

# GROWING BRINJALS

By  
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## Introduction

Brinjal or eggplant, locally known as 'terung' is a popular fruit vegetable. It is botanically identified as *Solanum melongena* L. and belongs to the *Solanaceae* family. There are many varieties of brinjal sold in the local market. They are usually identified visually by their colours and shapes. The common ones are long purple, long white, long green, round purple, round purple black, round green and round white. Generally, long brinjal has lesser seeds than round type. The flesh colours are green, white or a blend of these colours.

Bacterial wilt is a serious disease and poses a major constraint in the production of brinjal. It is caused by a bacterium, *Ralstonia solanacearum* (*Pseudomonas solanacearum*). There is currently no effective chemical control measure for this disease. In order to overcome this constraint, Agriculture Research Centre (ARC), Semongok initiated a programme to screen its brinjal germplasm collections for bacterial wilt resistant accessions. The best one was then selected for varietal purification, testing and subsequently recommendation for growing under our local conditions.

## Recommended Variety

The Department of Agriculture recommends 'ARC-BJ 105' or 'Terung Unggul' for planting as it is adaptable to our local conditions. This variety has been extensively tested and found to be highly resistant to bacterial wilt disease. It is also a consistently high producer of good quality medium sized fruits.



'Telung unggul' plot

### **Crop Characteristics of Terung Unggul**

Average fruit yield (kg/plant)	: 3 (2.7 – 3.4)
Average plant height (cm)	: 133
Average days to harvest (from transplanting)	: 40
Fruit colour	: Purple black
Flesh colour	: Greenish
Fruit shape	: Long and slender
Average fruit size (L X W cm)	: 26 x 4
Average fruit weight (g)	: 130
Fruit quality	: Sweet, fine texture and thin skin

### **General Cultivation**

Seeds may be sown to 50-hole seeding trays or polybags in the nursery or directly to prepared bed in the field. To prepare seedlings as transplants, sow 2-3 seeds into small polybags (10x12cm) filled with soil. Watering and applying a few granules of compound NPK fertilizer or well-rotted chicken manure will bring the germinated seedlings to healthy transplants. At the age of 3-4 weeks, select only the healthy and vigorous seedlings for transplanting to the field. The plants can be grown on land with gentle slopes or raised beds on flat land.



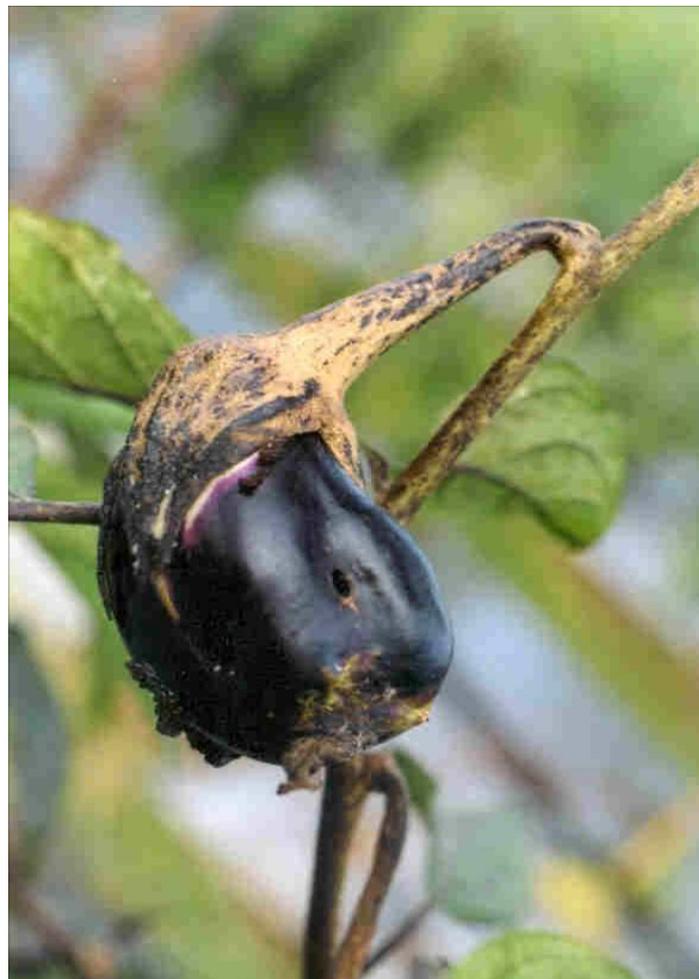
Staking is required to support the productive branches.  
Plastic mulch is used for weed control.

The seedlings are usually arranged in single rows and spaced at 60cm x 1–1.5m. Plastic mulch or black shade net may be used to reduce weeds and retain moisture. Staking is necessary to support the fruiting branches. Basal dressing of 0.5– 1.0 kg/m<sup>2</sup> well composted chicken dung, 100– 200 g/m<sup>2</sup> dolomite and 30g/m<sup>2</sup> compound fertilizer (12:12:17:2+TE or 15:15:15) are

usually applied to the prepared bed 1–2 weeks prior to transplanting. Side dressings of 30g/m<sup>2</sup> fertilizer (12:12:17:2 + TE ) are applied once a week after transplanting and then at every fortnightly intervals until the crop is over. At the onset of flowering, the fertilizer rate should be increased to 50– 60g/m<sup>2</sup>. Healthy plants after the main harvest season may be pruned to obtain a ratoon (re-sprouted) crop.

### **Crop Health Management**

Fruit and shoot borers, thrips, aphids, white flies and ladybird beetles, which are important pests of brinjal, should be controlled early. Only registered pesticides should be used. Reflective shiny plastic mulching also helps to reduce pest invasion. Integrated pest management and good agriculture practices (GAP) should also be a practiced by the growers. Beside bacterial wilt disease, other diseases such as the phomosis of shoot, stem and fruit of brinjal may also occur. As a preventive measure, practise crop rotation, use seeds from healthy fruit, plant tolerant or resistant variety and remove diseased crop debris to reduce the disease organisms in the field.



**Fruit borer damage**



Thrip damage on the fruit



Bacterial wilt disease



Phomopsis fruit rot

### **Harvest and Post Harvest**

Brinjal unggul can be harvested 6 weeks from transplanting or 3 weeks from flowering. Harvesting is done every 2 – 3 days. Frequent harvesting is required in order to achieve the crop's full yield potential. Unless the fruits are intended for seed collection, they should not be left to mature on the plant as this would reduce the total crop yield.

Basket should be used to collect harvested fruits as it allows good aeration, lowers heat built up and reduce crop loss. Cool storage of fruits wrapped with paper and placed in plastic bags extends the shelf life.

### **Seed Production**

As brinjal unggul variety is an open pollinated type, the seeds harvested can be kept for the next crop. It is advisable to harvest the earlier few rounds of fruits before allowing the later fruits to mature on the plants. Keep the fruits on the plant until they are fully matured or turn yellow. The seeds are extracted, washed and sun dried. Store the seeds in air tight container in a refrigerator.

### **Yield and Benefits**

Brinjal is a high yielding crop as long as the plants are well maintained. The estimated total cost for land preparation, fertilizers, agrochemicals, wages is RM 31,000/ha/season. Assuming a yield of 22 t/ha and a selling price of RM1.80/kg, the estimated return per season is around RM 8,000.



Attractive fruits of 'Terung unggul'