



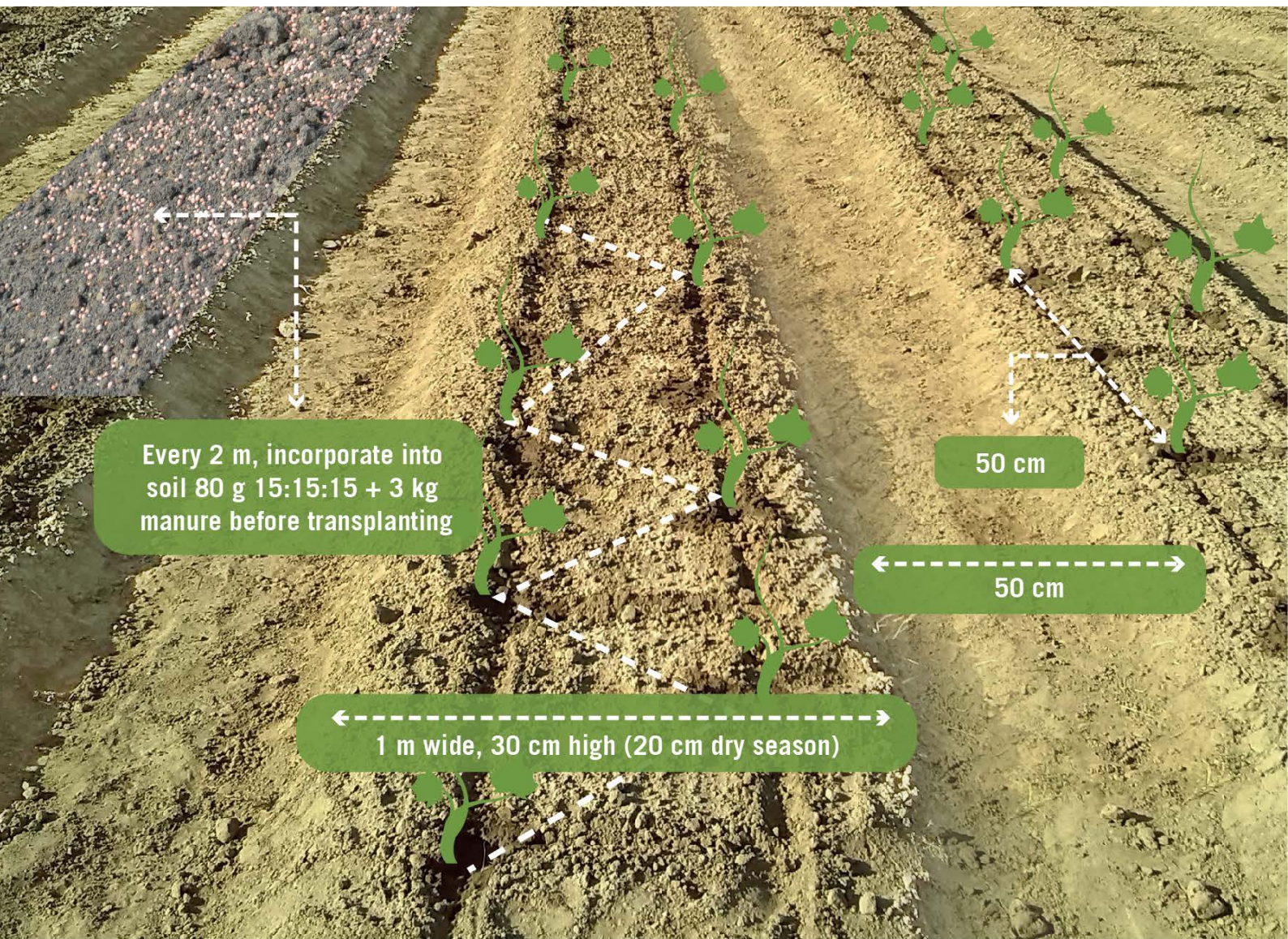
# Crop Guide **FRENCH BEAN** (CLIMBING TYPE)

## • Land preparation

- » Narrow paths help with irrigation and drainage
- » Organic or plastic mulch may be installed to conserve soil moisture and minimize weed growth
- » Install trellis before transplanting
- » 26,600 plants/ha (adjust according to the variety and season)



ENGLISH



Every 2 m, incorporate into soil 80 g 15:15:15 + 3 kg manure before transplanting

50 cm

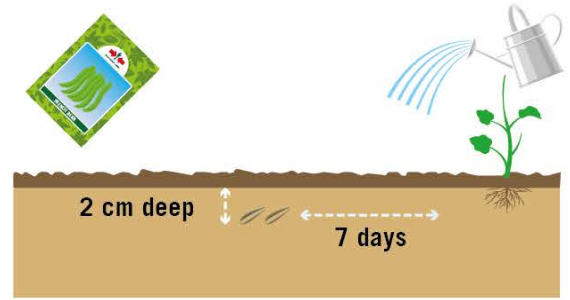
50 cm

1 m wide, 30 cm high (20 cm dry season)

