

## The Farmer's Advocate AND HOME MAGAZINE.

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DOMINION.

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the things closer to nature than mathematics. Does any one believe that agriculturists can be made and agriculture benefited by "plucking" farm boys and girls and not allowing them to enter High School. Such nonsense! The boy or girl on the farm requires education just as much as the boy or girl going into city business or city professional work. More than that, the boy or girl with the ability and the ambition cannot be held down by examination results.

The question is not answered. Where is the difficulty? Are the teachers incompetent? Surely not. Did the examiners show partiality? Surely not. Is this mother all wrong in her contentions, or why is it that all the candidates from several rural schools failed? Who can answer? It seems up to the Educational authorities. One of three things must have been to blame—poor teaching, bad marking or dull pupils. Who has ever found all the Entrance class pupils in one school, let alone in several, dull?

Dr. Jas. W. Robertson, of Ottawa, in concluding an earnest Red Cross Society address recently said: "Christian civilization demands that a man must be at present in one of four places: The firing line for the young man for the honor of his country; the saving line to help save life as the Red Cross Society is doing; the factory line to manufacture necessities; and the farming line to provide food for those who are struggling and working."

Do not attempt to prepare a poor or dirty field for fall wheat starting this late in the season. The winter may not be so favorable as last, and the wheat sown on poorly prepared land may be a loss.

Perhaps this is the only royal thing he can see in all the world's miseries is the amount of paper they extract from the public pocket.

### The Wheat Question.

According to Old Country farm journals an agitation is on foot in Britain to encourage the growth of larger acreages of wheat. Some claim that oats are of just as much importance as wheat, and hold fast to the belief that those having land more suitable to the growth of oats than to wheat production should not be misled into substituting wheat for oats, which make a good nourishment for both man and beast.

It is time to think here in Canada. Much land is now being prepared for winter wheat. The crop this year has been a heavy one, and that in itself serves to increase the favor in which the crop is held. Moreover, war prices are a drawing card. What may be a good field for oats or barley may not be suitable for winter wheat. It is well to keep this in mind. The crop this year has been uniformly good, but that on summer-fallow or rich clover sod well manured or having clover plowed down has been much heavier than any sown on fields in poor tilth or after stubble with no manure. There is nothing to be gained by putting wheat on dirty, ill-prepared land. Manure, either from the barnyard or in the green form, is essential. Weeds must be absent. This means good cultivation. Good drainage is imperative. It is too big a risk to put wheat on poor, dirty stubble land or on low, cold-bottomed, poorly-drained soil. Grow all the wheat you can, but do not sacrifice a good crop of oats for a poor crop or no crop of wheat.

### One Year of War.

The New York Times, one of the fairest and best-informed of American papers, sums up the achievements of Germany during the first twelve months of war with the vast military and naval forces which she has been training for the past forty years for the conquest of Europe. She possesses Belgium, a part of the North-eastern Provinces of France and has Russian Poland within her grasp. While doing this she has lost 3,000,000 men, her island colonies in the Pacific Ocean, great fortified outpost in China of Kiao-Chau and her West African possessions—more than half a million square miles of German territory, and more than ten million people who acknowledged German rule. Her navy has been locked up, her merchant ships destroyed or driven off the seas, and her great foreign trade annihilated. Her submarines continue to harass the Allies, but do not diminish their fighting power on sea where Britain still holds the mastery. Germany's losses in money are uncomputed but enormous. In arraying herself against the world, and by her awful treatment of Belgium and the Lusitania she has offended the moral sense of the world and forfeited for generations its respect and friendship. She may win some victories yet, but final triumph does not await her. That can never be. The Allies will win because win they must. For free England, Republican France, aspiring Italy and vast Russia, their armies will never pass at the German behest. They would perish first to escape the living death of subordination to Prussia. Their immense superiority in men, in wealth, in power will determine the contest even if it be prolonged for years.

Get at the after-harvest cultivation as soon after the land is cleared as possible. Recent rains have made the ground soft and easy to work. It may be too dry later on.

