

Method of Identification of fake and adulterated fertilizers by the farmers

Chemical fertilizer is the costliest among different farm input material used in agriculture. The manufacturer and retailers try to place fake and adulterated fertilizers in the market before Kharif and Rabi season when the demand of fertilizer is highest. It has direct impact on the farmers. Though the government is committed to control the problem of fake and adulterated fertilizer, the farmers should check the purity of fertilizers at the time of purchase in the same manner as they do at the time of purchase of seeds by cracking it with teeth, check the quality of clothes by touching it or quality of milk by pouring the finger in it. Often fake and adulterated DAP, Zinc, Urea and MOP is placed in the market which is commonly used by the farmers. Farmers can test it first at the time of purchase by adopting following methods and if the fertilizer is found fake, it can be confirmed by testing at Kisan Seva Kendra by using testing kit. Testing kit has been made available at all Kisan Seva Kendra. In such circumstances, information can be given to Deputy Director, Agriculture (Extension). District Agriculture Officer of the district and Director, Agriculture of the state for further action.

Name of the Fertilizer:

Urea

Method of Identification

- White, shining and round shaped grains of approximately uniform size.
- Completely soluble in water and when solution is touch, it feels cold.
- It melts when it is put on hot plate and nothing remains if it is heated.

Name of the Fertilizer:

DAP

Method of Identification

- Hard, granular, brown or black in color and difficult to erase with nails.
- If some grains of DAP is mixed with lime and rubbed, it produce sharp odor which is un bearable to smell.
- The grains swells if put on a hot plate.

Name of the Fertilizer:

Super phosphate

Method of Identification

This is a hard granular, brown or black in color which cannot be easily broken by the nails. It is available in the form of powder also. There is a possibility of adulterating it often with mixture of DAP and NPK.

Test

If this granular fertilizer is heated, it does not swell where as grain of DAP and other complex swells. In this way, adulteration can easily be identified.

Name of the Fertilizers:

Zinc Sulphate

Method of Identification

- Magnesium sulphate is most commonly used chemical for adulteration in Zinc sulphate. As they are physically similar in appearance, it is difficult to identify fake fertilizer.
- If zinc sulphate is mixed with DAP, a thick precipitate is formed but it does not happen so with Magnesium sulphate.
- If zinc sulphate solution is mixed with light caustic solution, a dark muddy precipitate is formed. Which completely dissolves completely in concentrate caustic solution, If there is Magnesium sulphate in place of Zinc sulphate, precipitate does not dissolve.

Name of the Fertilizers:

Potash

Method of Identification

- Mixture light white powdery salt and red chili.
- If the particles are moist, they do not stick.
- If dissolved in water, red portion of the fertilizer comes up.