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## ROTATION OF CROPS.

(Continued from page 74.)

AGRICULTURAL chemists have laid down the following propositions for the direction of practical husbandmen in the rotation of crops, viz. :

1. That all plants have a tendency to exhaust the soil.

2. That some plants exhaust it more than others.

3. That all plants restore to the soil an excrementitious principle.

4. That this principle does not act as a manure to the plant which restored it to the soil, but that this vegetable excrement, deposited by one species of plants, may act as a manure to other species different from that which deposited it.

5. That all plants do not restore to the soil the same quantity or the same quality of this matter.

6. That two species of different plants may grow together, and mutually benefit each other by their interchange of this principle, and that this interchange, with others again, would injure both.

7. That all plants affect differently the growth of weeds ;

From whence it follows :

1. That a continued succession of the same crop must exhaust the soil.

2. That soils are injured by crops, in proportion to the quantity of nutritious matter they extract from the soil, and the diminished quantity of nutritious principle which they restore to it.

3. That plants of the same kind should not return too frequently in succession, or in the circle of cropping.

4. That perpendicular rooting plants, and those which direct their roots horizontally should succeed each other.

5. That two plants, equally favourable to the growth of weeds, should not succeed each other.

6. That crops which exhaust the soil, such as wheat, &c. should only be sown when the soil is in good heart.

7. And that the succession of crops should be regulated by the influence of particular crops upon particular soils, as some soils are more readily exhausted than others.

It may here be observed, that particular insects feed upon particular plants, and that their destruction must follow that interchange or rotation of crop which deprives them of their food in the particular plant ; hence their destruction may be considered as one among the many advantages of rotation.

Although general rules may be given for a system of rotation, still much " judgment and experience are necessary to arrange the plant, and to adapt it to all the varieties of climate, soil, and situation ; for although it may be an apparently easy matter to follow up an alternate crop of *white* and *green crops*, yet very little observation will convince any practical man, that the general rule may be strictly observed, and still the system of cropping may be very defective."

Experience has proved that the fertility of soils is destroyed in various degrees by different plants ; and that in some cases the fertility cannot be restored by the ordinary manures, ever so abundantly bestowed, if the