SUMMER AND ITS PROSPECTS.

—"From brightening fields of ether fair disclosed
Child of the sun, refulgent summer comes. —Thompson.

THE short reign of Spring is over. Merry May is gone, and the first week of "lesty" June is upon us. Nature's high-day and meridian—Summer—has come once more, scattering sunshine, happiness and life all around. That man's heart must be dead—must, at least, be hard and unimpressible, who does not feel the inspiration of the summer season, when the fields have decked themselves in green, the forests clothed every branch and twig with leaves, and the sparkling waters of each streamlet laugh and sport with a joy all their own No wonder Thompson sung the story of summer so sweetly! The theme is well fitted to call forth the loftiest flights of poetic genius.

But a truce to summer fancies! In this matter-of-fact age, people don't care so much about poetry as about something "practical." Instead of dilating on the beauties of nature at this season, the business-man will be very apt to exclaim: 'Why not tell us something about the farmers' prospects? The fields, the woods and the streams will look after themselves; but what are the prospects of the crop in the ground?' This is precisely, O trade man of commerce, what we took up our quill to write a few sentences about; but with the proverbial arbitrariness of writers, we are determined to tell our story in our own way, believing that a little fancy—a little seasoning to the dish—will make it none the less acceptable.

If a few sprigs of sentiment regarding summer have escaped us, it is only because we never saw the Western part of our rising Dominion looking fairer than at the present time. We cannot say how the Provinces of Nova Scotia and New Brunswick appear on this first week of June, because we have not recently had the pleasure of visiting our Blue Nose Cousins, but we have seen part of Quebec, and a large portion of the splendid Province of Ontario, and never did the summer commence with brighter prospects, or hill and dale present a more beautiful appearance. A drive into the country is now delightful. The dust and din of the city or town are soon forgotten amidst the exuberance and repose of nature, and the jaunt leaves you strengthened by the pure air, enlivened by remembrance of the gay robes of forest and field, and pleased with the boding memories of rustic scenes. One is almost tempted to the wearing of the green, when the country appears so lively and so joyous in its summer dress!

The farmers of Ontario ought to feel in good spirits, for seldom have they ever had prospects of better crops than at present. The great staple—fall wheat—is exceedingly luxuriant. In many sections, as everybody is aware, this crop has not of late turned out so well as formerly, but the appearances thus far warrant the expectation of an unusually large yield. Not in ten years, at least, has the winter wheat looked as well in some of the old districts we have visited, the plants being not only strong and healthy, but standing thickly over all parts of the fields. Under the influence of the recent heavy rains the meadows have greatly improved in appearance, and the prospects of a good hay crop are excellent. The clover is coming rapidly forward, and will soon be out in blossom—adding colour to the landscape and perfume to the breeze. The spring crops are already considerably above ground. Barley, oats and peas—all partake of the hopeful character of the season. It is, of course, impossible to foretell what may happen between this time and August, the crops may suffer from drouth, from insects, and, possibly, from frosts. But there can be no question of the fact, that the prospects of our agriculturists are at present as bright as the summer sun, and that unless some unfortunate train of circumstances occurs, (which is not at all probable,) the approaching harvest will be such as to gladden the hearts of all classes.

The orchards are a sight at the present moment! Seldom do they promise so lavishly It is not unusual in the best fruit districts to see acres of blossom—white, beautiful blossoms! We have had occasion before to mention the rapidity with which our crop of fruit is augmenting, this year witnesses, at least, the average increase in the number of bearing trees, and they promise a plentiful yield Horticulturists report that apples, cherries and plums are all looking well, and even the pear and peach trees present a satisfactory appearance Let us hope that these early summer anticipations may be realized, for what is more delightful in the autumn than an abundant supply of ripe delicious fruit!

And what of the gardens? We shall not speak of the flowers, with their richly variegated colours, lest we be accused of indulging more summer sentiment, but to please the giants of trade, our masters, we will descend to the humbler, but more useful—vegetables. These call not for much remark beyond the statement, that the gardens seem determined this season to rival the wheat fields and the orchards. Already they look exceedingly well, and promise to be as fruitful as the broad and rugged fields.

The summer of '68 and its prospects! Tis thus they appear on June's first sunny week Will these bright prospects of plenty be realised? Will dangers be warded off until the verdure is ready for the gleaming scythe, the rustling golden grain has replaced the green and tender stems, and the blossoms have ripened into fruit? Ah! that's the rub? Mark you! we make no predictions on this knotty point. Even in ancient times, only the gods were supposed to be able to raise the veil which enshrouds the future. We speak only of the present. Our pen simply describes the appearance of the country as it exists on the first week of summer, and under the brightening beams of the summer's sun Many a bright morning has ended in an evening of gloom! So may it not be with our bright summer prospects!

FISH MANURE

A HINT TO OUR FISHERMEN.

THE primary importance of a supply of fertilizing substances to keep up the productiveness of the soil, is always acknowledged by the intelligent agriculturist. Without them his crops soon deteriorate, and fertile lands become sterile and barren. The quantity of farm-yard manure, even under the best management, is generally inadequate for the purpose, and still oftener is entirely wanting in those chemical ingredients which are needed. To remedy this the ends of the earth have been ransacked for guano and other kindred substances, until there is reason to believe that the supply has nearly reached its limits, and it is pretty certain that whatever is left is of very inferior quality. Bone dust, lime and gypsum, under various names are all used, and still there seems to be no limit in the demand for artificial manures in every country which has made any advances at all in agriculture. The ease with which they can be applied, and the almost certain and immediate effects produced, has no doubt something to do with this, but from whatever cause, the fact remains that the demand for artificial manures is greater than the supply, and that the disproportion threatens to become still greater.

