

hibition in 1855, told their own tale as to quality of produce.

The botanist tells us that the genus of plants yielding the various kinds of wheat is called *TRITICUM*, and that it belongs to the natural order GRAMINEÆ (grasses) of which it is the most prominent and important member.

The name *triticum* is, according to Varro, a Roman agricultural writer, derived from "*tri-tum*," ground or rubbed, because the fruit or seed in its preparation as a food for man requires the process of grinding or trituration. We learn, too, from Varro and other authors of that period, the place which wheat occupied in the agriculture of the Romans, and the great pains and consideration they bestowed upon its cultivation. Indeed many of their rules and recommendations form good comments upon the negligent tillage of our own times, and might be consulted and followed with advantage by most of us at the present day. The Romans appear to have been acquainted with two species of wheat, the *triticum* or ordinary wheat, and the *far* or spelt wheat; the first they recommended to have sown on good, warm, loamy soils, while they considered the other best adapted for cold clay soils, and for high and exposed districts. Their rules for getting the land into proper condition preparatory to the wheat crop are well worthy of our attention. They insisted upon the necessity of having the land in good heart, so as to be able to produce and perfect a good plant; that it should be carefully freed from all noxious weeds, which abstract from the soil the food that should support the growing crop; that the soil should be broken down into the finest tilth possible, and that it should be ploughed as deep as the farmer's force would permit, so that roots of the plant might be able to penetrate the subsoil in search of its necessary food.

The Romans were evidently keen observers of results, though they were not so well acquainted with their causes as we are. Their farmers had not the advantages which chemistry places in the hands of ours; and yet many of their practices and precepts are even now entirely neglected by the majority of us, and only to be seen exemplified on the farms of our most enlightened and intelligent agriculturists. On heavy lands they recommended fallowing, and exposure to the sun and to the frosts; on good loams soils they recommended that wheat should follow a crop that differed from it in its habit of growing and its requirements from the soil; and on light sandy or gravelly soils, that the soil should have the necessary firmness given to it by means of the roller or other implement. They were more particular, too, in keeping the seed pure and unmixed, in selecting the best for the purpose of sowing, and in changing their seed and adapting it to the soil in which it was to be used. These are all points which we shall have to refer to as we discuss the subject of this treatise, and which never can be neglected with impunity in the cultivation of wheat.

In describing the different species composing the genus *triticum*, well-nigh every writer has adopted a different arrangement, and consequently considerable confusion and misapprehension exist, not only as to the species, but as to the correct nomenclature of the endless (so-called) varieties, which enter into our ordinary cultivation. By common consent, M. Louis Vilmoren, in France, and Mr. Lawson, in this country, are looked upon as the best authorities on the subject. Therefore, we cannot do better than to follow the division and classification of the genus, so ably drawn up by the former, while the descriptions and agricultural characteristics of the cultivated varieties, by Mr. Lawson, will enable us to form correct opinions of their nature and suitability to our several requirements.

M. Vilmoren divides the genus "wheat" under seven heads or "species:"—

1. *TRITICUM SATIVUM*—Common Wheat.
2. *TRITICUM TURGIDUM*—Turgid Wheat.
3. *TRITICUM DURUM*—Hard Wheat.
4. *TRITICUM POLONICUM*—Polish Wheat.
5. *TRITICUM AMYLEUM*—Starch Wheat.
6. *TRITICUM MONOCOCUM*—One-grain Wheat.
7. *TRITICUM SPelta*—Spelt.

The first four species have their seed or grain naked, while the seed of the remaining species has the chaff scales adhering to it.

No. 1, *T. sativum*, is arranged in two principal divisions, "bearded" and smooth, or "beardless." Of the bearded there appear to be seven, and of the smooth or beardless twenty seven distinct varieties; and these are again divided into sub-varieties according to their colour, as white, yellow, or red, and according also as the chaff scales are smooth or rough.

No. 2, *T. turgidum* has two principal divisions—those varieties having simple ears, and those having compound—the sub-varieties being determined by the colour, white, red, or dark, and by the rough or smooth character of the chaff scales. Of these M. Vilmoren enumerates eleven distinct varieties, ten having simple ears, and one having a compound ear.

No. 3, *T. durum*, has three varieties.

No. 4, *T. polonicum*, only one.

No. 5, *T. amyleum*, only one.

No. 6, *T. monococcum*, only one.

No. 7, *T. spelta*, is divided into two—the bearded and beardless varieties.

Of these seven species only the two first are cultivated in this country, the others being merely grown for experimental or illustrative purposes.

The *T. sativum* comprises all the varieties of winter and spring wheat under ordinary cultivation; the *T. turgidum* being limited to certain districts where the soils are cold and strong, and where a large yield of a coarse quality is desired.

It would not be within the limits of this short treatise to attempt to give a description of each, or of half the various wheats cultivated in different parts of the kingdom; it must, therefore,