

elderly and rather stout gentleman balancing himself on the all-too-yielding branch of an apple tree. We could not but agree with him when he explained, "I ain't no squirrel". His boys had gone, his girls were married and his wife a lady of ample proportions and matronly figure was no more a squirrel than he, so what was to be done?

At the beginning of the war the withdrawal of many young people of British birth as well as many Canadians was not so much felt as might be supposed. It will be remembered that the war broke out in the end of the summer when farm work was not so pressing. None of us thought in spite of the forebodings of those who knew the state of affairs much better than we, that in three years from then we should still be fighting and not within sight of the end. At that time the idea of women being of much use on the land was scouted. "Our women are not strong enough, they cannot do as our mother's did." This was the authoritative statement of many men who ought to have known, having lived long in this land and knowing the people well.

At that time it was our opinion that the women of the present time are, if anything, stronger than "our mothers" were, but they have exercised a different set of muscles. A girl, who in the morning can take a round of an eighteen hole golf course, in the afternoon—and a fairly hot afternoon too—can play six sets at tennis, and in the evening is not too much fatigued to engage in any amusement that turns up, cannot be considered a weakling. At a certain stage of all civilizations the women of the wealthier classes are withdrawn from all productive labor, to the loss of the world and their own detriment. This is true in the East as in the West. A clever American points out that while the Eastern potentate keeps his women in luxurious idleness in the harem and only permits them to appear in public places veiled, the American merchant princes, allow their women folk to show a great deal too much of themselves in public and in private and keep them in an equally useless state of luxury and idleness. He asks "What combination more tempting to physical and mental and, consequently, moral degeneration can be made than a rocking chair and a cheap novel in a steam-heated room?"

If the love of outdoor sport has done nothing else it certainly has done one great thing in helping to emancipate women from this degeneration. In Great Britain, which still to a great extent provides a standard of living for the world, this healthy love of out of doors has kept our young women strong and active if not useful. During the last generation the girls of the classes have certainly increased in stature and the sensitive plants of early Victorian days, who, if we are to believe the novelists of the period, took every opportunity of swooning, etc., are entirely out of fashion. The higher classes in America, travelling over all the world as they do, have also begun to see that the life of the novel and the rocking chair is neither a good nor a happy life and the restlessness which is permeating the female society of this continent is the result of this knowledge. The war will do great good to women and through them to society if it can show a means by which this knowledge can be put to some use. For of what use is learning unless it be made to work good for the world. The time is past to say that the women of Canada cannot do a great deal of the work hitherto done by men. They have proved that when necessary they can. One lady in Ontario cut all the grain on a good-sized farm, giving a hand at taking it to the barn, and this besides doing a great deal of work in house and garden. Another lady, who, in spite of her four children, said not a word to prevent her husband enlisting, has taken up his work and done it successfully. She engaged an elderly man to help her to take the produce to town and to do hoeing. She herself being a good hand with horses does cultivating and indeed all the horse work except teaming. Her neighbors say that by her business capacity and good judgment she has improved her farm so much that on her husband's return he will be able to increase his holding and work on a much larger scale. These are only two instances out of many but they are enough, if there were plenty of women they could do a great deal but where are the women?

In Great Britain there are many more women than men. In Scotland alone, where women do and always have done a great deal of out-door work on the farm there were, before the war, over a million more women than men. All over the world 105 to 106 male infants are born to 100 female, but we suppose it is unnecessary at this time of day, particularly at present, to enumerate the causes why in old civilizations there are always more women than men. They live more sheltered lives, are less liable to death by accident and more men emigrate to new countries than women. On this continent there are more men, particularly young men, than women. Of course in the West the preponderance of men is more marked than it is in the older settled provinces. At the present time when so many young men are for the time being doing battle for freedom this is, of course, not so marked, but these boys will come back and others with them we hope and believe. Even with this drain on the male population of Canada there are not enough women to do any more than the work which seems naturally to belong to them. Meetings are got up to try to create an interest in Child Welfare, and addresses are given by the learned on subjects connected more or less remotely therewith. Of what use are these unless the mothers of the children have time to put the knowledge gained at these functions or elsewhere into practice, or are able to find other women who can do it in their place? Gardening, for instance, is a very good exercise but if a woman has a heavy afternoon's work in the garden, her desire to go into the house and cook suitable and appetizing food for the children is not overwhelming.

