

to his business. As people have come to understand the use which may be made of the office they have taken advantage of it very freely, to such an extent, in fact, that it has become necessary to have someone in charge all the time. In addition, the office has become the meeting place of the directors of various organizations—the Farmers' Institute, the Agricultural Society, Farmers' Club, etc., and also of agricultural gatherings of different kinds. Last winter the newly organized Farmers' Club met in the outer office every two weeks and the attendance of nearly 150 at some of the meetings indicates the interest taken in the subjects discussed. Special questions pertaining to, crops feeding and farm methods and practices were discussed as well as some of the problems which affected the interests of the farming community as a whole. In February, a special Poultry Institute of five sessions was put in which greatly interested the ladies and townspeople as well as the farmers themselves. The attendance at some of these meetings taxed the accommodation to the limit.

#### GOES THROUGH THE COUNTRY

"My work as representative of the Department of Agriculture takes me into all parts of the county. Last fall considerable time was spent getting in touch with conditions, in inquiring into various phases of general farm operations here and in getting facts and figures pertaining to different branches of the industry. Information acquired in this way has been found very useful in addressing farmers' institutes and other gatherings from a local standpoint. This year special attention is being given to the accumulation of definite and even statistical information bearing on many features of the agriculture of the county.

"Considerable outside work is being done, also, in the way of rendering assistance to farmers in such matters as laying out drainage systems, etc. The reclamation of immense areas of practically unproductive swamp land is receiving special attention. At several points throughout the county experiments with commercial fertilizers are being tried on different crops with a view to finding the cost of rendering this kind of soil profitably productive. Special work is being undertaken in connection with the different Departments at Guelph, with the dairy commissioner's office in Ottawa and with the Canadian Seed Growers' Association. The work which has been undertaken for this season is more than can be performed by one man and recognizing this fact the Department in Toronto has assigned an assistant to this branch who is associated with me in different duties connected with the office.

#### THE SCHOOL WORK

"In organizing a class in the school, I received a great deal of assistance from rural school teachers and from the public school inspector. Our class from the first consisted of eight pupils. This number was very small in view of the limited accommodation in the first year class room. Four mornings of every week are devoted to agricultural subjects. For the remainder of the time these boys constitute a part of the general first form class and take with them the work in grammar, literature, composition, reading, writing, arithmetic and a part of the science.

"The work in agriculture is modelled upon the first year work at the Ontario Agricultural College. Most of the first year subjects are included in the course but we are not endeavoring to confine ourselves to first year college work. In fact, in some branches we have already touched upon a great deal of second year work. While we hope that after two years' in our class a boy will have no difficulty in entering the O. A. C. in the second year class if he later decides to do so, our aim is, nevertheless, to make our course here as self-contained as possible. For this reason, the practical side of every branch of the work is being

emphasized, and the course is adapted as far as possible, to conditions and requirements of this particular district. Purely scientific principles in Physics, Chemistry, Bacteriology, Botany and Entomology are dwelt upon only in connection with their practical application.

"Attention has been devoted chiefly to the study of live stock, stock judging, feeding and general animal husbandry; field crops—seed judging and experimental results; soils—their nature, requirements and improvements from a physical and chemical standpoint; systems of tillage and rotation, drainage and engineering and surveying in connection therewith; plant life, growth, structure and habit from a botanical standpoint; and last and perhaps of greatest importance in this district, the subject of dairying in all its aspects.

#### THE BOYS ARE INTERESTED

"In their classroom work the boys are full of intelligent questions and are continually bringing in questions from their neighbors. Their interest in the work is further indicated by the way in which they attend farmers' institute meetings, farmers' club meetings and other agricultural gatherings, without special solicitation.

"In addition to the work with the boys of the general course, we ran during three months of the winter, a short course in agriculture. By special arrangement with the business college here a course was put on which allowed boys to take agriculture at the collegiate during the morning and in the afternoon to take a special course in business. This proved to be a very popular course and the advantage taken of it indicated that if continued next winter it can be made a very valuable feature of the work.

"While it is likely that the development of the school side of the work will be more gradual than the progress made in connection with the office there is every reason to believe, judging by the experience of the first year, that the agriculture option in the Collegiate Course can and will be made a permanent feature of the educational system."

