1. CROP ROTATION IN RELATION TO SOIL PRODUCTIVITY

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The early English colonists on their arrival in North America found a more or less well-developed system of agriculture practiced by the native tribes. Roger Williams states that the Indians in Rhode Island followed a system of growing corn and beans in which the corn was planted in May, after it had attained a height of 3 or 4 inches, beans were planted by the hills of the corn, the corn stalks thus forming supports for the bean vines. Clean cultivation was given. Special care was observed to remove all weeds or other superfluous vegetation. A plot of land would be cultivated with this one-season intercropping rotation for a number of years; but when productivity fell below a satisfactory point, the land would be "turned out" and a new field cleared from the forest.

The Indians in eastern Virginia and eastern North Carolina seemed to have devoted their agricultural energies largely to the production of corn. John Smith states that most of the lands of the coastal plain regions of Virginia and the Carolinas were very heavily wooded with pine trees and undergrowth of oak and an occasional interchain of grape vines. These lands were naturally very productive. The Indians would clear them of trees by the use of fire. They would then plant the corn in hills about 4 feet apart, planting three grains to the hill. When the corn had attained a height of approximately 3 feet, the soil was drawn to the plants with crude implements, thus forming a mound around each hill. The individual field would be used for a long number of years; but when productivity fell below a satisfactory point, another field would be cleared from the forest and farming operations started anew. It is stated that the natives frequently fertilized their corn by burying a fish obtained from the nearby rivers under each hill before planting.

Edmund Ruffin in his essay on Calcareous Manures, published in 1832, states that the agriculture of eastern Virginia at that time had reached a very unsatisfactory state. A three-year rotation, consisting of corn, corn, and wheat without winter cover crop, was in common use. Many farmers adjacent to the tidal rivers used "green fish" as a fertilizer, but the quantity was limited and means of transformation inadequate so the practice was not general. It was customary to cultivate rather large acreages, but with a very small acre yield.

1Paper read as a part of the symposium on "Crop Rotation" at the meeting of the Society held in Washington, D. C., November 19, 1926.
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