

Soiling Crops.

In the accompanying diagram the crops referred to have been all tested in Ontario. We had entertained some doubts of Lucerne. We had for years known it in Great Britain, where it has been long grown and highly valued for green fodder; but Prof. Brown, in his address to the Dairymen's Convention, has borne testimony to its entire hardiness. He says: We have now proved the thorough adaptability of the Lucerne to this country—in hardiness, prolificness and value as a soiling crop. That drilled in the spring of '76 is now beginning to show the need of a more substantial manure than diluted farm-yard liquid, so we have now given it a heavy application of manure. Five cuttings gave eight tons per acre, and I am sure the crop will certainly be more productive next year. Experiments have been made both by broadcast and drilling; by the latter mode the produce was much the greater. This was due, of course, to the surface being more fully stocked with plants. It would, it is presumed, be best to broadcast provided the land is thoroughly clean and in good heart.

The diagram shows when each variety gave its first cutting and how long it continued to give good soiling. Lucerne yielded 4 tons per acre from five cuttings in about six months. Fall rye comes in early in spring, is a good soiler, but matures early. It yielded 2 tons in two cuttings; red clover 6 tons; tares and oats 3 tons; millet 3 tons; corn 25 tons at one cutting; rape 7 tons; thousand-headed kale 15 tons; prickly comfrey 3 tons. This, for the comfrey, is a small yield, but it increases in the volume of its product as it grows older. Sainfoin, also named in the diagram, is highly appreciated in Britain, but we would not recommend it yet more than as an experiment. From the diagram it is also apparent how many varieties of green food you may have for use each month. Thus in April there is a slight yield from Lucerne, and very little from Sainfoin and red clover. In June there are cuttings of four varieties throughout the month, and during the soiling months till October, when they decrease in number.

From Prof. Brown's address we take the following selections:

He said they were accustomed to hear of the different systems of farming called grazing, grain growing, root farming, dairy farming, and mixed farming, in each and all of which the live stock go and come from field to field in summer, according to the conditions of cultivation and the different modes of management. "Soiling" was the housing of cattle at all seasons, and in our circumstances, from the middle of April to the middle of October, when all their food is taken to them from the fields, in place of their being allowed to search for themselves. In this country we cannot secure the rich old pastures of England, because we cannot secure variety enough of grasses—which meant fifteen to twenty kind—to give a close bottom and offer that succession of herbage best for the health and growth of animal life. Our droughts, and especially our winters, operate against the richness of the pasture. We have rainfall enough per annum, but it is not distributed enough to give the regular top-dressing so essential to continuous greenness on an average of seasons. On putting an average beast upon green grass without any grain or cut fodder there is no going back, neither is their much progress in flesh making. There is little finishing on the outside or inside. So then we can make the frame in the field, but not complete it for the home or foreign market. In this respect they could not possibly compete at present with some other parts of the world. What applied to beef making also applied to the making of milk. He would divide the subject of green fodder into six different elements, all of which were highly necessary to have in order to produce the required steady and constant supply of green fodder. These were as follows:—(1) An early cut, (2) repeated cuttings from the same plant in one season, (3) a sufficient number of kinds to afford an unbroken supply of succulent herbage, (4) the

Crops	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		OCTOBER		Number of Cuttings	Tons per Acre per Annum	Hay Weight per Acre—Tons	Value per Acre Hay—\$10 Ton
	Val. Green Fodders	Rich pasture = 40	Val. Green Fodders	Rich pasture = 40	Val. Green Fodders	Rich pasture = 40	Val. Green Fodders	Rich pasture = 40	Val. Green Fodders	Rich pasture = 40	Val. Green Fodders	Rich pasture = 40	Val. Green Fodders	Rich pasture = 40				
LUCERNE															4	16	4	\$88
SAINFOIN			X	X	X	X	X	X	X	X	X	X	X	X	2	6	2 1/2	14
RED CLOVER					X	X	X	X	X	X	X	X	X	X	2	7	1 1/2	12
RYE					X	X	X	X	X	X	X	X	X	X	2	6	3	23
TARES and OATS					X	X	X	X	X	X	X	X	X	X	1	6 1/2	4	10
PRICKLY COMFREY					X ¹	X ²	X ¹	X ²	X ¹	X ²	X ¹	X ²	X ¹	X ²	3	10	3	14
MILLET					X ¹	X ²	X ¹	X ²	X ¹	X ²	X ¹	X ²	X ¹	X ²	1	6	2	10
RAPE					X ¹	X ²	X ¹	X ²	X ¹	X ²	X ¹	X ²	X ¹	X ²	1	10	3	13
CORN					X ¹	X ²	X ¹	X ²	X ¹	X ²	X ¹	X ²	X ¹	X ²	1	15 1/2	6	19
CABBAGE and KALE					X	X	X	X	X	X	X	X	X	X	1	20	10	50
Tons per Acre per Month					10	13	13	22	22	22	18	13	13	18				
Val. Green Fodders					.32	.29	.28	.28	.28	.28	.27	.26	.26	.26				
Rich pasture = 40					.32	.29	.28	.28	.28	.28	.27	.26	.26	.26				
Average value dry weight																		\$8.40 per ton.
Average value green																		2.15