#### WORK BEING EXTENDED

Readers of The Canadian Dairyman and Farming World will be able to gain a good idea from the foregoing letter of the nature of the work that is being carried on by these branches of the Ontario Department of Agriculture. Already their value is becoming recognized in other sections. Several counties have made application to the Department this year for the establishment of similar offices in their sections. Three new offices, we are informed, will be opened this year, one being at Picton, in Prince Edward county. Thus, already the work is spreading. Where it will end no one can foretell.

### To Get Rid of Twitch Grass

T. F. Raynor, B.S.A., Seed Branch, Ottawa.

Twitch grass is particularly hard to get out of the land as it gets into the fence corners and around stumps. It has one redeeming feature, though, it can be used for pasture. If allowed to mature for hay, there is danger of the seed being spread. The best crop to grow where twitch grass is troublesome is buckwheat.

To fight twitch grass successfully, a campaign must be carried on in the dry time of the year. The only thing to do in a wet season is to keep the top down. In the dry time, the best practice is to plow the ground after the twitch grass is nearly in head. After plowing and working up the soil, the roots should be raked to the surface with the cultivator and harrow. The roots of twitch grass are particularly rich in plant food, hence it is advisable to kill them in the ground if possible. If we burn them, we lose a valuable plant food.

The frost of winter can be turned to good ad-

vantage in fighting twitch grass. By practising after-harvest cultivation and ribbing up the soil just before the frost comes, this peat can be dealt a fatal blow. The frost apparently freezes the moisture out of the roots as well as helping the condition of the soil. If such a field is followed with a head crop, the twitch grass will be pretty well licked.

### Where Does the Cow Get the Milk?

Geo. Rice, Oxford Co., Ont.

Various explanations have been given as to how the cow elaborates her milk. These are mere theories and the inside machinery of the cow is still a mystery. Cows have been fed food containing no fat elements, yet the cow goes on producing milk of the same quality as before. Then again some have fed food rich in fat to increase the percentage of fat in the milk and no increase in fat production has followed.

Nature has given the cow a little "system" of her own; and, after all we are not much concerned as to how the milk comes as to the fact that it does come. Therefore, we will say the milk comes by the cow devoting her "energy" to working this little "system" that nature has implanted in her. A better understanding of the great amount of energy a cow devotes to the production of milk and the great care it must be upon her system should give the dairyman more light upon the importance of the care and feeding of the cow.

#### COW REQUIRES MARVELLOUS AMOUNT OF ENERGY

We have become so used to the cow producing milk that we take it as a matter of course. We do not stop to consider what a wonderful, great producer of food the milk cow is, and what a marvellous amount of energy she devotes for the benefit of mankind. We have begun to call a cow that produces only 3,000 lb. of milk yearly a "robber cow." Judging her in comparison with others her production seems low. But why is it low? Simply because she may have no more energy to devote to the production of milk. A cow must have energy as well as ability to devote that energy to milk production. Do we stop to consider how much it taxes a cow's system to produce even 3,000 lbs. yearly? No; we figure that if the milk is worth \$1.00 per 100 lbs., and her feed will cost that, to say nothing of the labor, etc., then there is no profit. But, suppose we don't ask her to work in a "sweat shop" but figure her milk at \$2.00 a cwt., then she shows a good profit. But you say \$2.00 a cwt. is too much for her milk, the producer cannot get that price.

#### A QUART OF MILK IS EQUAL TO A LB. OF BEEF

Why should the cow not be credited with the food value of her milk? Scientists tell us that a quart of milk is of equal food value to a pound of beef. Then, if beef is worth 6c a lb. or the quarter, surely milk should be valued at 6c a quart.

Granting that milk weighs 10 pounds to the gallon, which is sufficiently close for our purpose in this article, a cow giving 3,000 lbs. milk yearly, or 1,200 quarts, produces as much food as a fat ox that produces 1,200 lbs. of beef; and she would do it on a great deal less feed. It will be seen that if we allow the 3,000 lbs. a year cow the true value for the food she produces, she is no longer a "robber cow." Or, to put it another way, she is being robbed by the public, made to work in a sweat shop as it were. Such cows need a labor union to go on strike and get a living wage for what they produce.

#### MILK PRODUCTION GREAT TAX ON COW

It is far from our purpose in this article to defend the 3,000 lb. a year cow, but to try to show