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FARMING IN SWITZERLAND

G. C. Creelman, B.S.A., M.S.

Note—After his return from abroad we requested President Creelman to give an account of intensive agriculture in the Old Land for the benefit of the readers of the CANADIAN DAIRYMAN and FARMING WORLD. Owing to pressure of work Mr. Creelman was unable to prepare the matter for us at that time. It has since come to hand and we take pleasure in presenting it to our readers.—Editor.

YOU may lie in a hammock under the trees at Montreux, on Lake Geneva, almost any day in January, while a walk of 10 minutes will bring you to a place where tobogganing and skiing are the principal sports. You may pick the most luscious grapes in the valley of the Rhone, and looking up see Mont Blanc, covered with perpetual snow. You may see a hillside all divided up into small fields, or farms until a bird's-eye view looks not unlike the experimental plots at the Ontario Agricultural College, and yet the farmers look as well fed and thrifty and appear happier and more contented than the average proprietor of 100 acres in America.

Owing to differences of elevation, the climate is extremely variable, even in the same localities. Owing to the same cause, few countries in Europe, even of larger extent, can boast of a more varied vegetation than Switzerland. In regard to vegetation it has been divided into seven regions. The characteristic product of the first is the vine, which grows up to 1,700 or 1,800 feet above the sea level. The next is the hilly or lower mountain region, rising to the height of 2,800 feet, and characterized by the luxuriance of its walnut-trees, with good crops of spelt and excellent meadows. The third, or upper mountain region, which has its limit at 4,000 feet, produces forest timber, more especially beech, and has good crops of barley and oats, and excellent pastures.

Above this, and up to the height of 5,500 feet, is the fourth or subalpine region, distinguished by its pine forests and maples; here no regular crops are grown. The fifth, or lower alpine region, terminating at 6,500 feet, is the proper region of alpine pastures. In the sixth, or upper alpine region, the vegetation becomes more and more stunted, and the variation of the seasons is lost. The seventh, or last region, is that of perpetual snow. Many parts, even of the lower regions of Switzerland, are of a stony, sterile nature, but on every side the effects of persevering industry are apparent, and no spot that can be turned to good account is left uncultivated. Of the total area, over 26 per cent. is unproductive; of the productive area nearly 26 per cent. is under grass and meadows. The chief crops are wheat, spelt, rye, oats, and potatoes.

THE SWISS FARMER

"We love liberty and poetry," said one Swiss

farmer to me last May. "Our wine presses we call our drawing-room and our vats are in our library." Every farmer grows his grapes and presses his own wine, and when he has sold his crop, he is content to put his surplus cash to improving his little farm and increasing its fertility. Perhaps when our population becomes more congested, and we are forced to live upon a smaller acreage, we shall farm better than we do. We may then fight the weeds that take the place of wheat and remove the stones that take the place of wheat and plow the fence corners that should be planted to wheat, and cultivate and fertilize to the fullest extent, that we may have more wheat per acre.

A Matter of Emphatic Concern

The discussion of the Weed Pests of 1908 is a matter of emphatic concern. Through investigation, wide correspondence, and the reports of visitors and Farmers' Institute workers, it becomes more and more apparent to the Department of Botany that the Province of Ontario, at large, is sorely menaced in its agricultural industry by the spreading of noxious weeds. They are usurping our fields and greatly increasing the cost of producing crops. In the majority of cases, they attain a foothold before they are recognized and combated. Very often they secure entrance into clean land through the use of seed whose impurities are not known. Ignorance of weeds, like all other ignorance, is costly. They are an enemy that is fought better by fore-knowledge than after-skill. Every farmer should be warned and prepared to resist their entrance or their first sign of attack. Recently in the Province of Nova Scotia when it was found that an influx of the Brown Tail Moth, that has caused much damage in the New England States, was imminent, the pupils in the schools were organized into a first line of defence. To resist the attack of weeds there is need for similar organized precaution throughout the country; not only through the scholars in the schools but by everyone concerned. The weed pest of 1908 for one man becomes the weed pest of 1909 and succeeding years for a widening circle of sufferers.

S. B. McCREADY.

Botanical Department, Ontario Agricultural College.

"Not more land, but a little land well tilled." That seems to be the motto of the Swiss farmer.

Where dairying is practised, soiling is generally practised. No grain is fed in summer, but after a little dry hay, fed at 5 a.m., the cows are watered and then fed all the fresh-cut green grass that they will take. The manger is generally filled twice during the forenoon and again about milking time at night. In winter they feed at 6 a.m., and 6 p.m., just after milking.

THEIR DAIRY COWS

The cows are generally the Spotted Swiss, or a grade which looks very much like her. Very often they are grey or mouse-colored, but always large and strong looking. At first glance they appear too beefy looking to give much milk, but on closer inspection you find a good heart girth, indicating strong constitution, a large barrel, or broad basket, and a heavy bone. It is this last

feature I think that makes them appear clumsy and more beefy looking than they really are.

The Swiss farmer believes in the General Purpose type. His best grade cows, such as will produce 7,000 or 8,000 lbs. a year, are worth on the market from \$140 to \$160 apiece, and after they have been milked three or four years they are spayed and fattened and sold for beef, bringing about \$100 to \$120 each.

Milk and butter average very little higher in price than ours, but the Swiss farmers are more economical feeders; their markets are right at hand, and the dry stock and young stock are sent to the mountains when feed is scarce in the valleys. A great deal of the milk of Switzerland is made into condensed milk and cheese, and Swiss cheese is popular all over Europe; it is open, having large air spaces and holes all through it, and is most palatable and digestible. It is invariably pure white and is served every day to every guest at the leading hotels in Italy, Switzerland, and France.

Speaking generally of Swiss farming, I would say that their simple living, intensive methods, and their patient industry, in which every member of the family joins, account for the prosperity of the farmers of Switzerland.

The Perennial Sow Thistle

This is by all means the worst weed in the Province of Ontario, says J. Eaton Howitt in Bulletin 168, of the Ontario Agricultural College. It is found in almost every county, and upon almost every farm. So rapidly and so persistently is it spreading that in some parts of the province it threatens to entirely over-run the fields and drive out the farmer. In spite, however, of its wide dispersal there are many who are not able to recognize this pest and who mistake it for its harmless cousin, the Common Annual Sow Thistle and the Spiny Annual Sow Thistle. This should not be the case, as it is a very conspicuous weed, and differs markedly from the other two species. The Perennial Sow Thistle grows freely on a great variety of soils, but is especially troublesome on rich, low, damp land. It appears the first year in a field in scattered patches consisting of young plants, each plant made up of a rosette of leaves lying close to the ground, and thus, when numerous, they completely cover it. These young plants have but short underground root stocks, and are comparatively easy to destroy. The second year a large stem bearing numerous leaves and flowers is produced and the rootstocks grow long and send up quantities of new shoots. Once established in this manner, it is no easy task to destroy this pest.

The Perennial Sow Thistle (*Sonchus arvensis*)