

Agricultural.

ROTATION OF CROPS.

There are various arguments for the practice of raising different kinds of crops in succession upon the same piece of land, now common in older parts of this country. These are based both upon practice and theory; the former being to most of us the more conclusive. Long ago it was discovered that much land would bear a good crop of grain only once in two or three years without manure, and that to secure a crop, it was necessary to plough or otherwise work over the land in the mean time. This system of fallowing necessarily left the land half the time with no crop upon it, and the farmer depended for a crop upon the decomposition wrought in the soil by the action of the elements, aided by his own labor in overturning and pulverising it. When it was discovered that a crop of roots could be raised between the crops of grain, and the effect of fallowing still be realized, the roots were regarded as clear gain, and the whole system of farming was changed. Now, on all these lands where farmers are obliged to be economical of fertility, some system of alteration or variation is employed. It is enough for most farmers to know by experience that—whether they depend on the fertility of the soil alone, on the green manure which they plough in, or on the dung of cattle which they apply—they realize by this means a much better return for the time, labor and available fertility expanded.

Some plants seem very rapidly to exhaust fertility, so far as they alone are concerned; and the theory of many is, that the exhaustion results from their appropriating the most available supplies of certain substances, or have the ability to collect them more easily. Thus turnips, though they remove from the soil a comparatively small quantity of the phosphates, yet an abundant supply in a very available form promotes their growth and increases the yield, in an entirely disproportionate degree. And wheat and other small grains demand a proportion of available nitrogen, greater than other crops which remove more from the field. The benefit of an alternation or rotation of crops being a recognized fact, and it being also true that, under certain ill-judged modes of farming, land became unaccountably sick of certain crops which before grew well, M. Decandolle proposed a theory which met the case, and was almost universally received. It was that the roots of the crops throw off or excrete substances in the soil, and that these substances, while injurious to the plant which throws them off, are food for other kinds of plants.

Almost all plants have their natural enemies, parasitic plants, like smut, rust, etc., or insects which live upon them—and when a plant grows several years in the same soil, it becomes more and more a prey to these and perhaps subject to other diseases having similar but not so obvious causes.

When the full value of manure is realized practice has demonstrated that crops must follow each other in the order of their dissimilarity—for instance: grain, roots, grass, leguminous plants; oil plants, and commercial plants raised for the plants itself. The longer the time intervening between two crops of the same plant the better. Rotations are usually short in this country, and the land manured but once. In other countries, rotations continued throughout ten or twelve years are not uncommon. One reason for this is, that in our markets there is not a demand for so many products, though this evil is rapidly diminishing. Different soils and different markets make different crops profitable.

NEW FLAX.—We have examined a splendid specimen of new flax, grown by Mr. Robert Watson, of Whitby. The stalk averages between three and four feet in length, and will prove of a quality equal, if not superior, to that grown in Ireland, or any other flax-growing country. The ear, even at present, is large and heavy, and the crop promises to be most abundant. The quantity of seed expected may be safely estimated at twenty bushels per acre; and the quantity of fibre, when properly prepared for market, not less than 500 lbs. The seed is now worth \$1 50 per bushel of 50 lbs, making the yield \$30 per acre. The fibre is worth \$10 per cwt., which would yield \$50, making in all per acre \$80. These facts should be most encouraging for the farmers of Canada, to devote their earnest attention to such a productive field for the development of their skill and industry, as the cultivation of flax would undoubtedly prove. We are indebted to Mr. John A. Donaldson, of Weston, for information on this subject, on whose authority we have to state that a more beautiful

field of flax has never come under his observation in any country. We shall be happy to afford all interested an opportunity of examining a fine specimen now in our office.—Toronto Leader.

GRAIN CUTTING.—The proper time to cut grain crops is when the berry is just out of the milk, or as soon as it is hard enough to bear moderate pressure of the thumb nail without breaking. This is usually about ten days before maturity. If harvesting be delayed until the kernels are ripe, there is loss in the weight of the grain, and much waste by its shelling out upon the ground. Fields have sometimes borne a good crop with no other seeding than that received from what had been scattered during the previous harvest.

