

contain all of the elements found in fertile soils, and all of the constituents existing in crops that are used for the food of men or animals. They, therefore, can supply any or all deficiencies which may exist in barren soils. When applied to land they can supply all that is needful to give it productive capacity. Their several modes of action, whether by supplying directly the food of plants which may be absent or deficient in the soils; whether by placing that which may be present, but not in a form for use, in such a condition that plants can assimilate it, or by both of these modes at the same time, I have pointed out already. I have given the best mode for the application of each, and the best mode of their preparation previous to application and the most economical quantities to be used, so far as my judgment goes. The advice which I have given is founded on very mature deliberation, and where I was uncertain I have refrained from giving any decided opinion. Taking in view the official position which I hold, and desiring to inspire all possible confidence in instructions based on scientific principles, being desirous that the confidence hitherto manifested towards the principles which I have promulgated should be continued and increased, I have been careful to advise nothing but what was obtained from the highest authority, or was the result of my own careful and oft repeated observations and investigations. I therefore with confidence can urge the adoption of my advice. That there may be errors in the above I do not doubt, that there are some truths not before urged on the agricultural community of our State I am very certain; that the adoption of these in practice will prove of great benefit, experience will demonstrate, and from its verdict there can be no appeal.

The part of the State which, in the performance of the functions of my office, I have visited since my last report to your honorable body, is that political division of the State known as the

THIRD GUBERNATORIAL DISTRICT OF MARYLAND.

It lies between $38^{\circ} 3'$ and $39^{\circ} 23'$ parallels of north latitude, and is composed of the following counties: Montgomery, Howard, Anne Arundel, Prince George's, Charles, Calvert and St. Mary's.

The counties of Anne Arundel, Calvert and St. Mary's border on the Chesapeake Bay. Prince George's, Charles and St. Mary's lie between the Potomac and Patuxent rivers; the latter county also borders on the Chesapeake. Montgomery county lies between the Potomac and Patuxent, above tide-water. Howard is bounded on two sides by the Patuxent and the Patapsco rivers above tide-water; whilst Calvert county lies between the Patuxent river, below tide-water, and the Chesapeake Bay. The geographical position of these counties pre-eminently fits them to be a rich agricultural district, abundance of water-power, in some places