

Diammonium Phosphate (DAP)

Properties

Diammonium phosphate is a two-nutrient fertilizer. It contains 18% nitrogen (N) and 46% phosphorus (P) as P_2O_5 . Since its nitrogen content is in ammonium (NH_4) form, it is particularly effective in the first development stages of plants. When used as a base fertilizer, its nitrogen content may not be sufficient to provide plants' need. Therefore, if diammonium phosphate is preferred as starter fertilizer, plants must be supported with other nitrogen-containing fertilizers in top dressed fertilization. Since its nitrogen content is in ammonium (NH_4) form, it is easily retained by soil. So no nitrogen loss occurs because of washing as a result of excessive precipitation or excessive irrigation.

Agricultural Use

As rest of the world, diammonium phosphate fertilizer is used as a phosphorous fertilizer in our country, too. As a plant nutrient, phosphorus is essential for root development during early growth stages and very important for energy metabolism. In case of not applying at sufficient depth or in sufficient rate, phosphorus deficiency arises in plants so dramatic decreases occur in yield and quality. In our webpage, you may achieve detailed information under title of "Fertilization Recommendations".

Application

The effectiveness of diammonium phosphate fertilizer particularly in the calcareous soils with pH above 7.5 is higher than triple superphosphate (TSP). As it is the case with other phosphorous fertilizers, a portion of phosphorus existing in diammonium phosphate fertilizer combines with calcium (Ca) that is abundant in calcareous soils and becomes non-available for plants. However, it can transform again to useful form as a result of certain physicochemical processes in soils. Therefore, all phosphorous fertilizers including diammonium phosphate must be banded with special equipment instead of spreading. .

As the case for other compound fertilizers, diammonium phosphate is applied in advance of or during seeding and incorporated with soil considering the effective root deepness. Applying it after seed germination will not have any effect on phosphorus nutrition of plants. The reason of this is that phosphorus retention by soil particles and as a result of this, hindered horizontal movement. Phosphorus can reach up to a depth of only 5-6 cm with precipitation. Therefore, in diammonium phosphate application 5-6 cm below the seeding depth must be aimed.