

in "trench-farming" that the coast "rancher" is especially successful, if we may include hops in the term. I met last fall an unassuming young farmer who had cleared \$15,000 in hops that season, which was an unusually profitable one. His crop had comprised some thirty odd acres. Others devote their chief attention to chickens or to fruit, and with good profits in either case. In a private letter I mentioned something about the size of strawberries grown on a border island, and a young man in Ontario thought it safe at that distance to doubt the truth of my figures. However, next season I will ship a strawberry to the ADVOCATE for the inspection of all visitors, the consignee to pay the freight.

Among the coast towns with an especially fine agricultural backing are New Westminster, B.C., and Anacortes, Washington. Farmers who have lived for thirty years in these localities say that they have never seen a failure of crops. In fact that is the report from all the coast country. Of course prices have fluctuated, and must always do so.

The ADVOCATE I find to be highly appreciated, and the ranchers are even modest enough to own that they can learn from its pages. E.

How Much Seed Wheat Should be Put Upon Each Acre to Insure the Very Largest Results in the Crop.

Experiments in seeding with different quantities of wheat were begun on the farm belonging to the Ohio State University several years previous to the establishment of the Experiment Station. These experiments have been continued on the same farm by the Station, and the tenth experiment has just been harvested.

In this experiment two varieties of wheat were used, Dietz and Velvet Chaff (Penquite's Velvet). The land on which they were sown had borne nine successive crops of wheat, having been dressed three times with barnyard manure during that period.

The land occupied by the Velvet wheat lies upon a gravel knoll, sloping to the west, the gravel coming in some places to within two or three feet of the surface. The wheat on this knoll has for several seasons been less vigorous than in other parts of the field, and this season especially it was badly infested with the wheat midge, commonly known as the red weevil.

The Dietz wheat grew upon land of a little better quality, and sloping to the east instead of the west. It was but slightly injured by insects. The results for this year are given in the following table, the yield being given in bushels per acre. The plots were exactly one-tenth acre each in size:

Quantity of Seed Per Acre.	Yield Per Acre.	
	Velvet Dietz.	Bush. Bush.
2 Pecks.....	21.9	26.0
3 ".....	22.1	26.3
4 ".....	23.3	28.6
5 ".....	22.0	28.6
6 ".....	23.5	28.8
7 ".....	23.1	28.7
8 ".....	22.9	27.2
9 ".....	22.2	26.3
10 ".....	23.6	26.3

It will be observed that while the yields of the Velvet are irregular, they do not favor very thin seeding. In the case of the Dietz, however, the results are decisive. Every time the seed falls below four pecks or rises above seven there is a falling off in yield.

The following table gives the average results of this series of experiments for ten years:

Quantity of Seed Per Acre.	Yield Per Acre.
2 pecks.....	29.1 bushels
3 ".....	33.9 "
4 ".....	34.0 "
5 ".....	35.9 "
6 ".....	35.1 "
7 ".....	36.5 "
8 ".....	35.9 "
9 ".....	32.1 "

In the long run, seeding at from five to seven pecks has given a larger harvest than when less or more seed was used.

Notes from the Ontario Agricultural College.

BY PROF. JAMES MILLS.

In answer to a number of inquiries about the appliances provided, and work done at the Ontario Agricultural College, I shall avail myself of your kind offer of space in the ADVOCATE to answer those who wish to know something definite about us and the work we are engaged in.

First of all, I may say that we have a farm of 550 acres of moderately good land, most of it better adapted to the growing of grass, roots, and coarse grains than wheat. Something over 400 acres of this land is cleared and under cultivation. A portion of it (over 80 acres), divided into small plots of various sizes, and devoted to experimental work, a portion (about 30 acres) used as a lawn and garden in connection with the College, and the remainder (about 330 acres) worked as an ordinary farm.

Our farm buildings are, we think, very good—large, commodious and well adapted to ordinary farm and experimental work, while our implements and live stock are all that could be desired for our work, and for the most extensive course of practical instruction. We have fair representatives (male and female) of ten breeds of cattle, eight breeds of sheep and three breeds of pigs, all kept for the benefit of our students, for giving them object lessons, and the most thorough practical instruction in everything pertaining to live stock.