A recent number of an agricultural journal gives an account of an experiment made some years ago with a crop of fifty acres of wheat. The bulk of it was cut as here recommended and weighed 62½ lbs. to the bushel. The remainder gathered when fully ripe, gave only 58 lbs. per bushel. On the whole amount 1,200 bushels, there was a gain of 5,400 lbs., or about 90 bushels in bulk and the quality of flour was superior.—Perth Standard, Lanark County, July, 29.

The North Ontario Advocate, speaking of the crops in that section of the country, says—The other day we had an opportunity for taking a glance at the crops in the townships of Brock, Scott and Uxbridge, and we may safely say that a more pleasing prospect for a bountiful harvest has not been witnessed for many a day. There seems to be a considerable quantity of wheat and barley sown, but not so many oats and peas as formerly. We noticed some fields were infested, more or less, with smut; although there are no complaints about grub or insects. Haying has been commenced generally, and some fall wheat will be ready for cutting in ten days from this date.—July 26.

THE WEATHER.—Finer weather weather than that which this neighbourhood has enjoyed during the past week could not be wished for. There has been one or two moderate showers, just sufficient to allay the dust. The hay harvest is pretty well advanced; and the yield is represented as more than an average one.—[Perth Standard July, 29.

WHITTY FLAX OUTDOSE.—We have received a sample of flax from Col. Mitchell, grown upon his farm in Esquesing, which surpasses in quality any that we have yet seen. It is four feet in length and of clear, good stock, and the crop is so large that Col. Mitchell believes it will realize \$10 to the acre for the seed alone. He says that the crop in his neighbourhood is excellent, promising a large yield. We are glad to find that our farmers are giving increased attention to the growing of flax, for which the soil and climate of a great part of Canada are so well adapted. It is almost certain to prove highly remunerative.—Leader.

THE CROPS.—The cutting of hay has been going on in this vicinity for several days past the meadows yielding an average crop. Farmers inform us that though the midge and fly have made their appearance in some parts of the county, the wheat will yield a three-fourth crop. All other kinds of grain will yield an extra crop. Old residents say they never saw them look better. This is indeed gratifying, and we hope soon to hear no more about 'hard times.' From all parts of the Province, and the United States, the same cheering intelligence reaches us.—Dundas Courier; Central Canada.

THE HARVESTING has commenced. The fall wheat is the finest we have had for many years, but the spring wheat in some places has suffered from the midge. Altogether, however, the prospect is very good, and farmers are in high spirits. The weather is beautiful for harvesting.—Peterboro' Review July 31.

Business prospects are very good. Enormous quantities of lumber are being sent off every day by the Port Hope and Peterboro' Railroad, and the high price of lumber, with the reduced rate of discount, has contributed largely to the advantage of our manufacturers of sawed lumber, who are doing better than they have done for years. The prospect of a fine crop enhances the expectation of a good fall business; and people generally are well pleased with the business prospect before them.—Ibid.

The seed wheat fair in connection with the County of Wellington and Township of Guelph Societies, will be held in Guelph on the 28th of August.

THE CROPS.—We have most gratifying intelligence from the various sections of the country, of the thriving state of the crops.—The harvest prospect exceeds any known in the country for many years. If the crops are got safely housed the quantity and quality will be unexcelled. The breadth of wheat

sown, we believe, surpasses that of former years, and though there is a small insect now and then, it does comparatively little harm. It is on the outside of the berry, and when developed takes wings and flies away. This was the case last year. The hay crop is very heavy, and in many places is in the barn. In fact, green crops of all kinds as well as cereals are excellent. The absence of spring frost will make the harvest early, and increases the chance of little or no damage by the autumn frosts, which used to do much damage in times past.—Owen Sound Advertiser.

