BARLEY.

The average return of this grain in Upper Canada is 27½ bushels per acre; sixteen returns report but little grown—there are 56 returns. In Lower Canada the average is 23 bushels per acre; Chicoutimi, Bellechasse, Megantic, Nicolet, and Pontiac, give 30 bushels. The growth of this species of grain is very much on the increase in Lower Canada; there are only 3 Reports out of the 30 which state that very little is grown. Winter Barley is coming into use, and promises to be a prolific and valuable cereal. Some idea may be formed of the extensive growth of Barley, when it is stated that in the City of Albany, about 600,000 bushels were imported from Lower Canada in the Fall of 1859. Some very fine crops of Winter Barley are reported to the Bureau. A Mr. Haven, near St. Catharines, states that he grew 150 bushels on 3 acres. A Mr. McCarty, near Niagara, reaped a field on the 12th July. He says:—"I sow 3 bushels per acre, and my yield has been in fallow 60 bushels—and on Corn-land 40 bushels per acre. The Corn-land was equally good as the fallow; what made the difference in the yield in my opinion was, that the latter was sown on the 20th September, and the former on the 1st of that month." He adds:—"I believe under any circumstances it will yield double the quantity of Spring Barley; it is ripe on the 1st July before the Midge can strike it—we sell it at $1 per bushel.

This correspondent also remarks:—"It ought to be widely known, that Barley flour used as Buckwheat-flour, is far superior to it; it is delicate in flavor, and most wholesome."

Winter Barley, it is stated, is chiefly grown in mild climates where the Winters are short, and the Spring dry, such as the South of France, Italy and Spain, or in countries where deep snow covers the ground all Winter, and goes off rapidly in Spring, such as Russia, Poland, and parts of North America.

That the introduction of this new species of grain will be a valuable acquisition to Canada, is further shown by a report of Mr. Charles Chapman, of Ottawa, who has sent a sample to this Department.

[A communication from Mr. Chapman, on the subject of Winter Barley, similar in substance to that published in the *Agriculturist* some time ago, is here inserted.]

RYE.

Of rye the average return in *Upper Canada* is 18 bushels per acre, but 50 of the returns report that there is very little or none grown.

In Lower Canada this grain is represented in 22 returns (out of the 30 received,) to be cultivated for bread. The average is 13 bushels per acre, and cannot be a remunerating crop. Lotbiniere and Megantic return the largest averages; the former 20, and the latter 18 bushels per acre. Chicoutimi returns 17.

INDIAN CORN.

Only 37 Returns from Upper Canada have furnished reports of this crop, of which the average is 30 and 24-60 per acre. 28 report very little grown, and 10 report the crop much injured by the early frost of June, which, although very injurious to the crop of 1859, may be esteemed altogether exceptional, as a similar frost has not occurred since the year 1836.

In Lower Canada Indian Corn, Peas and Buckwheat seem to be very little cultivated, and with very partial success.

PEAS.

Sixty-four Returns from Upper Canada have reported on this crop. The average is 23½ bushels per acre—only six report injury by bug, and 58 are unanimous in declaring that no injury has been done by this insect, which, for many years previous to 1858 had been very destructive, but has this year nearly disappeared.

BUCKWHEAT.

The Returns of this crop in Upper Canada are so deficient that little can be said about it. There are only 26 Returns with regard to it, and these show an average of 18 bushels per acre. The extent of land under this crop is very small.

POTATOES.

With regard to this crop there is a very great improvement in Upper Canada. The rot appears to prevail still, but to a very limited extent. The average of last year was 125 bushels per acre—that of this year is 176. 45 of the Returns state positively that there was no rot this year; 14 state that from 25 to 50 per cent. of the crop was lost, and 12 state that the loss was light, say from 5 to 10 per cent. None can account for it, but many attribute it to an insect, the ravages of which are always the worst in damp soil and situations, and in wet seasons. The "Irish Cup" seems to be the most generally recommended as the freest from rot, although stated by one to be the worst. New land is much recommended as a preventive, and dry situations.

In Lower Canada also the yield of this