Our dairy department also is now fully equipped, and we are at length in a position to give valuable instruction in things pertaining to the feeding of dairy cows, the handling of milk and cream, the making of butter, and the use of the centrifugal hand separator, Babcock and Beimling milk testers, creamers, cream vats, churns, butterworks, etc.—everything that is required in a first-class dairy school, except the appliances for making cheese.

We are now proceeding to erect a new poultry building for the purpose of giving instruction in that important branch of farming, and new green-houses with a botanical laboratory for more extensive and thorough work in botany and horticulture.

Already we have a large carpenter shop, in charge of a foreman carpenter, with everything necessary to give boys practical instruction in the use of tools, and to teach them how to do ordinary carpenter work on a farm, such as the making and repairing of wagon tongues, whiffletrees, doubletrees, gates, barn and stable doors, etc.

Our farm is now comparatively clean, and is in much better condition than in years gone by, while our experimental work is much more varied, extensive and valuable than at any time in the past. Not only does our professor of agriculture give a large share of his time to experimental work, as usual, but a special experimentalist, with a full staff of assistants, devotes his whole time and attention to this work. Within the present year much valuable work has been done in testing varieties of grain, different dates of seeding, different methods of cultivation, and different kinds of manure. For example, the following varieties of grain, potatoes, roots, clovers, and grasses have been tested with very satisfactory results: 51 varieties of fall wheat, 57 of spring wheat, 65 of barley,

112 of oats, 44 of peas, 86 of corn, 74 of potatoes, 31 of mangels, 74 of turnips, 9 of clover and 9 of millet.

This brief statement will indicate in outline the extent of our equipment for work and instruction in the outside departments; and we may add that the College provides the necessary apartments for the comfortable lodging and boarding of students, a beautiful hospital for the sick, a Y. M. C. A. hall for religious services, and class-rooms, with a competent staff of professors and lecturers to give full courses of lectures on agriculture, live stock, dairying, veterinary science, chemistry, geology, botany, and entomology (the study of insects), with such instruction in English, mathematics and book-keeping as is needed by young men on the farm.

The course of study in the Ontario Agricultural College is liberal, but specially adapted to the wants of young men who intend to live on the farm; the appliances are ample, the staff of professors is sufficient, and the charges for board, washing and tuition are exceptionally low. So, all considered, I think I may, without boasting, say that we now offer the young farmers of Ontario greater advantages than at any time in the past.

The Study of Agriculture.

Foremost among the topics occupying attention in Great Britain to-day is that of agricultural education. Its importance is recognized by the highest authorities, and gradually steps are being taken that indicate the development of a general system of national agricultural instruction, from the elementary schools upward. The subject is now bound to receive considerable practical attention in the province of Ontario in connection with the public school course, since it has been placed on the curriculum, and a text book authorized for the use of teachers and scholars. As yet it is only an optional study, and may not for some time be taken up very generally. On the part of teachers surely some special equipment is necessary preparatory to dealing with so important a subject, especially in view of its ramifications into various physical sciences. In fact by haphazard or distasteful methods of presenting the subject to pupils of the third and fourth classes, as contemplated, positive injury may be done and progress delayed. It will be well to make haste slowly. How to deal with the subject in the school-room would seem to be about the first point for consideration. It will bear exhaustive discussion at the teachers' associations, and might, with advantage, be ventilated at farmers' institute meetings.

A man might as well grow pine trees for the sake of the knotty boards that could be made from the body above the lower limbs, as to feed cows on purpose to raise caseine. The more "clear stuff" there is in a tree, in proportion to the whole, the more it is worth per thousand feet. Same with the milk of cows; the fat is the "clear stuff" and the caseine is the cheap knotty part.

The Legislature of Illinois has passed the following act relating to the "docking" of horses:—"Whoever cuts the solid part of the tail of any horse in the operation known as docking, or by any other operation performed for the purpose of shortening the tail, and whoever shall cause the same to be done, or assist in doing such cutting, unless the same is proved to be a benefit to the horse, shall be punished by imprisonment in the county jail not exceeding one year, or by fine of not less than \$25 or more than \$200.