

## Relation of the Soil to the Growth and Quality of Tobacco.

(Experimental Farms Note.)

Soil characteristics play a very important part in the yield and quality of all farm plants, but especially is this true of the tobacco plant. While the fertility of soils is the most important factor in tobacco crop yields there are other factors that play a very important part in determining the quality and hence the market value of the crop.

During the past four seasons, fields and parts of fields prepared, manured, planted and cultivated in the same way and at the same time and of practically the same fertility, as yields have been identical, have shown marked variation in the quality of the cured leaf. In this article the word quality is being used to mean ripe, good color, good texture, and good quality—in a word good tobacco in every respect. Soil samples have been taken from these areas and the mechanical analysis or composition has been determined for the flue-cured, white burley, and cigar tobacco districts.

The finest quality of white burley has come from sand and gravel loams which contain not less than 65 per cent. of sand and from 3 to 15 per cent. of clay. Clay, clay loam, and muck soils have not been satisfactory for producing a good quality of white burley tobacco.

The finest quality cigar binders have come from the fine and very fine sandy loam soils containing from 2 to 6 per cent. of clay, 10 to 25 per cent. of silt and the remainder fine and very fine sand.

For the best cigar fillers the soil should be slightly heavier.

The foregoing refers, of course, to soils so situated that the drainage is good.

### Experimental Farms Importation.

Robert Cunningham, of the Central Experimental Farm at Ottawa, accompanied R. R. Ness to Scotland and between them they selected a number of Ayrshires of excellent individuality for the Ottawa herd. These are at present in quarantine in St. John, N.B.

"Overton Lord Kyle" was bought at the Lanark Show and Sale to head the new herd. He is a yearling with great record backing and an excellent individual from a conformation standpoint. His dam, "Overton Snowflake 2nd" gave 9,190 lbs. milk at 3.93 per cent. as a heifer and his dam of sire gave 10,150 lbs. milk at 3.56 per cent. In addition to this young bull he also secured some excellent Ayrshire matrons. From Hobsland came the grand young cow "Dunlop Betsy" and the yearling heifer, "Hobsland Betty 7th" which is a big strong heifer with great promise. "Auchlochan Emerald" was purchased out of the renowned herd of Dr. Douglas, and she is by that great breeding bull "Golden Pippin," who is a son of the well-known show cow "Auchenbrain Fanny 9th." From A. Cunningham, of Thornhill, Stewartson was purchased "Hardcroft Dewdrop 3rd," a grand, young cow that should do well in the new herd. It is worthy of note that Mr. Cunningham has built up a richly-bred herd free from T. B. that are noted producers, as he will not keep any cow that will not give 10,000 lbs. milk in a lactation period.

From the Catlins herd came "Catlins Barbara," a sister to the dam of "Hobsland Jean 5th" and "Hobsland Perfect Piece." This cow is of immense scale and capacity. Mr. Ferguson, of Auchinbry supplied a great three-year-old heifer "Auchinbry Mina 5th," that has every indication of being a heavy producer. Her dam had a number of records averaging over 10,000 lbs. milk at over 4 per cent. Thomas Barber, of Broomhill, was also visited and a promising four-year-old cow "Broomhill Flo" was secured, and from James Howie was purchased a grand cow. Perhaps the best cow of the lot is "Oldhall Maggie 5th," bought from Mr. Caldwell, of Moorefield, and from John Caldwell, of Coarsehill, was secured a choice cow in "Culraigie Dot." A useful dairy looking cow, "Hareshaw Tibbie," was secured from the Hareshaw herd, and a yearling heifer "Grange Mary 5th" from John Slater of Grange Farm, Kirkcudbright, completes the list of Ayrshires for the farm.

In addition to the Ayrshires Mr. Cunningham, who is also a sheep man worthy of note, secured a dozen choice Leicester shearing ewes to strengthen the already splendid flock kept at the Experimental Farm.



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