

E.—BOTANY, continued, with more practical application. Sap circulation, nomenclature, fixature of names. Origin of plants, their history, development, etc. Parts of flowers distinguished and discussed.

F.—CHEMISTRY.—Student becomes acquainted with scientific experiments, and of such a nature as to afford a knowledge of this science as applied to plant and animal economy. A study of oxygen, nitrogen, hydrogen, etc, and their combinations and uses for plants and animals. Discussion of reagents used in the detection of certain substances in the materials of plants, soil, etc. A complete knowledge of formation of acids, bases, salts, gases, etc. Preparation of fungicides and insecticides—constituents entering into these combinations.

HORTICULTURE.—Treating of methods of cultivating of soils ; seed sowing—when and how ; transplanting and planting of trees and small fruits ; out-door grafting, budding, cross fertilization of flowers. Best methods of spraying fungi and insects. Practical work in the field, pruning, grafting, application of commercial fertilizers at time of planting, preparation of ground for plants. In fact, putting into practical use knowledge obtained during fruit year.

SECOND YEAR.

The student is now prepared to take up a more advanced treatise of the subject having fully mastered the fundamental principles in the first year's work, the course is as follows :—

FIRST PERIOD.—(*Three Months*).

Botany, Physiology of Plants.—(See Note A).

Economic Entomology.—(See Note B).

Horticulture.—(See Note C).

A.—BOTANY.—Text-Book in this year, with work in laboratory, with specimens of plants, fungous growths, etc., acquiring use of microscope studying cell structure and contents such as starch nucleus, etc. Examination of different fungous growths, observing spores and their formation, assimilation, transpiration, and absorption of plants, and many other interesting studies that come under this head.