# Nyota bean - a new high yielding, market preferred and drought tolerant dry bean

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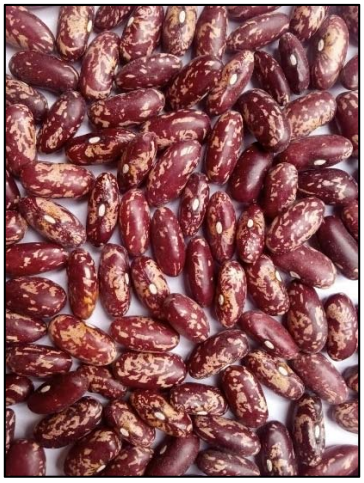

## Introduction

Dry beans (*Phaseolus vulgaris* L.*)* are the most important legume, and the 2nd most important food crop after maize in Kenya. They are the main source of cheap protein in the arid areas where growing drought tolerant varieties are grown. Nyota variety developed by KALRO which is market/consumer preferred has the following characteristics:

- Has light pink flowers
- Flowers in 30-40 days
- Has a uniform flowering period (all pods mature at the same time)
- Matures in 60-70 days
- Yields 1400-2000 kg per ha (6-10 bags-90kg per acre)
- Is more drought tolerant than other bean varieties
- Brilliant red mottled grain

## Climatic and soil requirements

The optimum altitude for Nyota is 1,000 to 1600 m above sea level. Can grow well in low to medium rainfall areas (750 - 1000 mm per annum). Nyota bean can grow on a wide range of soil types but best growth occurs in soils that are deep, well drained, high in organic matter and with a pH range of 6 -7.

## Seed rate and planting

The recommended seed rate is 20– 25 kg per acre
Plant at a depth of 4-5 cm
Spacing: 50 x 10 cm or 45 x 15 cm

## Land preparation

- The field should be well prepared to break the big soil clods. Hoes, oxen plough and tractors can be used for ploughing.

## Fertilizer

Soil analysis is strongly recommended to provide guidelines on fertilizer requirements. Apply DAP fertilizer at the rate of one bag per acre (50 kg per acre).If applied in furrows or planting holes, mix the fertilizer and the soil thoroughly before placing and covering the seed.

## Time of planting

Beans should be planted at the onset of rains. When intercropped, beans should be planted soon after the maize.

## Weeding

Weeds reduce yield, it is therefore important to weed at least 1-2 times per season. The 1st weeding should be done two weeks after emergence and the 2nd one before flowering. It is not advisable to carry out weeding during flowering or when wet as this leads to flower abortion or disease spread.

## Harvesting and yields

Harvest beans when dry and spread them out in the sun to dry further before threshing. If threshing is done immediately after harvesting the grains will damaged because they are soft. Dry the beans on a plastic sheet or gunny bag to keep them clean. After threshing and winnowing, sort out and discard rotten, bruchid-infested, off type and damaged seeds.

## Treatment before storage

Beans intended for storage should be treated in one of the following ways to control bean weevils:

- Use of non-chemical, hermetic storage technologies such as the triple layer Purdue Improved Cowpeas Storage bags
- Dusting with storage pesticides such as Actellic at a rate of 50 g per 90 kg bag
- Grains can be further treated with sunflower or corn/maize oil at 200ml per 90 kg bag

## Bean storage

The seed should be kept clean and dry. Proper drying reduces the chance of mould formation. Put the beans in sacks or others containers, and stored them in a clean, dry and ventilated place. The store should not have leaking roof and rain water should not run down the walls.

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Editorial and publication coordinated by:
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