

“super-phosphate of lime” is really a mixture, of which the active ingredient—mono-calcic phosphate—forms sometimes not more than one-fourth of the entire weight.

71. This discovery of Liebig's led to the establishment of an entirely new branch of chemical manufacture, for although for a time farmers manufactured their own super-phosphate, by purchasing bones and sulphuric acid, it was soon found that a manufacturer, with convenient machinery, could do the work far more advantageously and economically. The late Mr. Thomas Proctor of Bristol was the first manufacturer of super-phosphate of lime. He was present at the meeting of the British Association when Liebig announced his great discovery. As soon as it was made known he travelled to Bristol with all speed, and at once commenced the manufacture, promptly sending out Liebig's new manure ready for use. The economy of the new process was soon recognized, and the manufacture of artificial manures advanced with incredible rapidity.

72. The next advance was the discovery of Mr. J. B. Lawes in 1842, whereby he proved that **mineral phosphates of lime** were capable of being manufactured so as to produce the same mono-calcic phosphate, which had previously been manufactured **solely from bone**. This led to an extensive search for rocks, and other mineral deposits containing the tri-calcic phosphates, and the result has been a considerable decrease in the cost of the materials used in the manufacture, which has resulted in a **cheaper supply** for the farmer's use. The new description of super-phosphate of lime thus introduced was distinguished as **mineral super-phosphate**, that is to say, super-phosphate of lime manufactured from mineral phosphates. Subsequent experience has confirmed Mr. Lawes' original opinion, and has resulted in super-phosphate of lime being now very largely made by the judicious use of mixtures of