H.—17.

no immediate cause for alarm from this source. The Argentine Government has ever since 1897 taken the most energetic measures to prevent the invasion of the crop districts by these pests, and has been very successful. They have spent \$11,000,000 gold in this direction, with the result that in 1898 95 per cent. of 68,000,000 hectares was saved from the scourge, and in 1901 and 1902 they almost entirely eradicated the plague. About three-quarters of the soil in the arable districts is composed of alluvial deposits of volcanic and granitic origin, making the soil fairly light, porous, and free from stone, which makes it easily worked. The soil in most districts is strongly covered with vegetable deposits. It rests on a subsoil which varies from 25 centimetres to  $1\frac{1}{2}$  metres.

## WHEAT-GROWING.

It was at one time the opinion of scientific men that the pampa soil of the Argentine was not very suitable for agriculture, particularly for the growing of a good quality of wheat. That idea, however, has long since disappeared. Excellent specimens of wheat can be seen all over the country now. There are many varieties of wheat grown, but probably the best suited to Argentine soil is the "Barletta." Some tests have been made, where it was found that this variety gives a weight of 83.250 per hectolitre, while one of the best Russian varieties weighed 84.500 per hectolitre. One must take into consideration the vast extent of the wheat districts of the great Argentine territory in order to realise that it is necessary to procure that particular seed which may be best adapted for the district he may be farming in. Want of knowledge in this direction is said to have caused serious deterioration in the quality of wheat in some provinces, particularly in the noted wheat province of Entre Rios. In the southern parts of the Argentine splendid results are said to be had from Hungarian and Russian varieties; those along with the first-mentioned, Barletta, seem to be very suitable for export.

In the southern parts of the republic you find a colder climate, which, perhaps, tends to make seed imported from colder climates do better. It is said, however, that excellent large, plump, bright seed from Manitoba, in Canada, and also magnificent seed from California does not do well in most districts. I have also learned from old Spanish wheat-growers that such excellent imported seed only requires a few seasons until it degenerates into a shrivelled-up inferior product; while, on the other hand, the best varieties of native grain which are suited to the different provinces seem to give general satisfaction both for milling purposes and for export. Among the varieties grown are to be found some French varieties, which are much in request for home con-

sumption, but are not sought after by the British importer.

Before dealing briefly with a few practical facts as regards the actual practice of wheat-growing by the natives in the Argentina, I beg to quote a few statistics which I consider to be as reliable as can be obtained in the republic, seeing that they came from the Ministry for Agriculture and the latest Argentine Year-book. I suppose the largest harvest the Argentine ever reaped was in 1898 and 1899, when they exported over two million tons. Besides the exports, 1,750,000 tons was used for home consumption and for seed. According to the latest figures issued by the Ministry for Agriculture, the total wheat-production for 1903 and 1904 was 2,750,000 tons, of which 1,681,000 was exported. Besides this, 71,980 tons of flour was exported. The home consumption of wheat in the Argentine is now over 700,000 tons per annum. The quantity of maize produced by the Argentine will sound large to New-Zealanders. Last year she grew no less than 3,770,195 tons. In 1903 and 1904 there were under wheat alone in the Argentine something over 4,300,000 hectares. In the District of Tres Arroyos there is upwards of 150,000 hectares under wheat, and during my visit there I was informed that 40,000 hectares was recently purchased from the Government for agricultural purposes by one firm alone.

The cost of cultivating 100 hectares according to the latest statistics is found to be as follows: This crop gives twenty bags of 70 kilos., or about 1,400 kilos. to the square: For ploughing, \$300; harrowing, \$100; two ploughings, sowing, overseer, &c., \$400; two extra harrowings, \$100; 6,000 kilos. of seed at \$5.50 per kilo., \$330; interest on capital, depreciation, and payment of labour, \$70: total cost, \$1,300.

Speaking generally of the various provinces as wheat-growers in the Argentine, the Province of Buenos Aires contains the best land. This province is being rapidly opened up for agriculture. The centre part of the province is largely adapted for sheep-farming. The Province of Entre Rios lies near the River Parana and Uruguay. This is a great country, having vast rolling plains, and many small rivers, and some woods in places. This will also some day become a great wheat province, owing to its having such rich soil.

The Republic of Uruguay, although I did not get a look over it, is said to be coming to the front as a wheat-producing colony. This republic is controlled by an entirely different Government from that of Buenos Aires and the other provinces. I may add that this republic is noted for her frequent rebellions. Uruguay produces about 800,000 quarters of wheat. In that republic

they have always maintained a gold currency.

Ploughing is done in a very rough, slovenly manner in most places in the Argentine. A Canterbury farmer would be scornful if he watched the ordinary "chacero" Italian tenant following his bullocks as he turns the most crooked furrow imaginable, leaving much of the grass to be seen on the surface. It is said, however, by old farmers that there is sometimes wisdom in light working of the land, particularly during wet seasons. It is found during the wet seasons with deep ploughing the wheat grows very much to straw, where the shallow-worked land returns a good crop. This would appear somewhat of a lottery business in wheat-farming. Idleness during the growing of the wheat-crop seems to suit the Italians. While that is true, it may be pointed out that no country offers better advantages for carrying on mixed farming the whole year round. There is no time of year when a farmer could not if he wished be busily engaged in ploughing, sowing, reaping, or threshing either wheat, linseed, maize, or lucerne.