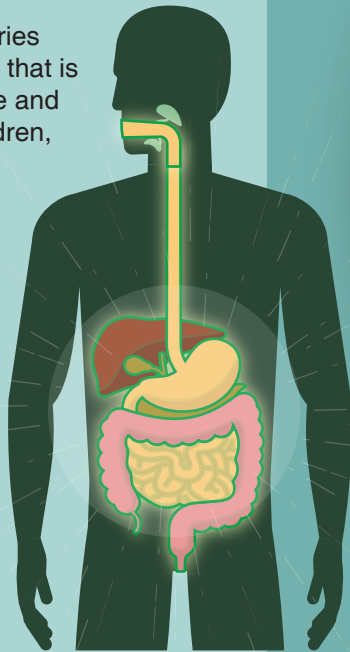


# Multiple Benefits from Mung Bean Production

## 1 Nutritional benefits

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



Mung bean can be made into value-added products including:

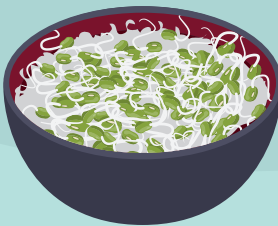
- Dalmot
- Daal
- Bhugiya
- Salad
- Burger
- Sprout



Mung beans can be used to make veggie burgers



Haldiram's mung Daal



Mung bean sprouts

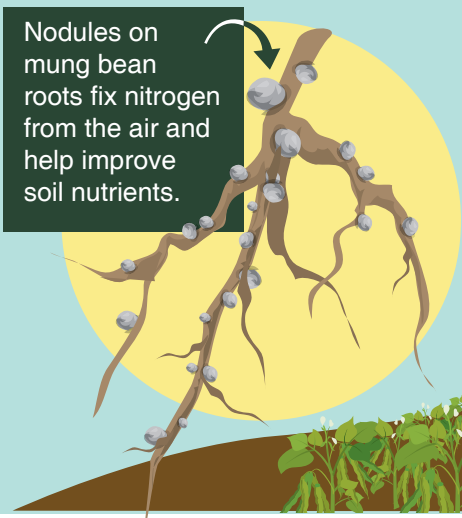


Baby food with 20% mung bean (Poshan Khadye Udhog, Butwal)

## 2 Soil health improvement

Nodules on mung bean roots fix nitrogen from the air and help improve soil nutrients.

Incorporating mung 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 30 khatta can generate a return of up to **NPR 120,000** in just 75 to 80 days.

120,000  
Rs

75-80  
days



# Mung Bean Production

Tips on mung bean production in Nepal:

70 - 80 days

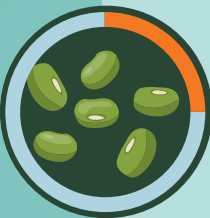
Mung bean is a short duration crop, which is commonly grown after the harvest of winter crops such as mustard, potato, wheat, lentil and chickpea, when most of fields remain fallow before rice cultivation.



## Major benefits

### 1 Nutritional benefits

Mung bean contains easily digestible globulin protein with



24%  
protein in  
whole  
grain



28%  
protein in  
sprouts

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



### 2 Soil improvement

Incorporating mung bean biomass after pod picking can help to improve soil quality and nitrogen content.

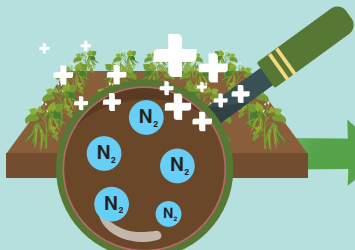
Fixes nitrogen equivalent to 30-35 kg N per 30 khatta. This is equivalent to 65-75 kg of urea fertilizer.



