ARMYARD manure, green manure, and plant residues are commonly used as sources of organic matter for the soil. As a consequence, of the limited supply of farmyard manure in certain areas, it may prove of value to produce artificial manure from various plant residues which are available on the farm. Hutchinson and Richards (7) were among the first to produce artificial manure on a practical basis. The following conditions were outlined as essential for the production of artificial manure from straw: Proper aeration and temperature, an adequate supply of soluble nitrogen, and a neutral or slightly alkaline reaction. It was concluded that the addition of 0.7 to 0.75 parts of nitrogen to every 100 parts of dry straw gave the best results.

Albrecht (1) suggested the use of a mixture of 45% ammonium sulfate, 15% superphosphate, and 40% limestone to be applied at the rate of 150 pounds per ton of wheat straw. This resulted in the formation of a very good manure within 3 to 5 months. When applied to soil seeded to wheat and later to clover, it was more beneficial than was straw or barnyard manure. Smith and Brown (13) reported that a good quality artificial manure could be produced by composting straw or cornstalks with chemicals and adding sufficient water. Waksman and Reneger (18) studied the production of artificial manure for the growth of mushrooms and found that a mixture of straw and alfalfa without the addition of inorganic salts gave good results. Other investigations (3, 4, 5, 6, 8, 10, 12, 15) have tended to confirm the results of Richards and Hutchinson.

The present report is concerned with the production of artificial manure from several organic residues that might be available in New Jersey, namely, oat straw, clover hay, peat, leaves, cornstalks,