

ed to be misunderstood. I only referred to the pints of seed to show that I had taken the best means in my power to obtain the best sorts.

I am, Sir, your obedient servant,  
W. HAINWORTH.

Hitchin, November 12th, 1846.

Two years since, having one pint of seed of a peculiarsort of wheat, which we had raised from a single head of the preceding year, and being desirous of obtaining information on two points;—first the relative yield from the pint, as compared with the quantity from the single head; and secondly, the actual loss or failure; from non germination,—destruction by insects, or dying out during winter or spring.

Now the single head contained 90 grains, and the pint, the produce of the head held about 10,600 which gave 118 for one sown—but as only 89 grains germinated, and moreover in the May following only 47 out of the 89 plants were alive, the yield under more favorable circumstances would have been 150 for 1.

The space occupied by the plants was  $1\frac{1}{2}$  yards square, or about the fourteenth part of a rod—the 2240th part of an acre, consequently the yield per measure would be about 35 bushels per acre, but as it weighed 68 lbs to the bushel,\* it would have been equal to 40 bushels per acre.

The pint thus raised, we dibbled in after early potatoes on exactly the 32nd part of an acre two or three grains in each hole, but from covering them (as we believe) too deeply, not more certainly than two thirds germinated; and in the following spring scarcely more than half the number of plants, or about the same proportion as in the former experiment, were alive. However, they stood out well, and eventually produced sixty-two and one half pints, weighing  $66\frac{1}{2}$  lbs, or at the rate of thirty five bushels (by weight) per acre.

Now it remains to enquire, to what cause is to be attributed the enormous loss of 43 out of 90 plants, and whether such loss, could have been obviated by thicker sowing; for the quantity sown was only equal to one-third of a bushel per acre, and would treble the quantity,—have produced a threefold crop? we should say decidedly not, for in consequence of the plants being, so thin (*at first*) upon the ground, we were under the necessity of hand hoeing in June to keep down the weeds, which we think, from its effects,

\* Verified and confirmed the year following by weighing a bushel.

was fully equal to doubling the plants upon the ground. Now supposing six times the quantity of seed to be sown to ensure the same result (35 bushels per acre) the value of the seed sown would be comparatively trifling with the amount incurred by hand hoeing a thin crop in a country where labor is dear; but if on the lighter soils a crop can be doubled by thin sowing and after culture, would it not then pay? We wish some of our readers would favor us with their opinions on the subject.

We have the last fall sown three quarters of a pint of the same wheat on the same land, and again after potatoes; and the only difference made is in the method of sowing; one half is in drill 10 inches apart, and the grains about 2 inches asunder in the drills; the remainder is in hills about 12 or 14 grains in a hill, and 2 feet 6 inches apart each way. It was sown late, but nearly every seed germinated, but had scarcely commenced to tiller out when the frost came. The issue shall be noted hereafter.



COBOURG, FEBRUARY 1, 1847.

Not having received any replies from our numerous readers to the question stated in our last number, on the relative value and importance of Fall ploughing, we shall offer our own opinion on the subject. We regret this the more as we well know we are surrounded by clever, intelligent, and practical men, who, we are assured, are only prevented by their extreme diffidence from venturing to appear in print. We positively think we shall have to make some startling heterodox statement in order to rouse them into action, and elicit controversy, for we are quite certain that a fund of valuable information might be amassed by a plain statement of their various opinions on agricultural topics.

That much valuable time might be saved in the Spring, by the diligent use of the plough in the Fall, all must concede, and, to land which has borne Peas, and which is intended to be sown with spring grain, (Barley or Wheat,) and which is frequently in a foul state, from the seed peas being imperfectly cleaned, or from not covering the ground sufficiently early in the summer, Fall ploughing (all

other circumstances being favourable,) is highly advantageous, as it serves to destroy the growing crop of weeds by burying them, and at the same time exposes to certain destruction by frost, many others not before brought into a position for germination, while those root weeds which are biennial or perennial, receive a decided check from the same operations.

That the stiff clay and retentive soils are benefitted is equally obvious, for retaining as they do, such an amount of moisture, and being so cohesive in their nature, it would, after our summer's heat, be almost impossible to reduce them sufficiently, without subjecting them as much as possible to the action of severe frost, by which their cohesiveness is destroyed, and their substance made permeable to the admission of the smallest fibrous root of the ensuing crop.

For fitting land for Barley or Indian Corn, we think a winter furrow almost indispensable, should the land at all incline to a stiff, loamy nature, and if of any other description, should weeds abound, much will be accomplished by fall ploughing; and should the soil be dry, and the surface water easily removed, a couple of turns with the harrows would cause many weeds to sprout, to their certain destruction by the first frost,—while for Spring Wheat, where the land is really suitable to the crop, the sowing on the winter furrow is decidedly the most preferable.

Again, for whatever crop intended, the turning in of grain stubble in the Fall, is most efficacious, for in dry soils, particularly lime stone lands, the process of decomposition is so slow, that unless such stubbles have the advantage of a thorough soaking by the winter rain and snow, and their percolation through the soil at the spring thaw, fermentation and decomposition scarcely takes place at all, or in a manner not noticeable, and the woody fibre remains undecomposed during the entire year, yielding nothing as a stimulant, and little as a fertilizer to the ensuing crop.

Where a naked fallow is resorted to, and perhaps under our burning sun, on heavy days, they cannot be altogether dispensed with, as it is almost impossible to rid the land of those weed seeds which are bound up in the soil, and which nothing short of a thorough pulverization can ever bring to the light and air, so essential to germination, and which must take place ere they can be subdued, a