No. 505—Subsoil to 504, yellow sand.

No. 506—Harrow Experimental Farm, surface soil, light brown soil, 0-9 inches.

No. 507—Subsoil to 506, 9-24 inches, yellow sand.

No. 508—Surface soil, 0-6 inches, brown sand, farm of Fred. Wright Harrow.

No. 509—Subsoil to 508, 6-24 inches, medium light grey sand.

No. 510—Surface soil, 0-10 inches, light grey sand, Joe Henry's farm, Leamington.

No. 511—Subsoil to 510, 10-24 inches, light yellow sand.

No. 512—Subsoil to 513, 6-24 inches, yellow sand.

No. 513—Surface soil, 0-6 inches, dark brown sand, farm of W.S. Corcoran, Arner.

No. 514—Surface soil, 0-7 inches, chocolate coloured sandy loam, Harrow Experimental Farm, plot 11.

No. 515—Subsoil to 514, 7-24 inches, dark grey sand.

No. 516—Surface soil, 0-15 inches, black sand loam.

No. 517—Subsoil to 516, 15-24 inches, light yellow, sandy loam, farm of Fox, 3rd concession, Leamington.

No. 518—Surface soil 0-6 inches, rather rolling and compact soil, farm of Wm. Patez, Ruthven, dark sand soil.

No. 519—Subsoil to 518, 6-24 inches, yellow sand.

No. 520—Surface soil, 0-8 inches, brown sandy loam, Harrow Experimental Station, Plot 4.

No. 521—Subsoil to 520, 8-24 inches, light brown sandy loam.

No. 522—Surface soil, 0-6 inches, medium dark sand, W. A. Barnet's Farm, Harrow.

No. 523—Subsoil to 522, 6-24 inches, yellow sand.

From a chemical standpoint bright tobacco soils are rather weak, but most of them are very responsive to artificial fertilizer, manure and clovers. It can be seen that there is a fairly close relation in plant food constituents contained in each soil.

ROTATION OF CROPS.

The maintenance of fertility and the best conditions for growth in the soil are greatly dependent on a proper system of rotation.

The present time when tobacco is in strong demand, and flue-cured tobacco lands are [illegible] at from two to six hundred dollars per acre, there is a strong tendency to [illegible]ling that it is a distinct loss to fail to take a crop of tobacco from the land each year. Good practice and experimentation have always shown that it pays to rotate from the standpoint of soil fertility, disease and insect pests, and total profit to the grower over any fair period of time. Wherever any one crop is grown continuously on the same soil, over a more or less extended period, crop yields always decrease, and all of the diseases common to the plant become more and more prevalent making it in the end unprofitable, if not impossible, to secure satisfactory yields.

For the production of tobacco of the best quality it is essential that the soil be liberally supplied with vegetable matter or humus in an advanced stage of decay. Humus increases the friability and water-holding capacity of the soil, and increases the yie[illegible]nd the quality of the tobacco. It has been found by experiment that a maximum yield of the best quality tobacco could not be obtained on soils which were very low in humus no matter how much commercial fertilizer was used. This humus is best obtained by following a rotation in which grass and green cover crops are included. It has been found by experiment and practice that clover crops or even clover sod turned under has a strong tendency to produce a dark-coloured coarse flue-cured tobacco. The same is true of a very large application of barnyard manure. On rather infertile, light, sandy soils a crop of clover turned under occasionally might be of benefit, and the same is true of applications of two to three tons of barnyard manure. Even then it would be better to grow the clover or apply the manure after the