen dotted over the level country without the observer moving from his tracks in the steer feeder's yard. These words fell when farmers were satisfied with the old-fashioned, two-inch, stave silo, without regard to permanency, and when labor and material were cheaper than they are to-day. However, north, south, east and west were farmers glorying in the fact that they had stood firm and had not departed from the ways of their fathers, had not strayed into the paths of radicalism or denied the ritual of their parents or their grandparents, had not contaminated the seed of legumes with nitro culture, and had not sprayed their orchards with English fly-bait, had not built a silo.

In many instances, perhaps, as it is to-day, the absence of a silo was due to financial circumstances, which to the beginner or the renter are difficult to overcome, yet too many, we fear, refrained from adopting it because it was a com-

paratively new idea, and because a retired farmer at the corner grocery store said that cattle would not eat that sour stuff, and if they did their teeth would drop out and calves would be born without eyes or ears or tails. The prejudice which fought silage for two decades has at last become insignificant, because feeder after feeder after giving it a trial proclaims its palatability, its economy and its effectiveness. Those who talk without knowing about a silo are now laughed at. It has proved itself valuable beyond a doubt. Recent evidence regarding silos and silage is to be found in the Stock Department of this issue, and it is surprising how this addition to the farm equipment and fodder may be brought into service to reduce the cost of production. However, the prejudice which fought the silo and failed will now direct its forces against other methods and practices which may be springing into prominence.

The farmer should not leap from one thing to another, nor should he espouse every cause that is given birth. Too often, on account of financial advantages to manufacturers of certain articles, a movement will be encouraged by unseen forces, and there are few operations indeed about the farm that do not influence the profits of some institution outside of agriculture by their progress or their failure. For instance, if silos are looked upon with favor, manufacturers of silos, cement, corn-growing and harvesting tools and implements, silo-filling machinery and even forks and baskets will profit by an increased demand. We have chosen a particular case where the transactions are all legitimate and will result in profit to the manufacturer and farmer alike, but if the silo were not a useful thing on the farm the manufacturer would gain and the farmer would lose. This only illustrates from whence influences might emanate that would be harmful rather than good.

It is well to be wise and insist on being shown, but on the contrary it is lack of wisdom that induces one to close his mind to all teachings that are different from those of our ancestors. Their farming was good in its time, but they labored under different conditions, different influences and different opportunities as regards information and knowledge. We must change with time, and destroy the barb-wire entanglements about our heads that keep out all the good and new ideas. Never before were farmers obliged to figure so closely, never was it so necessary to grasp every idea and develop it to increase economy in all our operations. We should have it proven to us, but we should "out with prejudice."

### Nature's Diary.

A. B. Klugh, M. A.

The trees are now rapidly assuming their leafy garments. From day to day we can note the expansion of the leaves of different species, and see how the buds of some species are just bursting, while the leaves of others are about half expanded. It is interesting to notice the way in which the young leaves are protected; many of them are reddish in color at first, the red pigment acting as a screen to protect the developing chlorophyll; many of them in their early stages stand straight up, so that their surfaces do not receive the most intense light of the day. At this season one can also see that the bud-scales play another part besides that of protection for the leaf-buds against dryness and sudden changes of temperature during the winter, as they also shelter the young leaves in the very early stages of their expansion. Many young leaves are downy or woolly at first, this covering protecting them, when their tissues are extremely delicate, from dryness and also from the attacks of insects.

In many of our streams are little fish, very small and very beautifully colored, known as Darters. They always remain near the bottom, often resting on it on the tips of the pectoral (breast) fins. When at rest the pectoral fins are outspread, and the sharp points on the fin-rays take hold of the gravel like little toe-nails and give the fish the appearance of walking on its fins. When the Darter is frightened it shuts both the dorsal (back) fins so that they are scarcely visible, closes the tail and the anal fin, and spreads out the paired fins (pectoral and ventral) on the underside of the body so that the body lies flat on the bottom. There are a great many species of Darters, the most beautiful of all being the

Rainbow Darter, whose sides flash with blue, crimson and green.

