**Multiple Benefits from Mung Bean Production**

1. **Nutritional benefits**
   - Mung bean carries globulin protein that is easily digestible and is good for children, sick and older people.

2. **Soil health improvement**
   - Nodules on mung bean roots fix nitrogen from the air and help improve soil nutrients.
   - Incorporating mung bean biomass after harvest into the soil will improve soil health and can increase productivity of the next crop.

3. **Source of income**
   - Cultivating mung bean on 1 bigha can generate a return of up to NPR 80,000 in just 75 to 80 days.

**Tips on mung bean production in Nepal:**

- **75 - 80 days**
  - Mung bean is a short duration crop, which is commonly grown after the harvest of winter crops such as mustard, potato, wheat, lentil and chickpea, when most of fields remain fallow before rice cultivation.

**Major benefits**

1. **Nutritional benefits**
   - Mung bean contains easily digestible globulin protein with:
     - 24% protein in whole grain
     - 28% protein in sprouts

2. **Soil improvement**
   - Incorporating mung bean biomass after pod picking can help to improve soil quality and nitrogen content.

3. **Source of income**
   - Mung bean can provide cash income of:
     - Rs 80,000
     - Rs 10,000

- From 20 katthas (1 bigha) to the farmers

**Nutritional benefits**

- Mung bean carries globulin protein that is easily digestible and is good for children, sick and older people.

**Source of income**

- Cultivating mung bean on 1 bigha can generate a return of up to NPR 80,000 in just 75 to 80 days.

**Soil improvement**

- Incorporating mung bean biomass after harvesting can improve soil quality and nitrogen content.

**Mung Daal**

Mung Daal can be used to make veggie burgers.

**Utilizing mung bean biomass after pod picking**

- Helps keep fixed nitrogen in the soil and can improve nitrogen for the next crop.

**Pesticide and Urea**

- Fixed nitrogen equivalent to 20-25 kg N per bigha.

**Whole grain Daal**

Whole grain Daal along with value added products like Dalmoth, Bhujia, sprouts, salads, Haluwa and veggie burgers are good food for all ages.

**1 bigha = 10,000 katthas**

**Partners**

- USAID
- BILL & MELINDA GATES FOUNDATION
- CIMMYT
- International Maize and Wheat Improvement Center
- IPRI
- IRRI

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Mung Bean Cultivation

1. **Land selection**
   - Land should be:
     - Fertile
     - Irrigated with a good drainage system
     - Preferably light soil
   - Soil pH should be between 6.2-7.2
   - Kalyan
   - Pratiksha
   - Pratigya

2. **Variety**
   - Pre-released
   - Registered
   - Kalyan
   - Pratiksha
   - Pratigya
   - Bari Mung
   - SML 668
   - Pant Mung 5

3. **Seed rate and sowing date**
   - Seed drill: 600-800 gram/kattha
   - Manual broadcasting: 800 gram/kattha
   - Sowing date:
     - Falgun: 2nd week to Chaitra last (March to mid-April)
   - Cultivation technology:
     - Seed drill: Manual broadcasting
     - Broadcasted by hand
     - Seed and fertilizer spreader
     - Direct Drilling: Zero till seed drill
   - Depth: 3-5 cm
   - Sowing depth should be 3-5 cm deep.
   - In dryer soils, sow seed closer to 5 cm deep.
   - In moist soils, sow it closer to 3 cm deep.
   - Irrigation: 15 to 20 days after germination.
   - Never apply insecticides near flowering time.
   - Only spray before flowering. Spraying after flowering is less efficient and may not protect yield.

4. **Nutrient management**
   - Per Kattha, mung bean can benefit from applying:
     - 200 to 300 kg Compost or manure
     - 3 kg DAP
     - 1.5 kg MoP
     - Incorporate organic matter or fertilizer into the soil before sowing

5. **Insect and disease management**
   - Spiders eat pests
     - Beneficial insects and spiders will help to reduce pests. Only consider insecticides after you consult with an extension agent, CIMMYT, or the Nepa Agricultural Research Council.
     - It is important to be sure the risk of yield and income loss from pests is higher than the cost of insecticide.
     - Insecticides can harm beneficial insects, so spray with caution.
   - Wasp lay their eggs in pests - this kills the pest
     - Be sure that people and children are not near fields when spraying.
   - Bugs eat pest eggs and adults

6. **Pod harvesting, production and storage**
   - 1st picking of ripe pods starts 50 to 60 days after sowing.
   - 2nd picking starts 70 days after sowing.
   - After pods turn from green to grey color, they should be picked and then should be dried for three to five days before threshing.
   - Improved farming of mung will produce 30 to 40 kg grain per Kattha (600 to 800 kg per bigha).
   - Grain moisture should be around 12 to 14%. This means that the grain should have a crunchy sound when you bite into it before it is ready for storage.

7. **Crop rotation**
   - Spring cultivation

8. **Notes**
   - Rhizobium inoculation treatment can increase nodulation and helps in nitrogen fixation in the soil.
   - There must be enough moisture in the soil at the time of sowing.
   - Sowing in lines reduces required seed rates. It also helps make weeding and harvest easier.
   - Sowing depth should be 3-5 cm deep. In dryer soils, sow seed closer to 5 cm deep. In more moist soils, sow it closer to 3 cm deep.

The Crop Systems Initiative for South Asia (CSISA) was established in 2009. The project is led by the International Maize and Wheat Improvement Center (CIMMYT) and implemented jointly with the International Food Policy Research Institute (IFPRI) and the International Rice Research Institute (IRRI), and liaising with national partners. The content and opinions in this infographic do not necessarily reflect the views of the Bill and Melinda Gates Foundation, USAID, or the United States Government, and shall not be used for advertising or product endorsement purposes.


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