THE CROPS.—Farmers in this section of the country continue to represent the harvest prospects as highly encouraging, and all are sanguine that their labors will be rewarded with a bountiful yield. The wheat crops never looked better, and all other cereals promise equally well. The midge, which has done some little damage in a few localities in the west, has not, we believe, made its appearance hereabouts, and there is now nothing to fear from this pest. The potatoes look well notwithstanding the scarcity of rain, and there is no doubt that the crop will be a good one. The accounts from abroad are equally encouraging. For the first time in seventeen years the potato crop of Ireland has escaped the blight, and there is every reason to hope that the yield of this important product will be an abundant one. In England all the crops promise well, and from all parts of Great Britain the reports are highly satisfactory.—Kingston Daily News.

INFORMATION ABOUT WOOL.

A convention of wool growers was lately held at Cleveland, Ohio, and was very largely attended. The principal topic discussed was whether shearing should be done before or after washing. After a careful consideration of the question, it was resolved that the practice of washing sheep be abolished, because:

- 1st. It permits of early shearing, which secures a greater quantity of wool, a longer staple, and a better condition of sheep and ewes, through the year.
- 2nd. Of the exposure to contagious diseases, such as scab, foot-rot, &c., in places frequented by different flocks to be washed.
- 3rd. It is an expensive, unpleasant job, and unhealthy both for man and sheep.
- 4th. That the manufacturer must cleanse the wool at all events, and he can do it cheaper than the grower.
- 5th. That it is to the interest of the wool growers to put their unwashed wool in as good condition as possible, by keeping their yards well littered, and by throwing away all filth that can be separated from the wool.
- 6th. Some lots of wool are more gross and gummy than others, therefore no rate of deduction could be agreed upon, suitable to all grades and classes, but that each lot should be bought upon its own merits for quality and condition.
- 7th. As generally practised, washing is little or no improvement to the fleece.

EXHIBITIONS TO TAKE PLACE THIS AUTUMN.

- PROVINCIAL AND STATE.
- Upper Canada, at Kingston, September 21 to 25.
 - Lower Canada, at Montreal, September 15 to 18.
 - New York, at Utica, September 15 to 18.
 - Ohio, at September 15 to 18.
- COUNTY AND TOWNSHIP.
- Lanark county, at Almonte, September 15.
 - Wentworth and Hamilton, at Hamilton, October 14 and 15.
 - Toronto and West Riding York, at Toronto, October 6, 7 and 8.
 - Durham West, at Newcastle, October 8 and 9.

GOLD IN LOWER CANADA.—We were yesterday shown some specimens from the gold regions of the Chaudiere, of a most respectable nugget character, one piece weighing four ounces and a half, and another three and a half. Dr. Reed, in whose possession these specimens of the precious metal were, informs us that over ten thousand dollars worth of gold has been taken during the present year from the property of George Desbarats, Esq., alone. We hear also that much larger nuggets than we saw have been found. One of these valuable lumps, weighing some ounces over a pound, is said to be in possession of an individual who, doubting his own right of possession, the gold having been found on private property, does not choose to acknowledge the fact. This region is likely to become celebrated as a gold field.—Quebec Chronicle.

EDITOR'S NOTES.

ELLA.—You could be advised on the matter you write about with more advantage in a private interview than through the columns of a newspaper. We refer to the proposed book, and modes and places of publication.

PAMELIA S. VINING.—The poem is received. It comes like the fragrance of fresh flowers; like the riches of ripe fruit; like the news of the golden mines; like the voices of the reapers in harvest; like the music of birds and of happy children. It comes to be welcomed as tidings from a far country—and the country is indeed afar off—it is the land of poetry and of dreams.

EMME MANSFIELD.—Your tale is received. It is well written as before, but—what about that 'horrid Miss Brown?' Is not the portrature too real? So like an amiable class of persons as to be assumed for some one who does not deserve to reproach! If you think proper to confide real name and address, or an address for a letter to reach you, further explanations may be made.

