

only that portion of the soil which is capable of being dissolved by rain-water which is available as food. It is of no practical advantage to a growing plant, that the soil should contain food which will not be ready for use until the next year, or the next century. The life and growth of the plant is determined by the supplies which **are then ready for use**, or coming into use.

37. It has therefore been necessary to distinguish the inorganic matter according to its soluble condition. **Those portions of the soil which are ready for use**, or in other words, can be dissolved in rain-water, are known as the **active** ingredients of the soil; whilst **those which are not ready for use**, because they are not soluble in rain-water, are termed **dormant** or sleeping. The distinction between the two conditions is exceedingly simple; but the influence resulting therefrom is of the greatest importance. An analysis of a soil which represents the total composition of a soil, is of little or no practical value, **unless it distinguishes between that which can be used by the crop, and that which cannot**. The farmer wants to know what ingredients the land contains, which will be of service for the crop he is going to sow, and if an analysis leads him to rely upon all the substances in the soil being ready for his use, he will be deceived. For all practical purposes, a chemical analysis must, in the first place, separate the **dormant** matter of the soil from that which is **active**, and must thus inform the farmer what there is in the soil **which he can make use of**. Without this distinction being drawn, the chemical analysis of soils may be of scientific interest; but it will be calculated to mislead those who fail to distinguish between that which can be used, and that which cannot be used, or, in other words, between the **active and dormant constituents** of the soil.

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