THE RESPONSE TO LIMING AND FERTILIZATION OF
THE RECLAIMED MUCK LANDS OF NORTH CAROLINA

(Abstract)

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The muck and peat soils of eastern North Carolina have not main-
tained the fertility evident when drainage was first established. All
types are extremely acid, but liming is only partly effective in over-
coming the effect of soil acidity as the high concentration of lime
required to bring the soil to neutrality results in a depression of potash
assimilation. Heavy fertilization with potash is necessary to correct
the depression in crop yield following the application of more than
2 tons of lime per acre. This lime-potash relation is most marked
on soils low in mineral matter as the lime in these is less readily fixed
as insoluble silicates.

With the surface soil adequately limed the acid subsoil is injurious
to corn. Heavy liming and deep plowing have not served to remedy
this condition.

Lime applied to the surface soil does not affect the reaction of the
underlying soil to a depth of more than 1 inch.

Fertilization with nitrate of soda and potash has been beneficial,
more so on the mucks low in mineral matter than on others. Acid
phosphate is generally injurious or without effect.

Corn yields are better following soybeans or a green manure crop
than after corn or fallow.

Shallow plowing and bedding has given better results than other
cultural methods.

The outlook for the development of these tracts in truck or other
intensive crops is not promising. If cultivation can be maintained it
is probable that the soils will become more and more productive as
the rate of decomposition is abated.

1Abstract of a paper read at the meeting of the Agronomy Section of the Asso-
ciation of Southern Agricultural Workers held in Atlanta, Ga., February 3-5,
1926. Received for publication September 10, 1926.

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