### *Water Management*

- After transplanting keep the water level at minimum of about 4-7 days until the seedlings recover.
- Water should be gradually increased as the crop grows ensuring adequate soil moisture from tillering to hard dough stage.
- Flowering is the most critical stage when rice should not be subject to moisture stress
- Water should be drained out from the filed 10-15 days before harvest.

### *Plant protection*

- Bajo Kaap 3 is resistant to rice blast disease.
- Negligible pests and diseases are observed in the field. The National Plant Protection Centre (NPPC) or ARDC Bajo should be contacted for advice in case of severe plest and disease attack.

### *Harvesting and Threshing*

- Harvest the crop when at least 85% of the upper portion of the panicles turns golden yellow or straw coloured. Some leaves and stems may still be green at maturity particularly of improved varieties. The moisture content at harvest should at least be 20-25%.
- Drain the water from the field about 2 weeks before harvest to enhance ripening and to ensure optimum filed condition for harvesting
- Do not delay harvesting as grain shattering leads to yield loss and this may affects milling quality.
- After harvesting, dry the crop for 3-4 days depending on weathercondition.
- Threshing can be done using pedal thresher, machine or manually.

### *Grain quality*

Slender white grains with intermediate amylose. The cooking quality is soft and doe not harden on cooling. Can be suitable for *Zaw* and *Seep* making. This variety can fetch good market price since it has same taste like local variety *Khamtay*.

DoA

# Rice Variety

# Bajo Kaap 3 (TME80518)


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## Background

Rice is the most preferred staple food of the Bhutanese people. It is mainly eaten as plain boiled rice. It is cultivated in the entire 20 Dzongkhags of the country. Sarpang, Samtse, Punakha, Paro and Wangdi are the five top rice producing Dzongkhags. One of the primary objectives of the Ministry of Agriculture is to achieve at least 70% self sufficiency in food production and food self sufficiency is directly co-related to self sufficiency in rice (Impact Assessment of Rice, 2004). The Rice Impact Assessment study which was carried by RNR Research Centre Bajo in 2004 has estimated that the domestic rice production fulfills only 39% to 56% of the total requirement and the rest is met through import. The per capita consumption of rice is estimated to be 172 Kg per year (Rice Commodity Chain Analysis Report, 2007).

Although Bhutanese prefer traditional rice varieties for taste but have low yield and are unresponsive to additional inputs. Bajo Kaap 3 (TME8051), the recently released variety from ARDC Bajo is an improved IRRI Line, with superior grain quality and other parameters while retaining its Bhutanese cooking and taste quality and flavour.

## Areas of adaptation

This variety perform well mid-altitude (700-1500m). It is recommended as a single crop variety grown in irrigated conditions.

## Varietal Characteristics

- Matures in about 150-155days
- Average plant height 100-105cm tall
- Resistant to lodging and highly responsive to added fertilizers
- Non-shattering in the field
- The average crop yield is 2.04 t/ac.

## Recommended Cultural Practices

### *Seed rate and nursery sowing*

- The optimum seed rate for rice in raising seedlings is 20-25 kg per acre
- Seed selection can be done using saline water. Put seeds in a bucket of saline water, stir the seeds and discard seeds that float on the surface.
- Raise nursery by mid April till May.
- Seedlings could be raised using semi-dry bed or wet bed methods

### *Field Preparation*

Land preparation is one of the important factors that influence rice yield. It provides good physical, chemical and biological conditions of the soil for optimum plant growth.

- Pre-irrigate the filed if it is dry
- Plough thoroughly and flood it thereafter
- Drain the water slightly and plough/rotavate/ harrow as needed to break clods, bury weed, puddle and level the field.
- Final puddling and levelling is done just before transplanting

### *Manures and fertilizer*

- To improve soil structure and water retention capacity, use FYM or compost prior to or during land preparation. Generally, 2-3 tons of FYM per acre is recommended.
- The general recommended rate of chemical is 36-25-12 kg NPK per acre. However, fertilizer doses should be determined based on soil analysis results. NSSC provides free soil analysis services for farmers

### *Transplanting*

- Transplant the seedlings within June.

### *Weed Control*

Weeds are the worst competitors of rice plant. They compete for water, nutrients, sunlight and other growth requirements for rice hence reducing grain yields.

- Where weed pressure is expected to be low or moderate, 2 hand weeding at 20 and 40 days after transplanting are sufficient. It needs to be stressed that if hand weeding is to be done, plants should be close spaced and the first weeding performed not later than 30 days after transplanting.
- Concentrate on the use of line planting and rotary weeding where weed pressure is expected to be high. Two rotary weeding 20 and 40 days after planting are recommended.
- Where grass and sedge weeds are expected to be severe, Butachlor will be very effective. It should be applied at the rate of 10 -16 kg of 5% granule "Punch" per acre 3-6 days after transplanting.
- Indirect or complementary weed control methods like good land preparation, proper water management, use of weed-free seedbeds and seeds should be emphasized.