Another very interesting little fish is a denizen of stagnant ponds which do not dry up in the summer. It is called the Stickle-back, from the five sharp, strong spines which are placed in a row along the ridge of its back. These spines may be laid flat or they may be erected stiffly, making an efficient saw, which does great damage to fish many times the size of the stickleback. If a larger fish wants to make a meal of a Stickleback it must catch it from behind, as this little fish is much too alert to be captured in any other way. But swallowing a Stickleback tail first is a dangerous operation, as the sharp spines rip open the throat or stomach of the captor.

When swimming the Stickleback darts about rapidly, its dorsal and anal fins extended, its spines all erected, its tail lashing the water with strong strokes, and the pectorals flying so fast that they make a blur. When the fish wishes to lift itself through the water it seems to depend entirely on its pectoral fins, and these are also used for balancing. Its favorite position is hanging motionless among the pondweeds, with the tail, the dorsal and ventral fins partially closed.

At this season the male Stickleback is building his nest. He constructs it of the fine green Algae which are commonly termed "Frog-spittle." These green Algae are really simple aquatic plants, much lower in the scale of plant life than the mosses. It fastens the Algae to some stems or reed or grass, cementing it together with a waterproof glue, which he excretes from an opening near the anal fin, spinning it out in fine threads. He makes his nest in the form of a hollow sphere, finishing the structure with a circular door at the side.

As soon as the male has finished his nest he goes a-wooing. He selects some lady Stickleback and conducts her to the nest. She enters the nest through the little circular door, lays her eggs, emerges and swims away. The male then enters the nest and scatters milt over the eggs. He then looks up another female and induces her to come and deposit some more eggs in his nest, and thus he proceeds coaxing female after female until his nest is full. The eggs are white and shining like tiny pearls, and are fastened together in little packages. He now stands guard by the door, and with his winnowing pectoral fins sets up a current of water over the eggs. He drives off all the intruders by most vicious attacks, and keeps off many an enemy simply by a display of reckless fury. Thus he stands guard until the eggs hatch and the little Sticklebacks come out of the nest and float off.

## THE HORSE.

### Diarrhoea in Foals.

While young animals of all species are subject to diarrhoea from various causes, it is probable that none are so susceptible as foals. We do not refer to that form of diarrhoea that, in some cases, becomes epidemic in certain localities or premises, and is doubtless due to a specific virus, and from which calves chiefly suffer. We propose to discuss sporadic or accidental diarrhoea in foals. This is a serious and often a fatal malady, and in some cases its appearance cannot readily be accounted for. The newly-born foal is very susceptible to the actions of irritants of any kind to the intestines. Intestinal irritation may be caused in many ways and usually results in diarrhoea. In some cases it is evidently caused by some unfavorable condition of the dam's milk, and this is especially the case when the mare has been fed largely on food of a very laxative nature; in other cases it occurs without apparent cause. We must infer that in such cases there is some injurious ingredient, the nature of which is not well understood, in the milk under certain conditions. In other cases it is caused by careless or ignorant administration of drastic purgatives to the nursing mare. Aloes, especially, appears to have an affinity for the lacteal apparatus; at least it is largely excreted by these glands, as is demonstrated by the well-marked odor of the drug that can be detected in the milk a few hours after the administration of a dose. In such cases the drug has not been deprived of its purgative properties, and a foal partaking of milk thus contaminated is very liable to suffer from acute diarrhoea. This teaches us that we should not administer aloes to a nursing mare unless absolutely necessary. In most cases, where the purgation in the mare is demanded, it can be produced by the administration of raw linseed oil, which has not the same injurious action upon the lacteal secretion.

Another common cause of diarrhoea in the young animal is exposure to damp and cold weather, or confinement in damp, foul and ill-ventilated premises. One of the most frequent causes probably is allowing the foal to partake freely of milk from a mare when she is in a heated condition, especially when the dam has