

ture was \$4,231,000,000. During the preceding decade (1901-1911) the increase was 136 per cent., or 13.6 per cent. per annum. Part of this increase is due to a general rise in commodity prices and land values. Making due allowance, however, for the fact that the rise in the prices of agricultural products has been somewhat more rapid than in several other lines, the average capital employed in agriculture for the last five years cannot be less than \$5,000,000,000. It is probably considerably more, but we shall err on the safe side.

The total value of farm products in 1910 (field crops, fruits and vegetables, animals sold or slaughtered, dairy products, wool, eggs and honey) is given as \$722,000,000. Since 1910 there has been a considerable increase in the quantity and value of field crops, but very little increase in other lines. The number of live stock has been, in fact, slightly reduced, though the value may have increased somewhat. The average annual value of the field crops of Canada for the five years 1910-1914 may be taken as \$550,000,000 (Canada Year Book, 1914, p. 165). The value of other products was \$338,000,000 in 1910. The average value of these other products for the five years 1910-1914 cannot well be over \$400,000,000. Let us be on the safe side, however, and assume that the value has been \$450,000,000 per year. On this basis, therefore, we have a grand total of \$1,000,000,000 agricultural production per annum for the last five years (1910-1914).

We must now deduct from this total the various costs of production. First, labor cost: What is it? In 1910 some \$34,000,000 was paid out as wages to farm laborers. Since 1910 it is questionable if there has been much increase, if any, in the number of farm laborers. The rate of wages, however, has risen somewhat, so that it is not out of the way to assume that some \$40,000,000 has been paid out for farm labor per year for the last five years. In addition to this labor we must include the labor of the farmer himself and his family. In 1911 there were nearly four million people living on 714,000 farms in Canada. Upon every farm holding the occupier himself worked, and to some extent also his wife and children performed a share of the farm work. On some farms the women do a good deal. On some farms the farmer has a grown up son who performs the work of a hired man, but who is not so classed. He shares the income as partner or otherwise. On some farms there are three or four workers from the family. Now, what is the average number of workers per farm holding, exclusive of those classed as "hired help?" The question is a hard one to answer, and I cannot find any information along this line in the census returns. I feel safe in saying, however, that there are at least two workers per farm; or, otherwise, there are at least 600 days' work, on the average, per year, applied to each farm holding in Canada, apart from that labor for which direct and specified cash wage is paid. How shall this labor be paid? I find that the average wage paid workers in the manufacturing industries in 1910 was about \$480 for the year (Census, 1911). Considering the quantity and quality of the work done on our farms, and demanded by modern farming, it would be grossly unfair to pay those engaged in agriculture less than those engaged in manufacturing, in which a great deal of the work is largely mechanical. They are entitled to better wages. We shall, however, be on the safe side, and only allow them the same wages. Assuming then 1,500,000 workers (exclusive of "hired help") on the 714,000 farm holdings, and allowing each worker \$480 per year, the labor cost in agricultural production amounts to \$720,000,000, plus \$40,000,000, or a total of \$760,000,000 per annum.

Deducting labor cost, therefore, from the total value of the annual product, we have a balance of \$240,000,000. But we must make further deductions from this, viz., the interest on capital invested, municipal taxes, and an allowance for depreciation of equipment. Five per cent. on the investment is \$250,000,000, and a municipal tax of one per cent. (almost exactly this figure in Ontario, as I shall show subsequently) makes another \$50,000,000. The value of the farm buildings and implements in 1911 was somewhat over \$1,000,000,000. Not to speak of fences, and the increased value of equipment since 1911, five per cent. annual depreciation on this investment in equipment makes another \$50,000,000. The sum of these three further deductions is \$350,000,000, which we must take from our balance of \$240,000,000, leaving a deficit of \$110,000,000.

The situation can be expressed more concisely in the following tabular form:

Manufacturing in Canada, 1910 - 1914.