'Starry Heavens;' 'Forget me Not;' 'I'm Watching the Waves;' 'Dellwa;' received. If Dellwa sends his address, a private letter will apologise and explain. The address as formerly given has been mislaid.

Alex. Durie.—The sketch and descriptive article are received. In the absence of the proprietors the Editor thanks you heartily.

MENTAL EXERCISES.

FENWICK, July 24th, 1863.

- I am composed of 20 letters.
- My 10, 9, 6, 10, 7, 5, 6, 11 is the name of a vessel on Lake Ontario.
- " 20, 5, 6, 11 is the name of a kind of liquor.
- " 15, 13, 13, 1, 10 is to be found in nearly every garden.
- " 17, 8, 8, 18 is something sailors cannot do without on ships at sea.
- " 17, 8, 3, 4, 11, 11 is something drank instead of tea.
- " 12, 13, 14, 15, 2, 19, 18 is a town in Scotland.
- My whole is the name of a hotel, and the name of the village wherein located.

Yours truly,
G. W. W.

GEOGRAPHICAL ENIGMA.

- I am composed of 33 letters.
- My 16, 20, 26, 6, 31, 2 is a city in Italy.
- " 31, 12, 17, 8, 30, 13 is a town in Italy.
- " 3, 7, 11, 15, 21, 20 is a duchy in Italy.
- " 24, 20, 14, 11, 22, 26, 29, 2 is a kingdom in Italy.
- " 24, 9, 21, 16, 2, 14, 21, 26, 7 is a republic in Italy.
- " 13, 30, 15, 9, 8, 32, 7 is a province in Italy.
- " 27, 9, 14, 11, 4, 10, 29, 20 is an island belonging to Italy.
- " 7, 14, 5, 20, 26, 11, 13 is a cape in Italy.
- " 27, 13, 1, 29, 31, 24, 18, 19, 22, 31 is a mountain in Italy.
- " 21, 2, 5, 33, 14, 8, 13 is a gulf in Italy.
- " 18, 9, 21, 23, 2, 14, 25, 20 is a lake in Italy.
- " 18, 20, 27, 30, 25, 12, 5, 29, 7, 10, 15 is a bay in Italy.
- " 2, 11, 22, 12, 16, is a river in Italy.
- My whole is a place well known in Hamilton.

ADAM —,
Hamilton, C. W.
PROBLEM BY 'B. S.' OF CANFIELD, LAST WEEK.
ANSWER.—\$8,740 oldest.
7,429 next.
6,460 next.
6,256 youngest.

ANSWER TO B. S. OF CANFIELD.

J. J. M., says: The answer to enigma in last week's issue, by B. S., is 'Canadian Illustrated News.' There are four errors in it. In first query 23 should be 2, 8; in fourth, 44 and 5, should be 14 and 15; in last, 28 should be 2, 8.

GEOGRAPHICAL ENIGMA, NO. 111.

- I am composed of 68 letters.
 - My 45, 65, 35, 7, 17, 57, 49, 39, 37 is a county in Canada.
 - " 34, 14, 47, 55, 15, 25, 59, 9, 30, 40 is a city in the United States.
 - " 5, 32, 2, 20, 50, 28, 48 is a river in France.
 - " 13, 66, 22, 12, 64, 1, 12, 68, 60 is a county in Ireland.
 - " 3, 8, 19, 21, 51, 23, 43, 53 is a province in France.
 - " 27, 67, 11, 31, 61, 36 is a lake in Switzerland.
 - " 24, 64, 52, 62, 4, 6, 26 is a city in Prussia.
 - " 41, 58, 33, 16, 46, 54 is a river in Austria.
 - " 18, 29, 44, 63 is an island off Scottish coast.
 - My whole is a well known quotation.
- J. J. M.
The letters of six other correspondents remain over until next week.