Last summer we had the pleasure of listening to a farmer's wife giving an enumeration of the various duties that had fallen to her lot the day before. On enquiry we found that the farmer is prosperous and for at least a part of the year employs two men. This lady had come on the Sunday afternoon to thank a neighbor for allowing her children, a boy and girl of 9 and 7 years, to gather strawberries on the previous afternoon. Let us enumerate some of her occupations, we cannot pretend to give a full list. She rose at 5, milked 3 of the 6 cows, got breakfast for the husband and hired man, set bread and then went to the garden and occupied herself in much needed work till 10 a.m. The children had, meanwhile, washed the dishes. So she proceeded to look after her bread and get the family dinner ready and also tidy up the house making beds and doing the various little bits of work which fall to the housewife's duty on Saturday morning. After dinner she sent off her children, baked her bread, scrubbed the kitchen premises, and on the return of her children with the strawberries prepared some for supper and made pies and cakes for Sunday. The work was not done then, there was the milking and attendant wash, and Saturday being "tub-night" the children took a little more of her time. She felt, she said, too sleepy to read the paper but played the piano for half an hour. Truly music must have charms.

This woman did not seem to think her lot was other than that of her neighbors. She and her husband were prospering and were evidently happy. Domestic help in the country and in their environment was not to be thought of.

When women on the farm have to slave like this at what we should call their legitimate work, we would like to ask where are they to find time to do work on the land? It reminds us of the puzzle popular in our childhood days. A picture of a scraggy tree, or perhaps an equally scraggy landscape and we were requested to find, let us say, Napoleon or perhaps Lord Roberts. By the use of the imagination most of us could do so, but the puzzle now is where to find the woman. Canadian women can and do work on the land as well as others but the women are not here. If they are to do their duty to themselves, their children and their homes they have already enough to occupy all their energies in some cases more than they can accomplish without drawing unnecessarily on their nervous force, and it pays no man or woman either to work on their nerves.

Middlesex Co., Ont.

A FARM WOMAN.

A Year for Great Accomplishments in Agriculture.

EDITOR "THE FARMER'S ADVOCATE":

John Prout, 1810-1894, was the son of Wm. Prout, a farmer of South Petherwin, Cornwall. His early education was obtained at Launceston, while his training in farming was gained at his father's side. As a young man he became dissatisfied with English tenant systems emigrated to Canada, settling on a farm near Pickering, Ontario, in 1832. In 1842 he returned to England and engaged in business in London till 1861. In this year he bought Blount's and Sweet Dew's farms at Sawbridgeworth, England, which he operated until his death in 1894. Mr. Prout, in his 33 years operation of Blount's farm, demonstrated a system of farming of special interest and value at this time. His system was based upon his Canadian experience and his intimate knowledge of Rothamsted experiments of Sir John Bennett Lawes. Mr. Prout demonstrated that successive crops of cereals could be raised on heavy clay land if it is drained well, and properly fertilized. In 1881, he published a book describing his methods, entitled, "Profitable Clay Farming Under a Just Tenant System."

America Must Raise Maximum Crops in 1918. If America is to live we must raise a maximum of food in 1918.

It isn't a question of ability—it is one of absolute necessity! Food includes beef, mutton, pork, poultry, corn, wheat, oats, rye, barley, potatoes, turnips and all that contributes either to the table or to the ration of farm animals.

No need rehearsing the story of starving myriads in Europe, of millions of patriots in training camps, of the destructive power of the devils of Berlin and their secret vassals in our midst. For our own preservation, our 1918 yield must be maximum.

We have no patent for favorable growing weather next spring and summer. All the more reason why we should consider now, in all seriousness, the needs of our Allies, who at present are fighting our battles,—and the needs of our homefolk. All the more reason why we should actually put knowledge into practice.

I venture the opinion that 60% of the poor corn now in the middle west, could have been changed to high-grade corn if we had only done last spring *what we know*. But, this is no time for regrets. The rapacious Hun is on the road to America—determined on pillage and destruction of property and the absolute wiping out of the principles of democracy. The thin red lines of gallant Belgian, French, British and Canadian heroes with Americans fast coming is all that holds him back. Canadian farmers are square behind their defenders. Nineteen-eighteen crops must show the world that this is so.

In a month or two every state and province will be actively campaigning for maximum crop acreage. Every means possible to increase total crops will be urged—and rightly.

The farm tractor has made possible the working of large land areas. Especially has the tractor been useful

or the first stage of soil preparation—plowing. Enormous reduction in cost of plowing under favorable conditions has been made possible by tractor power.