We have been led to these remarks by having fallen in with an account of some interesting experiments, made by some gentlemen, in the manufacture of manure from fish and fish offal. We have often heard and read (besides having some personal knowledge) of the vast quantities which are annually used for manure along the shore of the Gulf of St. Lawrence, and of the still greater quantities which are left to rot or thrown into the sea, but we have never heard of any attempt to economise it, or to turn it to account in another spot than that adjacent to the fishing grounds. It is true, the experiments we are about to describe were made some years ago, but that circumstance does not in the least detract from their value, indeed, the closer approach of the time when the guano deposits must be exhausted seems to invest the subject with greater importance now than then

Mr. Sullivan, Professor of Chemistry to the Museum of Irish Industry, shall be our first authority He commences with the startling statement that in one year 200,000 tons of guano were imported into Great Britain at a cost of a million and a half sterling, and proceeds to show that fish are peculiarly rich in that very element which gives so much value to guano, namely, nitrogen or azote; whenever extraordinary shoals of fish have visited the Irish Coasts, the superfluous portion, which could not be consumed as food, has been employed to manure patches of land, and always with the best results. The offal of herring-curing houses at Yarmouth and other places, is disposed of in a similar way. But such a plan can only be made available near the spot where the fish are caught. The questions, then, which Mr. Sullivan proposed to decide, were whether a *portable* fish manure could be produced by any simple and inexpensive process, and whether the supply is such as to render the manure saleable at a cheaper rate? But, first, as to the constituents of fish in respect to the elements required for manuring, we are told that the chemists have settled all this, sprats (or capolin) and herrings contain about 16 per cent. of nitrogenous matter, and all other fish contain a greater or lesser proportion. There is also an ash, or mineral constituent useful as manure. If, therefore, the water of fish were expelled by drying and the oil separated for use, the nitrogenous and mineral constituents might be made available for the farmer. The nitrogen is given off in the form of ammonia when the fish decays, the mineral portion contains phosphate of lime, and both the ammonia and the phosphate are among the most highly prized of manures. Mr Sullivan calculates that if 100 tons of herrings were boiled to separate the oil, and then dried to dissipate most of the water there would result nearly 14 tons of useful oil, and nearly 21 tons of solid manure, containing ammonia and two or three kinds of phosphates. As regard ammonia, this manure would be equal to Peruvian guano, and equal to all other kinds in this highly important constituent It would, however, be less rich in the phosphates. The ammonia exists ready formed in guano, whereas it is in an elementary state in the fish manure, therefore it is argued guano would be superior to fish manure when an immediate effect is to be produced, but inferior where a slower but permanent improvement of the soil is the object. Arising from this is a probability that fish manure would be relatively better suited for light soils and guano for heavy, clayey soils. We now come to what is, perhaps, the most important part of the inquiry. Will it pay? If it will, and the supply of fish can be had Mr Sullivan's questions must be held to be satisfactorily answered Our authority thinks that 100 tons of herrings might be made to yield about 20 tons of solid manure worth $40 per ton and 2,520 gallons of oil worth 55c per gallon, making together $2,186, or $21 86 for every ton of herrings boiled down Out of this he thinks that $5 per ton might be cleared, after paying all expenses Then comes an inquiry, however whether a shoal of herrings is more valuable for curing or for turning into manure—for food for man or food for the soil Mr Sullivan decides this in favor of the former and looks therefore, to the offal of the curing stations as the chief source of supply, and of this offal it seems there is one ton to every 14 tons of fish He does not advocate the employment of large capital or contemplate expensive establishments, but thinks it might best be carried on by men possessed of means sufficient to erect a manure and oil manufactory at each of the chief fishing stations where the offal could be made use of instead, as in most cases, being thrown into the sea. This is one of those useful objects to which the Government could afford invaluable aid and assistance at the outset and we commend it to the attention of the Minister of Marine and Fisheries, who will probably understand and appreciate its importances quickly as any one

In a future article we purpose giving an account of some operations actually carried on, though on a much larger and more complete scale than contemplated by Mr. Sullivan, and which, under certain circumstances, may become capable of being adopted by ourselves.

PUBLIC WORKS.

No. III.

ROADS AND BRIDGES.

IN Lower Canada, nearly the whole of the roads were laid out under the superintendence of a Government officer termed the *Grand Voyer*, and made and maintained by each proprietor throughout the extent of his own lands. The Grand Voyer also had the power, in regard to those portions of roads which he considered too burdensome to be executed in the ordinary mode, to declare them *Public Works*, and to name a certain number of persons to take charge of them In 1832 the powers exercised by the Grand Voyer were transferred to the Road Commissioners, who continued to exercise them up to 1841, when nearly all the roads were given over to the municipal authorities, under whose charge they still remain.

In Upper Canada, in 1793, at the first sitting of its Parliament, an Act was passed which placed the roads under the control of a Superintendent chosen by the resident rate-payers, and invested with powers similar to those of the Grand Voyer of Lower Canada. At first the law required that every rate-payer should perform a certain amount of statute labour, either in person or by substitute, but this bearing as heavily on the poor as on the rich, the system was changed, and