

moistening them with water, and then covering them up with sawdust or fine earth. In a short time these bones became very warm, and when they had been so treated for a few weeks they were found to have become softened, and when used upon the land they quickly broke up and mingled with the soil. Hence they were more quickly ready for supplying phosphate of lime to the plant.

64. It is very desirable that you should be acquainted with the changes that took place in bones so employed, and observe the chemical changes which prepared them for absorption into circulation as plant food. In order that you may fully realize these changes, you must understand that there are at least **three distinct forms of phosphate of lime**, and their composition may be familiarly represented in the following manner—

COMPOSITION OF TRI-CALCIC PHOSPHATE	COMPOSITION OF BI-CALCIC PHOSPHATE	COMPOSITION OF MONO-CALCIC PHOSPHATE
Phosphoric acid. Lime. Lime. Lime.	Phosphoric acid. Lime. Lime. Water.	Phosphoric acid. Lime. Water. Water.

You will observe the connection between their names and their composition. The **tri-calcic** phosphate, or, as the name signifies, **three-lime** phosphate—has **three equivalents of lime** combined with one equivalent of phosphoric acid. The **bi-calcic** phosphate, or **two-lime** phosphate, has only **two** equivalents of lime with one equivalent of phosphoric acid, and one equivalent of water takes the place of the one equivalent of lime, in which it is deficient. The **mono-calcic** phosphate, or **one-lime** phosphate, has only **one** equivalent of lime combined with one equivalent of phosphoric acid, but it has two