The careful use of stock manures and abundant use of fertilizers has made it possible for farms that employ these means of crop increase to the full, to harvest over double per acre of what is produced on hungry half-starved soils. Not only has this been the case in good seasons, but in poor and good seasons alike,—in fact, proper crop feeding very often has paid a higher per cent. on investment in bad seasons than in good.

Combining Ideas.

Larger areas worked by tractor + Larger yields produced by fertilization.

A new idea? No! An idea that was put into practice in England during the last dark days of America, when the sons of America fought and died so that a great basic principle of democracy should live.

In 1861 John Prout of Sawbridgeworth, England, began operating a farm of 450 acres—or rather a combination of two farms totalling this acreage, employing, as his principal power, steam tractors; and as his source of plant food,—fertilizers.

Did he succeed? Did it pay? Didn't he keep live stock? What effect did the system have on the permanent productivity of the farms?

These are the practical questions an average American farmer wishes answered:

Let Prout defend his own case. He considered the following things indispensable to most economic farm operations: 1st.—Effectual soil drainage; 2nd, Fields of considerable dimensions; 3rd, Straight fences; 4th, Sound head-land roads; 5th, Convenient field water supply.

Item number five is about the only thing that is not essential in the operation of a similar area at the present time, since gasoline engines use but little water.

Before discussing Mr. Prout's figures let it here be noted that this article is not intended as an advocate of farming without live stock, or of continuous cropping without systematic rotation,—both of which practices Mr. Prout followed on his own farm. The only live stock that were kept on the farm were from six to eight farm horses, and one cow to supply milk and butter for the household. The story shows what can be done under extraordinary conditions, by the record of what has been done. The spring of 1918 will see many farmers, on account of shortage of labor, reducing the number of live stock which they have normally kept. It will furthermore see many large farms where enormously more food cereals could and would be grown if the owners could be assured of the profitability of intensive grain growing under present war conditions. Necessarily, the question of labor shortage will apply under such conditions; however, government and industrial agencies of all sorts are co-operating with the farmer, with the one purpose of supplying sufficient labor this coming summer.

Now, as to some of Mr. Prout's figures: When he had remodeled his farm, Mr. Prout laid out the farming areas in nine rectangular fields approximately 50 acres each. As an average of 13 years he plowed 429 acres of the 450 per annum. As an average of 13 years, from 1866 to 1878, his farm labor bill amounted to approximately \$2,545 per annum. Mr. Prout's expenditures for fertilizers averaged about \$12.50 an acre. His soil was a heavy clay, fairly rich in potash, but for the best producing of cereal crops, requiring phosphoric acid and nitrogen. The soil was naturally well supplied with lime.

In Mr. Prout's typical yearly outlay statement, he figured the land at a rental of about \$8.75 an acre. All necessary expenses were included and interest at 5% on working capital as well as depreciation in equipment and horses. These items, along with annual expenditures for manures, seed, etc., totaled as an average of 13 years, \$16,600 per annum. The profit account is analyzed into three columns, the first covering 13 years, 1866 to 1878; the second, the first nine years of the period; the third, the last four years of the period, as follows:

Average Yearly Returns and Profits.

	Average of 13 yrs. 1866-1878	Average of 9 yrs. 1866-1874	Average of 4 yrs. 1875-1878
Returns.....	\$22,545	\$22,120	\$23,490
Less selling expenses.....	1,000	1,000	1,000
Gross returns.....	\$21,545	\$21,120	\$22,490
Less outlay.....	16,600	16,795	16,175
Net profit per annum....	\$4,945	\$4,325	\$6,315

The average of the last four years (column 3) shows the financial returns when Mr. Prout's system was established. He made \$6,315 per annum on an investment of about \$80,000,—an interest rate of a little less than 8%. But mark that this rate of interest—8%—was made in years when the price of wheat ranged from \$1.32 to \$1.86,—average \$1.62 a bushel in England. These prices are far exceeded at the present time.

Now, as to the permanent effect upon the soil of this great farm, the problem was submitted to the renowned soil authority, Dr. Voelcker, who gave it exhaustive study. He summarized his findings in the following sentence:

"I can see no reason why, with this system of manuring and an occasional dead summer fallow in order to give a thorough cleaning to the land, Mr. Prout should not

be able to definite.

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Mr. Canadian employed large farm.

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