

Wheat Culture.

It is very clear to the most superficial observer that, to make a paying business of wheat raising, a large yield is indispensable, for in any event you have the rent of the land, the cost of tillage, the price of seed, the labor of harvesting, and the expense of threshing to meet, before you can count anything for profit. Consequently, if your crop only equals this expense, you have gained nothing; if it falls below it, you are so much poorer. Therefore, a large yield must be obtained in order to make the business a profitable one.

Some soils are naturally adapted to the production of wheat; others are not, owing to the lack of certain constituents which are essential to the production and perfection of a wheat crop. On soils well adapted to the growth of wheat, the main thing to be kept in view by the cultivator is to so feed the land with such fertilizing materials as will not only keep it in its natural condition, but also enrich it with the elements which enter into the growth of the wheat plant, to such a degree as greatly to increase the product each succeeding year. On those soils which are deficient in food for this plant, a much larger cost is demanded in order to bring it up to a state of fertility, so as to make it profitable to sow wheat upon it. Some soils may be so ameliorated and improved as to do this—others cannot be.

In many localities the land is so wet, owing to a very retentive subsoil, that wheat will not be productive upon it until it is underdrained. It is often the case that such soils, after underdraining and thorough tillage, become highly productive of this cereal when sown upon it. With other soils, thorough surface plowing, and a subsoil plow run from eight to ten inches deep in the bottom of the furrow, will so far drain and aerate the land as greatly to improve a crop of wheat, or any other crop. We know this by experience, having practiced it for years. Such soils as abound in sand may be made less porous by the application of a moderate amount of clay drawn upon it, with the use of a large amount of the manure of horned cattle, while clay soils will be rendered more productive by the application of sand, horse and sheep manure, and other substances which make it warmer and more porous. Wheat is naturally a lime plant, and where there is a deficiency of this constituent in the soil, the application of lime will be of great utility, where it is sufficiently convenient so as not to increase the cost very much. Where lime is absent and gypsum abounds, this may be made a very good substitute, as gypsum is composed of lime, sulphuric acid and water. In addition to the lime, the sulphuric acid is valuable, as it will change the carbonate of ammonia, which is volatile, into sulphate of ammonia, which is fixed; and carbonate of ammonia is constantly being disengaged in the soil, by the decomposition of all organic substances therein. Decomposed manures of all kinds bring into the soil, when applied for wheat, a great variety of the constituents that are essential to the perfect growth of this plant. Indeed, nearly all manuring substances are beneficial.

A judicious "rotation of crops," where the plowing has been deep and thorough in the commencement, and a large supply of organic and mineral fertilizers have been added to the soil during the "rotation," with a fine "clover lay" to be plowed under for the wheat, is one of the best modes of insuring success in this cultivation; and when a wise and thorough course is pursued, failure is almost impossible. Summer fallowing on land which is barren of clover and infested with weeds, tends greatly to the production of an ample crop of this essential article for breadstuff. Frequent plowings have the effect to equalize the various substances in the soil over the whole ground; while the exposure to atmospheric action causes directly the decomposition of these mineral substances and brings them into a soluble condition so that they may become food for plants.

A careful selection of the most approved varieties as seed, and a certainty that it is free from smut and foul seeds, is very important in the effort to grow a good wheat crop. If seed is old, or has been heated in the mow or bin, the germ may be injured or destroyed, and in that case will fail to produce a full and vigorous growth of plants. We had a very sad experience from this source a few years since, on twenty acres of new ground, where not more than half of the seed germinated at all. It is a very general notion in this country that wheat will not do well on old ground; but in England, from the best information we can obtain, it is a common thing to have a yield of from thirty

to forty bushels to the acre on land that has been in cultivation for hundreds of years. This may be done in this country as well as there, if the proper means are used.—J. V. M., in *Ohio Farmer*.

Providing Grass Seed.

Every farmer uses more or less seeds of the different grasses and forage plants. Most of these seeds are purchased from dealers or growers, few farmers being so situated as to grow all the grass seeds needed for stocking down pastures and meadows in the spring. The season is coming on when these seeds must be sown, if ever. It is time to look around and see where these can be procured to the best advantage, or at the cheapest rate. Both these requirements are, or must be, kept in view; it will not do to buy seeds with either object in view alone. Seed bought at the best advantage are always cheap. They may cost a little more money at the outset, yet may be the cheapest. As an instance, the experience of a man in Western New York may be adduced. Wishing to sow a little Alsike clover seed, he consulted the catalogues and advertisements of all the regular and transient dealers. Prices ranged from seventy five cents to one dollar and twenty-five cents per pound—the difference, fifty cents per pound, was considerable—so he concluded to send to the parties offering the seed at the lowest prices. The seed grew well, but the next year several stools of the white or ox-eye daisy blossomed out finely. They were dug out, of course, but new ones have appeared every year since, from seed which have hitherto remained dormant in the ground. That seed was not cheap at any price. The same person wished to sow some more last season. he was at the trouble and expense of taking a journey of sixty miles in order to personally examine, at a large seed store, the samples of Alsike seed. The seed purchased was previously examined with a magnifying glass, and no ox-eye seed could be detected. This Alsike seed cost more than advertised prices, but the purchaser will probably find it cheap.