A bad storm of wind and rain can soon lay a promising field of oats very low. There is something in sowing still-strawed varieties after all. Following a very heavy storm about two weeks ago we noticed some fields that, while others almost equally heavy stood fairly well.

If it requires early pullets to keep up the supply of winter eggs we look for high-priced eggs next winter. Did you ever see fewer early chicks and more late-hatch'd youngsters than is the case this year?

### Nature's Diary.

A. B. Klugh, M.A.

A very common Butterfly is the Monarch or Milkweed Butterfly, a large species measuring three and a half inches across the expanded wings. The upper surface of the wings of this species is brownish-red, with the borders and veins black, with two rows of white spots on the outer borders and two rows of pale spots across the apex of the fore-wings.

The Monarch differs very materially from most of our Butterflies in that it migrates. In the spring the adults which have wintered over in the southern states come northwards, and as the females find the Milkweed sprouting they deposit their eggs on this plant. The individuals which hatch from these eggs, when mature, migrate still farther north, and so the tide of Monarch migration advances until they reach Canada in July. As the cold weather approaches the Monarchs gather in large flocks and migrate southward. I have seen immense flocks of Monarchs in mid-September on Point Pelee, Essex County, and have seen them striking out across Lake Erie. When these flocks come to rest they have a habit of settling on one tree, so that at a little distance the tree appears to be covered with most peculiar leaves. When one approaches closely these leaves take flight, and resolve themselves into Monarchs. Great numbers must perish on this fall migration, as, though the Monarch is strong-winged for a Butterfly, it has too much "sail" to handle in a strong wind, and cannot take a reef in it. During a heavy blow on Lake Ontario I found hundreds of Monarchs drowned along the shore near Wellington. I found some which had been beaten down on the wet sand and partially covered by it but which were still alive. I picked them up, cleaned and dried them and let them go, when they at once struck off over the lake.

The caterpillar of the Monarch is a strikingly-colored larva, being pale green with cross stripes of black and yellow. On top of the second segment back of the head are two long, slender whiplash-like organs, and on the seventh segment of the abdomen is a similar pair. When the caterpillar is frightened these whiplashes twitch and when it walks they move back-and-forth. It is thought that these organs may be of service to the larva in frightening away the little parasitic flies which lay their eggs on the backs of caterpillars. The larvae feed only upon the Milkweed, and they feed both day and night with intervals of rest, during which they are to be found on the underside of the leaf.

The chrysalis of the Monarch is a very beautiful object, being pale green shading to whitish green below, and outlining this lower portion are shining flecks of gold. At the apex is a band of gold with a dotted lower edge of jet. After a few days the chrysalis changes to a darker blue-green, and just before the time for the Butterfly to emerge it changes to a darker and duller hue.

The monarch in all its stages—caterpillar, chrysalis and adult—is distasteful to birds, and hence enjoys immunity from their attacks.

On many plants both wild and cultivated we find minute insects known as Aphids, Plant-lice or Greenflies. These little insects live in large colonies, and so tightly are they often packed that the smallest ones are wedged in between the larger ones, and the hind legs of some are resting on the bodies of their neighbors. They do not need much space to feed over as they live by sucking the juice of the plant.

During the summer nearly all the aphids we see are wingless. These are all females which give birth to living young by a process known as parthenogenesis, that is without previous fertilization. But in the fall the females give birth to winged males and wingless females, and the fertilized eggs laid by these females remain unhatched until the following spring.

The aphids are soft and are fed upon by many animals, both birds and insects. But they are not entirely without means of defence, for at the end of the body are two little tubes which secrete a waxy substance. When attacked the aphid raises the end of the abdomen and smears this substance on the face of the attacker, who has to pause to clean it off its eyes, thus giving the aphid time to walk off. Some insects, particularly the Ladybeetles, apparently seize the aphid too quickly to allow it to thus defend itself, as these beetles live almost entirely on aphids, and do an immense amount of good by destroying them.

When plants become badly infested with aphids the amount of sap which is extracted often weakens them to such an extent that they die. When aphids are noticed on cultivated plants it is best to spray the plants thoroughly with soap-suds made from a quarter of a pound of soap in a gallon of water. This spraying should be repeated every three days until the aphids are destroyed.