GREEN FODDERS FOR "SOILING" IN CANADA.—Diagram of experiments of soiling crops made in the Ontario School of Agriculture at Guelph, Ontario, 1870. The X indicates the time of sowing, and the white space the time of cutting the fodder.

kinds to differ in constituent element—that is in their chemical properties, (5) the largest possible produce per acre, and (6) a high fattening and milking property. Prof. Brown then went on to discuss the question of the rotation of crops and the value of different kinds of crops for fattening purposes, and from the statistics submitted he affirmed that soiling possessed (1) the advantage of being able to maintain one head of cattle per acre instead of three acres by grazing, (2) that there is a great saving of food in avoiding destruction by cattle traffic, (3) that where we have apparently useless quantities of any kind of straw, chaff, and hay, good or poor in quality, they can be safely used in association with the moist green fodders, (4) that we obtain fully double the quantity of manure by soiling than by allowing it to have its own way in the field, (5) that it gives greater production of milk and flesh on an average, (6) that it gives greater variety of material and allows uniformity of management, which gives greater health and comfort and less liability to accident. 7th. It is well known in soiling experience that cows give a greater flush of milk from good early pasture than from having the food taken home to them. The change from winter confinement to the rich and plentiful supply of grass, along with the lazy conditions under which they obtain it, does this. Were this grass to continue there would certainly be much less in favor of housing, but it rarely keeps up, and while there is not so much milk in April and May and part of June, there is a continuous flow with no falling off through July, August and September.

The Rose.

Roses will do well in any ordinary garden soil that is free from standing water and well drained. When there is too much clay the soil can easily be made sufficiently friable by the application of wood and coal ashes, lime, stable manure, &c. When on the other hand a soil is sandy or too light, we need to bring clay, leaf mould, &c., to give sufficient body. Pruning is best done in November or March, though, to secure a good crop of flowers in the autumn, it is necessary to prune immediately after the first flowering is over. In regard to manuring we would say that there must be a generous application if we expect a generous yield of flowers. When roses are planted in the spring it is better not to dig in much manure about the roots, but rather apply as a surface dressing. This will at once be nourishing, keeping the roots cool and prevent suffering from the droughts of summer. The following autumn or fall after the roses have been planted, there should be again applied as a mulching, a free application of stable manure, which may be dug in the next March. We find cow manure the best fertilizer on the whole, that we have tried, though all kinds of farm manure are good, as are also bone dust, soot, guano, &c. We know some amateur florists who complain that they are always unsuccessful in the culture of roses. This may be partly owing to want of sufficient attention to manuring, pruning and cultivation at the proper time. Another cause of failure is that instead of planting the common, hardier varieties, they select such as require the care and attention of professional florists.

Two Pictures.

At the late meeting of the Ontario Fruit Growers' Association, Chief Johnson, of the Six Nation Indians, took a prominent part in the business of the day. Six of the Grand River Indians are members of the Association. They are a law-abiding, prosperous people. Look now at the other picture as represented by an American paper: "It has been estimated that it costs our Government \$2,500 and two lives to kill an Indian! It is estimated there are about 350,000 Indians left in the United States. At this rate it would cost 700,000 lives and \$875,000,000 to settle the Indian problem in that way. It would be interesting to know how much it would cost to train every Indian boy and girl to useful industry and make good citizens of them."