

healthy maize, better harvest

phosphorus



Role of P in maize growth

Phosphorus (P) is important for healthy plant growth and good grain production.

- Ensures healthy roots and strong stems.
- Increases grain production.
- Helps plants resist attack by pests and diseases.
- Ensures uniform and early crop maturity.

Phosphorus deficiency

Maize that does not have phosphorus is usually short and has poorly developed roots and weak stems. The leaves are purple in colour along the edges.

Common sources of phosphorus

- Diammonium phosphate (DAP)
- Triple superphosphate (TSP)
- Single superphosphate (SSP)



Factors affecting phosphorus availability

Soil pH

Phosphorus is most available when the soil pH is between 6.0 to 7.0. Liming of acidic soils can help to increase the amount of phosphorus available.

Organic matter

Soils with high organic matter have higher amounts of organic phosphorus. Organic matter improves phosphorus availability for absorption by plants.

Soil type

Loam soils are better at making available fixed phosphorus to plants, as compared to clay and sandy soils.

Climate

High temperatures and high rainfall increase the amount of iron and aluminium oxides in the soil. These oxides make phosphorus less available to plants.

Application timing

Applying phosphorus fertilizer before or at planting is recommended especially on clay and loam soils.

Placement of fertilizer

Phosphorus fertilizer should be placed within the rooting zone of plants as phosphorus does not move easily in the soil.

The amount of fertilizer to be applied depends on:

- The expected yield
- The amount of phosphorus in the soil
- The type of P fertilizer

***For better maize yields, apply the right type and amount of fertilizer,
at the right time, and in the right place.***

Working in partnership to create down-to-earth messages on integrated soil fertility management

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