

Diseases

Numerous fungi and bacteria are known to inflict Adzuki beans. Adzuki beans are susceptible to white mould, *Sclerotinia* sp., bacterial stem rot (*Pseudomonas adzukicola*) and other beans diseases.

In many on farm sites, bacterial common blight disease inflicted the plants severely (Fig. 4).

No major pest was observed in Adzuki beans.

Control Method

- Sow healthy seeds.
- Seed treatment with copper oxychloride or Bordeaux mix is recommended.
- Keep vigilance and spray copper oxychloride or Bordeaux mix at mid vegetable stage

Production (Dry Seeds): 628kg/acre



Cultural Practice

- Weeding is crucial. Keep crops weed free (5-7 times weeding). Water management is important. Prepare drainage if land is boggy. Bad drainage cause root rot. Not having enough rain is not an issue.
- Yusi Adzuki 1 can grow well without fertilizer application. However light application of manures in poor soil condition is recommended.
- Irrigation during too dry condition on roots is recommended.
- Seeds should be treated with organic fungicides such as copper oxychloride to control fungus problems in later stage.



Fig.4. Diseased Adzuki bean



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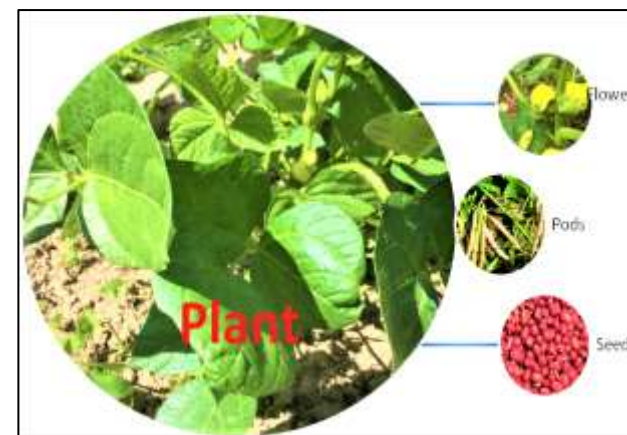
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Yusi-Adzuki (Adzuki Beans)



Scientific Name: *Vigna angularis*

Variety: Erimo

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Origin

Adzuki bean is originally grown in East Asia and are most widespread in Japan, China and Korea. It was first introduced in Bhutan from Japan in 2013.

Nutritional Value

Apart from their taste, Adzuki bean is a good source of nutrients, minerals and vitamins. Consuming 230 gram of this bean supplies 0.685mg of copper, 278µg of vitamin B9, 4.6mg of iron, 1.318mg of manganese, 386mg of phosphorous, 16.8g of total dietary fiber, 56.97g of carbohydrates, 4.07mg of zinc and 17.3g of proteins.

Health Benefits

- ✓ It has antioxidant properties.
- ✓ Prevents diabetes, heart disease and gastrointestinal issues.
- ✓ Improves brain function.
- ✓ Makes bones and teeth stronger.
- ✓ Heal constipation.



Fig. 1. Adzuki seeds

Other Uses

- ✓ Improve soil condition.
- ✓ Can be used as fodder.
- ✓ It can be consumed as dal, cooked with rice and tender pods can be consumed.

Growth habit

Adzuki bean is a legume and it is dwarf in nature which grows up to 58cm and does not require staking. It has yellow flower (Fig. 2). Fruiting habit is indeterminate which results in continues fruiting over time. In average three to four harvests will be required. It matures within 100 to 120 days after planting with average of 30-60 pods per plant. Pod length on average measures to 11cm with 6-7 dark red-reddish brown seeds (Fig 1).



Fig. 2. Adzuki Bean plant

Site Selection

Choose sunny and well drained sites. Crops are susceptible to injury in cold temperatures and susceptible to diseases in humid condition.

Altitude requirement: 600msl-2600msl

May-June is the best time for sowing Yusi adzuki 1 in warm –temperate region like Thimphu, Paro, Haa) for maximum yield however it can be sown until mid-July. In lower altitudes sowing time can be extended till August.

Seed rate: 15- 20kg/acre.

Planting space: 50 cm -65cm Row to Row.
18 cm apart (plant to plant).

Depth: 2-3cm if soil is moist.

No. of seeds per hole: Sow seed in groups of 4. Sow seeds in straight lines to make work easier later for weeding (Fig. 3).



Fig. 3. Yusi-Adzuki sown in lines

Soil requirement

It requires neutral to alkaline soil for maximum nitrogen fixation by nodule bacteria. Soils with pH 5.8 to 6.4 is best for adzuki production.