Capital Investment.....	\$1,500,000,000
Value of Products (Annual).....	1,400,000,000
Cost of Labor, etc.....	\$1,000,000,000
5 per cent. on Investment.....	75,000,000
1 per cent. Municipal Tax.....	15,000,000
5 per cent. Depreciation.....	50,000,000
Total Costs.....	1,140,000,000
Surplus Profit.....	\$ 260,000,000

Farming in Canada, 1910 - 1914.

Capital Investment.....	\$5,000,000,000
Value of Products (Annual).....	1,000,000,000
Cost of Labor (Annual).....	\$760,000,000
5% on Investment.....	250,000,000
1% Municipal Tax (An.).....	50,000,000
5% Depreciation (Annual).....	50,000,000
Total Costs.....	\$1,110,000,000
Deficit.....	\$ 110,000,000

The above comparison unquestionably throws no little light upon the cityward drift, for, with an annual discrimination of \$370,000,000 in favor of urban industries, no sane man could expect anything other than what has happened.

Next week I shall offer some explanation of this tremendous discrimination by an analysis of our present system of Federal taxation, with special reference to its incidence upon Canadian agriculture.

W. C. GOOD.

(NOTE.—Those who are disposed to go into the matter more fully can verify my figures and calculations by consulting the returns of the last Census, the Canada Year Books, and other official documents.—W. C. G.)

Nature's Diary.

A. B. KLUGH, M. A.

Two delicate little flowers which are now in bloom in our woods are the two species of Spring Beauties. The flowers of these two species are similar, both having petals which vary in color from pale pink to rose pink, with darker veins, five stamens, and a style which is three-cleft at the apex. But, as may be clearly seen from our illustrations, the leaves of the two species are quite different—in one long and very narrow, in the other shorter and broader. The Narrow-leaved Spring



Fig. 1—Narrow-leaved Spring Beauty.

Beauty is found from Nova Scotia to Alaska, and the Broad-leaved Spring Beauty from Nova Scotia to Saskatchewan. Though this is their range as a whole, there are many places within their common range where one species is common and the other absent. Thus in the vicinity of Kingston, Ont., I have seen only the Narrow-leaved species, on the Bruce Peninsula only the Broad-leaved Spring Beauty, while at Guelph both species occur.

The Fox Sparrow is now passing through Ontario on its way to its breeding-grounds in the north. This species is one of our largest and handsomest Sparrows. It is rusty-red above, the color being purest and brightest on the rump, tail and wings, and the other upper parts appearing as streaks laid on an ashy ground, below it is white, variously and thickly marked, except on the abdomen, with rusty-red, the markings along the sides and on the lower part of the breast being in the form of arrow-shaped spots, and pointed streaks. The wings have two whitish bars.

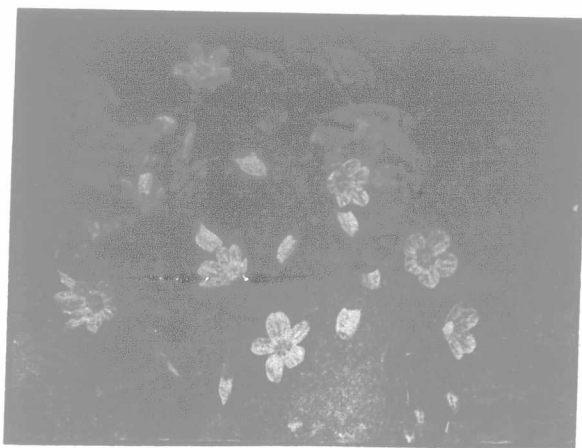


Fig. 2—Broad-leaved Spring Beauty.

