out injury, whereas when prepared by pickling it must be sown immediately, otherwise it is very apt to lose vitality.

Boussingault tells us that in French farming, wheat is sown either upon a fallow or upon land that has carried some forage crop, or such crop as beans and peas; the same practice is followed in Britain.

Wheat requires a good deep soil, rich and stiff, containing a certain proportion of calcareous earth, and abounding in organic matter; light sandy, and other hungry soils, being unsuitable. The subsoil should be dry and firm. In fact the capabilities of a farm in the production of wheat are regarded as its best test of value for the general purposes of agriculture.

Wheat requires a better soil, better climate, and better cultivation, than any other cereal crop, so that oats, barley, and rye, can be profitably grown where wheat would not ripen an ear.

Dr. Anderson some years ago gave a very lengthened detail of the constitution of the principal wheat soils of Scotland. These were Mid-Lothian, East Lothian, Renfrewshire, Pesthshire, Morayshire, and Berwickshire. His conclusions are that they all contain, in large quantity, the whole of the substances necessary for the food of wheat and other plants, in a condition in which they are fitted to be taken up by the plant; secondly, that they may be divided into two classes, those characterised by the absence, or small amount of alkalies in the insoluble matter, the other by the abundance of these constituents. Theory points to the superiority of these latter soils over the former —a superiority which practice has long established, for the soils of the Carse of Gowrie and East Lothian greatly surpass all the other wheat soils of Scotland in fertility.

Dr. Wolff, of Leipsic, in reference to Dr. Anderson's researches, compares the soils of Scotland with those of Germany, in both of which are the same abundance of all the soluble constituents necessary for the nourishment of the plant. It is only in the quantity of humus that a striking difference exists, the wheat soils of Scotland being richer than those of Germany in this respect, while the latter contain in proportion to their humus a much larger quantity of nitrogen. The cause of this phenomenon is sought for in the different climatal conditions of the two countries, which are unquestionably of much importance in the estimation of the goodness and fertility of any soil, it being very possible, for example, that in Scotland, a soil may be well adapted for the cultivation of wheat, which in Germany would no longer afford remunerating crops.

We have said that wheat thrives on a stiff clayey soil; but that must be well prepared for the crop. When sown on bare summer fallows, the soil must be loosened, exposed to the action of the atmosphere, and cleared of weeds, through repeated ploughings, harrowings, and rollings. Lime and manure should be applied in the month of July, and the seed committed to the soil in August or September.

When this crop is sown after the removal of a turnip or potato crop, one ploughing is sufficient, with a previous harrowing to prepare the ground for the drill machine.

Four single times of harrowing are deemed sufficient on ordinary wheat-lands, in order to cover the seed, and two on lighter loams after the drill-machine (Donaldson); but occasionally very heavy lands require more to do the work effectually.

Considerable difference of opinion has been expressed regarding the relative advantages of drilled and broadcast sowing. Mr. Pawlett, in an experiment undertaken for the purpose of determining this point, found the produce of drilled and broadcast wheat to be as follows:

	Bush.	Pks.
Drilled wheat, per acre.....	34	3
Broadcast do., do.	33	3

showing a slight difference in favour of drilled wheat, and confirming the general opinion that drilling (which has many advantages over all other systems of planting.) is the best way to ensure a plant, and consequently to get a good crop. "Many excellent crops have been grown from dibbled wheat, but the trouble, expense, and difficulty in getting it well done by hand has prevented its becoming more general in practice. My wheat is invariably drilled now at eight inches, and deposited as deep in the land as circumstances will permit."

With regard to wheat after fallow, Mr. Brown of Markle, was of opinion that the ground should remain unsown for a fortnight after the last ploughing is given, so that it might get in to a consolidated state, and be able to stand the harrowing process, without being too much subdued. However, most farmers will feel with Sir John Sinclair, that such operations must in a great degree be regulated by the weather and other circumstances, it being often necessary to sow the ground as fast as it is ploughed.

Wheat being the grain which above all others requires a long time for its development, should, in this climate, be sown as early in the season as possible, in order that the young plants may be thoroughly established before winter, although at the same time not too far advanced to suffer by frosts. In Europe the wheat sown in Autumn generally stands upon the ground for from 9 to 10 months; but the time varies with the climate in different countries.

The bulk of the crop, and generally its excellency, very much depends upon early sowing. All farmers are aware of this, and wheat sowing should therefore be invariably performed in good time in the Autumn. If this is not done, an opportunity for favorable sowing may be lost altogether, or the process delayed so long that the crop is hurried into bearing before it has time to perfect its vegetative organs, in which case the produce must necessarily be light. However, since the year 1773, Scottish farmers have been in the habit, to a greater or less extent, of sowing what is called "winter wheat" in the Spring months,—a practice which has been found very convenient by some agriculturists upon clay, as well as other soils, but only in those seasons when the wetness of the autumn prevents sowing at the usual time. Mr. George Cully, the celebrated farmer, stated that he had known winter wheat do pretty well when sown even in the beginning of April, but he did not approve of sowing so late as that,—not however from fear of a plentiful crop, but because it was so late in ripening, that six times in seven it suffered from the equinoxial gales. He was decidedly of opinion, from long experience, that the best time for sowing Autumnal wheat in Spring, was in February and the first ten days in March.

We are not aware whether any of our Nova Scotia farmers have tried the early Spring sowing of winter wheat on fall ploughed land.

The Spring or Summer wheats (properly so called) possesses some advantages, although for general purposes inferior to the winter wheats, the ear being short and the crop less productive. They remain on the ground for a much shorter period; though sown so late as the end of April or beginning of May, they will ripen as early as autumn sown winter-wheat.

Wheat of soft grain contains more starch and less gluten than that which is hard; while the former is preferred by the brewer, the latter brings a higher price in the market from being more suitable to the purposes of the baker. Southern countries are known to produce harder grain, than northern ones, and the researches of Davy and Payen show that the wheat of warmer climates is richer in azotised principles than that of temperate lands. But it is pointed out by Boussingault that we may have wheat grown in Europe fully as rich in azotised elements as any that is grown between the tropics. This conclusion is founded upon the experiments of Hermbstadt, who found that the application of different manures had a wonderful effect on the proportion of azotised matters in the grain. One hundred parts of the flour obtained from