being on the average of from three to four dollars for each dollar spent for the combination due to the fertilizer alone.

Much larger quantities of commercial fertilizers than are at present generally used could be very profitably applied to the flue-cured tobacco soils.

It would be better as a rule to buy the fertilizer ingredients and mix them at home. If this is not done only high grade, ready-mixed commercial fertilizers should be used.

From the standpoint of colour and quality of the cured leaf, and profit, the mixture that gave the best results at the present prices of fertilizers consisted of 100 to 150 pounds of sulphate of ammonia, 500 pounds of 16 per cent acid phosphate, and 100 pounds of sulphate of potash.

At pre-war prices of fertilizers and flue-cured tobacco, the mixture that gave the best results from the standpoint of colour, quality and profit consisted of 150 to 200 pounds of sulphate of ammonia, 500 pounds of 16 per cent acid phosphate, and 250 to 300 pounds of sulphate of potash.[1]

FERTILIZER AND CLOVER ON FLUE-CURED TOBACCO.

Although turning under a heavy crop of clover on fairly well improved land on which a crop of flue-cured tobacco is to be grown the same season is not recommended, it was thought worth while to try the effect under our climatic and soil conditions.

Four one-tenth acre plots were staked. The fertilizer was applied in the amounts given in table IV, in the row. It was desired to see if good applications of fertilizer would improve the dark colour of the leaf that was to be expected and at the same time improve the yield. Fertilizers were applied singly and in combination.

The soil on which this experiment was run is of the Leamington sand type, low in organic matter, but typical of the soils of the bright tobacco district, level and possessing excellent drainage.

TABLE IV.—Showing yield of red, dark, and total pounds of flue-cured tobacco per acre. Also the kind and amount of fertilizer applied per acre.

Plot No.	Lbs. red tobacco.	Lbs. dark tobacco.	Lbs. Total.	Sulphate Ammonia	Acid Phosphate	Sulphate Potash.	Fertilizer applied.
1	450	790	1,230	None.	None	None	No fertilizer.
2	1,240	200	1,440	None	600	None	Acid phosphate.
3	1,040	270	1,310	None	None	400	Sulphate of potash.
4	1,330	270	1,600	200	600	400	Complete fertilizer.

Very large yields for flue-cured tobacco were obtained on these plots. The crop was set in the field rather late.

The leaf produced was rich and waxy, possessing good body, texture, elasticity and aroma, but the colour was very poor, being mostly red to mahogany with a fair per cent of dark and green tobacco.

Plot No. 1 yielded at the rate of 450 pounds of red and 790 pounds of dark and green grades, making a total of 1,240 pounds per acre. The quality of the leaf was very poor.

Plot No. 2 yielded at the rate of 1,240 pounds of red and 200 pounds of dark and green grades, making a total of 1,440 pounds per acre. The plot was fertilized at the rate of 600 pounds per acre of acid phosphate. The phosphate increased the total yield

[1] NOTE.—Mr. Fred Wright and Mr. W. S. Corcoran of Oxley have given much painstaking and encouraging help in conducting these experiments.