The Fox Sparrow winters in the middle and southern states. It begins its migration from its winter range about March 10th, by March 20th it reaches the New England States and Chicago, by March 30th it arrives in extreme southern Ontario, by April 10th it is in central Ontario, by April 20th the species reaches Muskoka and Manitoba, by May 10th it arrives at Great Slave Lake and by May 20th those individuals which push on to Alaska have reached their breeding grounds. It is thus seen that this species takes forty days to travel from Missouri to Manitoba, a distance of one thousand miles, while in thirty days it goes from Manitoba to Alaska, a journey of two thousand five hundred miles. Much the same thing is to be noticed in the cases of all species of birds that winter in the southern states and breed in the north-west and whose migration has been studied—that they greatly increase their speed as they go northward. This is due to the fact that the rise in temperature occurs far more rapidly in the spring in

the north country than it does further south, or as we say "spring comes with a rush" in the north-land.

Sometimes during the spring migration the Fox Sparrow is heard singing its rich, clear, refrain. One spring, that of 1907, we had a heavy fall of snow while the Fox Sparrow migration was on, which held the birds back for several days. During these days, on the shore of Georgian Bay, there was a glorious Fox Sparrow chorus every morning.

Writing of this species in Alaska, Nelson says: "Along the coast of Norton Sound this bird is an abundant summer resident, sharing with the Tree Sparrow the shelter of the Alder thickets on the hill-sides and sheltered ravines. Wherever along the northern coast a fairly sized Alder patch occurs this hardy species may be looked for. On pleasant, frosty mornings at this season the males pour forth their clear, thrush-like whistle."

The Fox Sparrow breeds throughout the north country, from the Magdalen Islands, Newfoundland and Labrador, north-west to Alaska.

The Juncos are now very common at the edges of the woods and thickets, and about out-buildings. This species has the head, neck, breast and back slate-colored and the under-parts, below the breast, abruptly white, and as it flies it shows its white outer tail-feathers. It is much more common in Ontario in spring and fall than at other times, for, though some breed, even in the more southern parts of the province, the great majority of the species go to more northerly breeding grounds. The song of the Junco is a trill much like that of the Chipping Sparrow but somewhat lower pitched.

Our familiar friend the Phoebe is back in its accustomed haunts again, on the alert for the earliest insects which take wing. This species is one of the few birds which repairs and uses the same nest year after year.

THE HORSE.

Hens and horses do not go well together.

There is no excuse for using a poor stallion.

Work the brood mare, but do not overwork her.

The curry comb is absolutely essential at this season of the year.

Keep salt before the horses all the time, especially during seeding.

Feed regularly through the season of hard work and avoid digestive troubles.

He is indeed fortunate, who has saved the best of his hay and oats for the spring work.

The young colt and the brood mare will do well to have a little bran in their rations.

Keep the horses' shoulders clean. This goes a long way towards preventing shoulder trouble.

Water the work horses often, but avoid letting them drink too much after being fed, or when over heated.

Heavy horses at spring seeding would do the work easier without shoes, particularly if it happens to be a sticky seeding.

Do not expect two horses to do three horses' work but rather put four horses on the three-horse implement and drive faster.

Do not wash the legs of horses troubled with scratches. Allow them to dry after the day's work and brush clean before applying any lotion.

Have you the disinfectant, a piece of cord and a sharp knife ready for foaling time? All this was described in last week's issue.

Horses are not in keen demand, but the good heavy draft mares should be bred this year, if their owners expect to make the most out of them.

Watch the collars and the harness. Most horses shrink a little while at spring work, and some harness adjustment is necessary to prevent galls.

More is accomplished by keeping the team going steadily than by rushing for a few hours and idling in the fence corner for half an hour now and then.

Horses which have been heated up during their day's work should not be stood in a draft at night. The stable requires plenty of ventilation, but without draft.

It is always well to remember that the newly-broken colt and the in-foal mare are each only about one-half a horse. Working them half a day about is not a bad plan.

If you have a big horse on one end of the doubletree and a colt or a light horse on the other end, it is often advisable to give the little fellow a slight doubletree advantage.

Do not make the mistake of too rapidly increasing the grain ration of the horses when they go to work. Many horses suffer from indigestion by being fed large