

# Fertilizer

## for Coconut Palm

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Regular application with a balanced fertilizer mixture is essential for healthy growth and production. The recommended fertilizer mixtures contain the three major plant nutrients, Nitrogen, Phosphorus and Potassium. In addition, Magnesium another major essential element is also applied at regular intervals.

### USE OF INORGANIC FERTILIZERS

#### 1. Fertilizers

The inorganic fertilizers used for coconut are listed below :—

##### A. Nitrogenous fertilizers : %N

(i) Urea 46.0

##### B. Phosphatic Fertilizers : %P<sub>2</sub>O<sub>5</sub>

(i) Saphos Phosphate 27.5  
(ii) Concentrated Super Phosphate 42.0

##### C. Potassium fertilizers: %K<sub>2</sub>O

(i) Muriate of potash 60

##### D. Magnesium fertilizers: %MgO

(i) Ground dolomitic limestone 20  
(ii) Kieserite 24  
(iii) Commercial Epsom salts 16

#### 2. FERTILIZER MIXTURES

Separate fertilizer mixtures are recommended for seedlings, young and adult palms.

#### A. Mixtures for planting holes (seedlings at transplanting stage)

##### (i) New plantations

For each planting hole, the top soil for filling should be mixed with the following :

Dolomite 1 kg.  
Saphos Phosphate 1/2 kg.

##### (ii) Replanting, Underplanting, Replacements:

Mix the following with the top soil for each planting hole.

Ammonium Sulphate 1/2 kg.  
or  
Urea 1/4 kg.  
and  
Muriate of Potash 1/4 kg.

In addition to the inorganic fertilizers recommended above 10 kg. of dry cow dung per planting hole would be beneficial.

#### B. Mixture for young palms (from six months until bearing)

The composition of young palm mixture is given in Table 1.

Rates of fertilizer application are increased according to the age of palms as given in Table 2. A higher dosage is recommended for all second plantations, and also for new plantations on white sandy soils. For hybrids (CRIC 65), 1 1/2 times the recommended dosage should be applied.

**Table 1.** *Composition of mixture (parts by weight).*

Mixture	Urea	Saphos phosphate	Muriate of potash
CU	2	3	2

**Table 2.** *Rate of Application for young palms (to be applied six monthly)*

Time after planting (months)	CU Mixture			
	NC		SP	
	(g)	(lb)	(g)	(lb)
6—18	175	(0.4)	525	(1.2)
18—30	350	(0.8)	525	(1.2)
30—42	525	(1.2)	700	(1.6)
42—54	700	(1.6)	875	(2.0)
54 months to bearing	875	(2.0)	1050	(2.3)

NC —New clearings

SP —Second plantations/new plantation on sands

In addition to the application of the above mixtures ground dolomitic limestone should be applied at the rate of 1 1/2 kg per palm every three years.

### C. Adult palms :

There are three mixtures for adult coconut. Their composition, and the rate of application are given in Table 3. The appropriate mixture for your area should be selected according to the climate and soil type, as described in Table 4.

**Table 3.** *Composition of fertilizer mixtures and rates of application Adult Palm.*

Mixture	Urea	Saphos phosphate	Concentrated superphosphate	Muriate of Potash	Rate (palm/yr)	
					Kg.	lb.
CU 1	0.7	0.7	—	1.6	3.0	(6.6)
CU 2	0.5	0.6	—	0.9	2.0	(4.4)
CU 3	0.6	—	0.3	1.1	2.0	(4.4)

For hybrids (CRIC 65) 1 1/2 times the recommended dosage should be applied.

**Table 4.** Fertilizer recommendation according to soil type and climate

Climate Zone	Soil Type	Mixture
Wet Zone	Gravel/Cabook or Sand	CU 1
	Loam or Clay	CU 2
Intermediate Zone	Gravel or Sand	CU 1
	Loam or Clay	CU 2
Dry Zone	Gravel	CU 1
	Loam or Clay	CU 2
	Sand	CU 3

In addition to the NPK fertilizer mixtures, it is necessary that ground dolomitic limestone is applied at the rate of 2 kg (4 1/2 lb.) per palm in the wet zone and 1.5 kg. (3 1/2 lb) per palm in other areas once in three years.

### 3. METHOD OF FERTILIZER APPLICATION

A. *Young palms:* In the early stages (upto 12—18 months) fertilizers should be broadcast close to the palm covering the entire full circle upto a distance of 0.3 meters (about 1') from the base. As the palm grows older this area should be gradually extended up to about 1.5 meters (about 5') at the time of flowering.

B. *Adult palm:* Fertilizers should be broadcast in the entire area of the soil surface round the base of the palm up to a distance of 1.75 meters (about 6') from the base. The fertilizer should then be dug over into the soil with mammoties or forks. Unless weed growth is excessive it is not necessary to weed round the palm before fertilizer application. The area on which fertilizer has been applied should be mulched with weed thrash, dried fronds or



The fertilizer should be dug over into the soil.

husks. A mulch helps to check subsequent weed growth and conserve moisture in the manure circle. It also reduces soil temperature and prevents drying of the soil surface and adds organic matter to the soil on decomposition.

#### 4. FREQUENCY OF APPLICATION

- A. *Young palms:* At least half-yearly application of fertilizer is recommended. When circumstances permit, quarterly applications may be adopted with advantage, particularly on sandy soils subject to heavy rainfall during the monsoons.

- B. *Adult palms:* Fertilizer application should be carried out annually. In areas where both monsoons prevail, and particularly on sandy soils, six monthly application with each monsoon may be adopted with advantage.

#### 5. TIME OF APPLICATION

Fertilizer should be applied when the soil is moist. On light sandy soils, biannual applications is recommended at the tail end of heavy rains. If quarterly applications are preferred, they should be done at the beginning and towards the end of each of the monsoon. If there is a tendency for the land to get water-logged, fertilizer application should be done after the heavy rains are over.