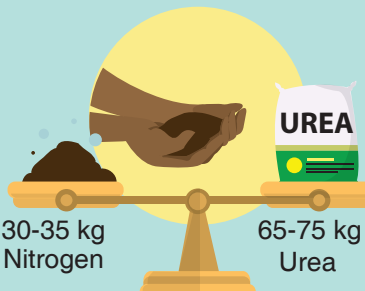
Pod picking



An average yielding mung bean crop can produce 13-15 tons per 30 khatta of biomass that can be plowed into the soil



This helps keep fixed nitrogen in the soil and can improve nitrogen for the next crop



30-35 kg  
Nitrogen

UREA

65-75 kg  
Urea

Compared with Urea

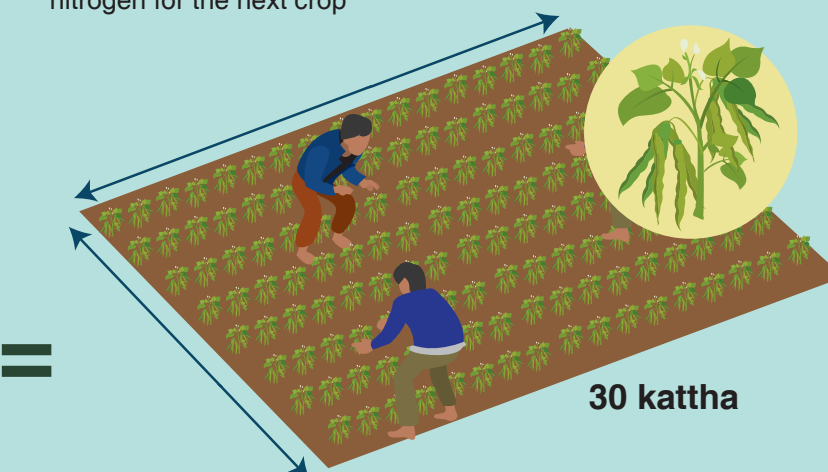
### 3 Source of income

Mung bean can provide cash income of



Rs 10,000

Rs 80,000-120,000



30 khatta

From 30 khatta  
to the farmers

Funded by



USAID  
FROM THE AMERICAN PEOPLE

BILL & MELINDA  
GATES foundation



CIMMYT  
International Maize and Wheat Improvement Center



Partners

# Mung Bean Cultivation

Soil pH should be between

**6.2-7.2**

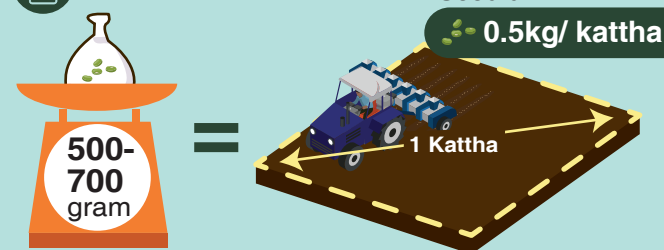
up to 1,000 meters above sea level

Mung bean can be grown from Terai to mid hills

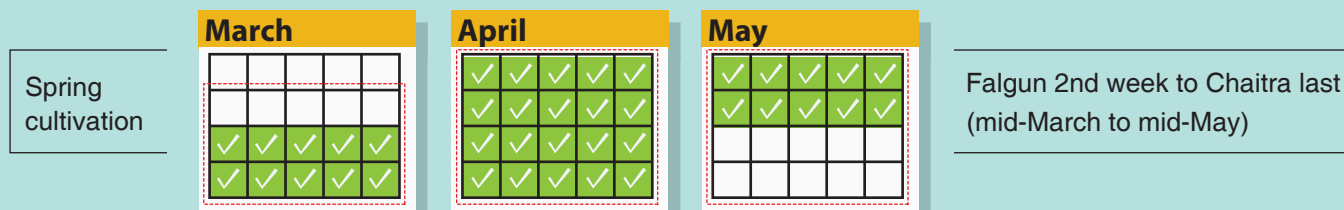
## 3 Seed rate and sowing date



Seed rate:



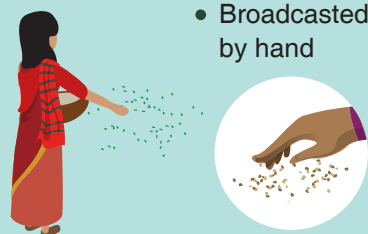
Sowing date:



Cultivation technology

After ploughing land and levelling, mung bean can be broadcasted by :

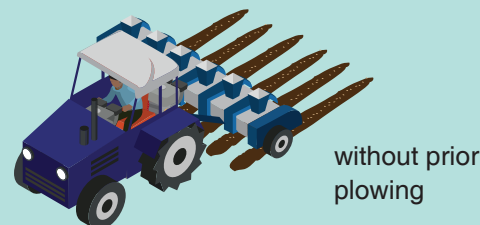
- Broadcasted by hand



- Earthway spreader



- Direct Drilling: Zero till seed drill



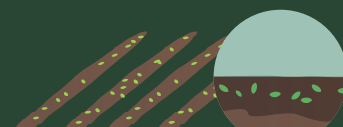
## Notes



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- 5cm depth. In dryer soils, sow seed closer to 5 cm deep. In more moist soils, sow it closer to 3 cm deep

## 1 Land selection

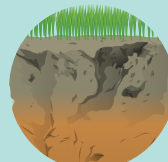
Land should be :



Fertile



Irrigated with a good drainage system



Preferably light soil

## 2 Variety

Registered

- ✓ Kalyan
- ✓ Pratisha
- ✓ Pratigya



Pre-released

- ✓ Bari mung
- ✓ SML 668
- ✓ Pant mung 5

## 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

## 6 Insect and disease management

Spiders eat pests



Wasps lay their eggs in pests - this kills the pest



Bugs eat pest eggs and adults



Beneficial insects and spiders will help to reduce pests. Only consider insecticides after you consult with an extension agent, CIMMYT, or the Nepal Agricultural Research Council.

It is important to be sure the risk of yield and income loss from pests is higher than the cost of insecticides.

Insecticides can harm beneficial insects, so spray with caution.

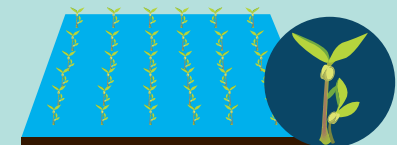
Be sure that people and children are not near fields when spraying.

Never apply insecticides without consulting an extension agent and wearing a mask, gloves, apron and boots.

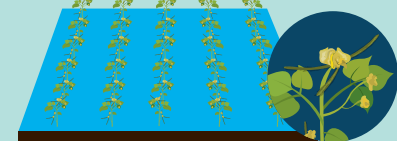
## 5 Irrigation:



1st 15 to 20 days after germination.



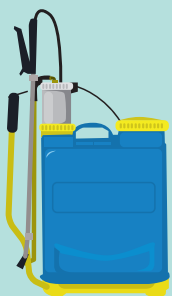
2nd During flowering.



Note: Stop irrigation after all pods have formed to ensure even ripening and good yields.

Yellow mosaic virus, leaf rust and leaf blight are the major diseases of mung bean. If these diseases can be seen in the field, then it is recommended to uproot infected plants and burn them or bury them under the soil.

If leaf spot is observed at high levels, you can consider use of a fungicide such as Bavistin 70 WP (Carbendazim) at 2 g/liter. Prior to spraying, consult with an extension agent.



Never spray insecticides near flowering time

Only spray before flowering. Spraying after flowering is less efficient and may not protect yield.

## 7 Pod harvesting, production and storage

1st 1st picking of ripe pods starts 50 to 60 days after sowing.

50-60 days

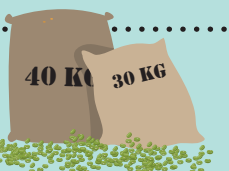
2nd 2nd picking starts 70 days after sowing.

70 days



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 (900 to 1200 kg per hectare).



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



12-14%