

Mineral Fertilizers on Ghanaian Market

Introduction

Fertilizers are soil amendments, organic or mineral applied to promote plant growth. The main nutrients present in fertilizer are nitrogen, phosphorus, and potassium, and are known as macronutrients. Other nutrients known as micronutrients are added in smaller amounts. Fertilizers are broadly two types:

- i. Those composed of enriched organic matter (plant or animal), and known as organic fertilizers.
- ii. Those composed of natural minerals or synthetic chemicals, and known as mineral fertilizers.

A mineral fertilizer is an inorganic material, natural or synthetic which when applied supply plant nutrients. A mineral fertilizer may be classified into straight or compound fertilizers. A straight fertilizer is fertilizer that contains only one of the three major nutrients (N, P and K). A compound fertilizer on the other hand contains two or more of major nutrients. The guaranteed percentage of plant nutrients contained in a fertilizer is indicated in the order of % Total N, % available P₂O₅ and % water soluble K₂O as depicted by Plate 1.



Plate 1. A label of a compound fertilizer

i. Straight fertilizers

Table 1: Common nitrogenous straight fertilizers

Name	Amount of N (%)	Colour
Sulphate of ammonia	21	White
Urea	46	White
Sulfan	24	Grey



Plate 2. Sulphate of Ammonia



Plate 3. Urea

Table 2. Common phosphatic straight fertilizers

Name	Amount of P ₂ O ₅ (%)	Colour
Triple super phosphate	45 - 46	Grey
Rock phosphate	14 - 42	Grey



Plate 4. Triple super phosphate

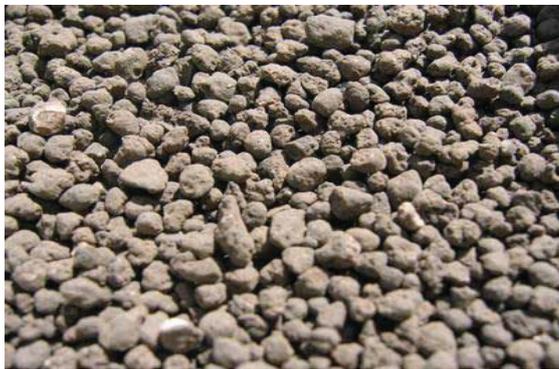


Plate 5. Rock phosphate

Table 3. Common potassic straight fertilizers:

Name	Amount of K_2O (%)	Colour
Muriate of potash	60	Red
Sulphate of potash	48	White



Plate 6. Muriate of potash



Plate 7. Sulphate of potash

ii. Compound fertilizers

Table 4. Common compound fertilizers

Name	Amount of N- P_2O_5 - K_2O (%)	Amount of S-Mg-Zn (%)
NPK 15-15-15	15-15-15	0-0-0
NPK 16-16-16	16-16-16	0-0-0
NPK 23-10-5	23-10-5	0-0-0
NPK 20-10-10	20-10-10	0-0-0
NPK 20-10-10+3Mg +4S	20-10-10	4-3-0
ACTYVA	23-10-5	3-2-0.3
Diammonium phosphate	10-18-0	0-0-0



Plate 8. Diammonium phosphate



Plate 9. NPK 20-10-10

General uses of straight and compound fertilizers

Compound fertilizers are often used for basal application on cereals and other field crops. Straight phosphatic and potassic fertilizers are also used as basal application. Nitrogenous straight fertilizers are used for top dressing. Under upland conditions all mineral fertilizers including nitrogenous fertilizers should be incorporated into the soil to prevent loss of the fertilizer material. In lowland paddy fields however, surface application of nitrogenous fertilizer is the most practical method. The soil should be moist at the time of application to ensure adequate dissolution of the fertilizer material.

Major fertilizer companies

The major fertilizer companies in Ghana are Yara Ghana, Chemico Limited, Louis Dreyfus commodities, Olam Ghana Limited, AFCOTT GH, IDDISAL, Wumpini, Ganorma, Wienco Ghana Limited, SIDALCO, Antika, and Dizzengolf.

For more information
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