It is wise to sow the best seed and to sow plenty of it. It is wise also to buy only of seedsmen who have an established reputation for accuracy, carefulness and responsibility. The reputation of such is worth more than the profits on a whole season's sales, and of course their goods can be relied upon. They also have a direct interest in selling only the best seed, since usually the result of such sales are "a standing local advertisement" in every section where sown.

It is necessary to sow plenty of seed. Ten cents saved in seed results usually in a dollar lost in the harvest. No one has ever reported that he had sowed seed too much. All errors have invariably been made the other way, as far as known. If the "penny wise but pound foolish" course—that of sowing as few pounds of seed as possible is followed—the hay crop will be quickly gathered, and in winter soon be gone. Just as much seed must be sown as will stock every square inch of the ground with at least one growing plant. This will take more seed than just the number of square inches of surface in field. Four or more times this amount should be provided, for much is inevitably lost. The seed should be scattered lavishly enough to secure a good stand, if it takes a good half bushel of seed to each acre to be seeded down.—*Country Gentleman*.

Tillage and Heavy Manuring.

Two very important helps to earliness are not sufficiently understood—heavy manuring and high tillage. Heavy manuring is usually given with a view to big crops, and no gardener for a moment would think of dispensing with it. But it serves a further purpose—that of inducing a quick growth. When plant food is ready at hand in abundance, of course the growing crop consumes more of it; and this very food develops more feeding organs, which in turn help to build up the plant and to send the roots deeper. Altogether a thrifty, quick and tender growth is induced at a time when, in poorer soil and unfavorable weather, the plant would but barely live and hold its own. The most marked effect of heavy manuring for earliness, is especially noticeable on cabbage, lettuce, beets, asparagus and rhubarb. Upon these crops it pays to apply at least 100 tons of manure per acre. Frequent and almost constant tillage pays not only for the increase of the crop but also for quickening it. This effect I have noticed as very marked upon what we may call

the hot weather crops—tomatoes, cucumbers, melons, squashes, beans and corn. So much is gained by frequent tillage, that I think if two crops of melons be raised, one on sod in the hot bed and set out in the garden and given the usual tillage, and the other planted at the time of setting out the first, but giving three times the usual tillage—say that it be worked twice a week—the latter crop will be as early, if not indeed earlier than the former. Cabbage, too, seems especially susceptible to this forwarding by tillage, and if to this be added the heavy manuring before recommended, the capabilities of the crop will certainly astonish the inexperienced. I have noticed such remarkable results from constant, thorough tillage, not only in promotion of earliness but in increase of yield, that I have thought upon this class of crops manure might be dispensed with, and yields both large and early be secured, if the tillage only be sufficient.—J. B. R., in *Fruit Recorder*.

Correspondence.**British Columbia.**

SIR,—In reference to Mr. E. Topping's enquiry for information respecting British Columbia, and in reference to the agricultural lands in this province, I would say that this is not generally a prairie country, but, on the contrary, it is a timber country, with a limited amount of prairie scattered through it very sparsely. The quality of the soil is generally good where it is not mountainous. The most of the prairie lands are already taken up, and the timber lands are the only lands available for settlement. During this summer there has been a great deal of land taken up in various parts of the country. I may say that quite a number of land seekers have gone away unsatisfied. The land law is very liberal; every British subject is entitled to 160 acres free by becoming an actual settler on the same. Any person can purchase all that he wants at the Government price, \$1 per acre. In the free grant system, you get your deed in two years after making improvements, to the amount of \$2.50 per acre.

Timber land is generally very heavily timbered with fir, cedar and other small woods, such as vine-maple, alder and birch.

All kinds of grain and root crops grow to good perfection, excepting Indian corn, which is not suited to the climate. The climate here on the east of the Cascade range is comparatively the same as the climate of England.

The price of all kinds of grain is about two cents per pound, which is not enough, compared with the price of labor, which is from thirty to sixty dollars per month. This is a good chance for young men, and in the event of the C. P. R. commencing soon, this will become a large field for labor.

The Local Government is expending a great deal of money in opening up roads in the different settlements, which will be a great advantage to new settlers. School houses are built in all the settlements as soon as there are fifteen children of school age, and all the direct tax that the settler has to pay is four cents per acre of road tax. The Government pays the teachers' salary, say from fifty to seventy dollars per month.

Good common horses are worth from \$150 to \$200, and are scarce; cows from \$30 to \$50, according to quality. Lumber for building purposes is worth from \$15 to \$25 per 1000. Travelling is very expensive. Board is \$1.50 to \$2 per day.

Parties coming to this province will do well to start early in the spring. There are two steamers per month from San Francisco to Victoria, and two per week from Victoria to New Westminster.

ADAM INNES.

Langley P. O., B. C., Aug. 14th, 1875.

[Mr. Innes will accept thanks from us and from our enquirers for the information given. As Mr. Innes formerly farmed in this country, and is a real practical Canadian farmer, we consider information can be obtained from him such as intending immigrants require better than from any other source we know of. Should any of you write to him, we would suggest that you should enclose something more substantial than a stamp for reply, as we know many write and ask queries for private purposes, and do not consider that time, brains or stationery cost anything.—Ed.]