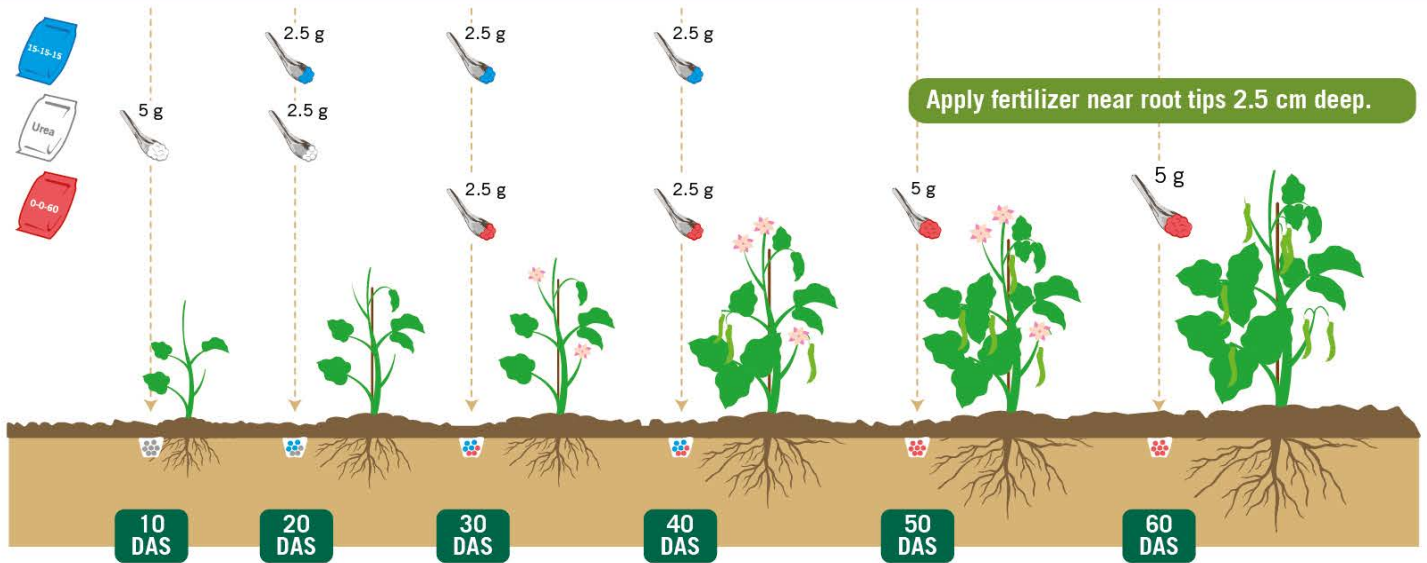
## • Sowing



» Plant 2 seeds per space and then thin to one plant when 10 cm tall



## • Fertilizer Application



Recommended amount based on crop optimum nutrient requirement and plant population of 26,600 per hectare. Adjust application according to season, soil conditions and plant growth status.

## • Integrated Pest Management



» Use sticky traps to monitor and mass trap insect pests



To prevent infection from spreading, sick plants, old crops and weeds must be removed and destroyed.



Crop rotation prevents build up of insect pests and diseases and restores soil fertility.

# • Integrated Pest Management and Safe Use of Pesticides

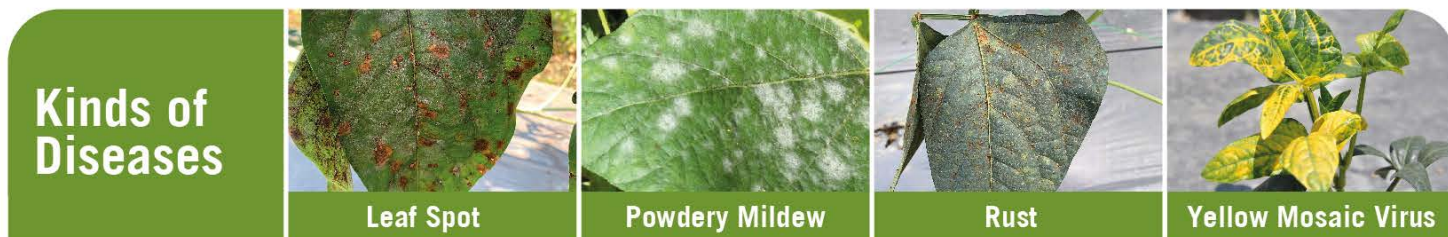
» Alternate MoA groups to prevent resistance

» Always read pesticide label and intended use (registered crop and pest)



Active Ingredient	MoA	Action	Thrips	Aphid	Whitefly	Leafminer (Liriomyza)	Pod Borer
Lambda-cyhalothrin	3A	SC	✓	✓	✓	✓	✓
Dinotefuran	4A	S	✓	✓	✓	✓	
Spinosad	5	S				✓	✓
Spinetoram	5	SC				✓	✓
Abamectin	6	SC (slight S)	✓			✓	✓
Thiocyclam oxalate	14	SC	✓	✓	✓	✓	
Chlorantraniliprole	28	S					✓
Flubendiamide	28	S					✓
<i>Bacillus thuringiensis</i>	11A	C					✓
<i>Azadirachtin (neem extract)</i>	UN	unknown	✓	✓	✓	✓	✓

Mode of Action (MoA) based from IRAC; SC (Stomach + Contact); S (Systemic)



Active Ingredient	MoA	Action	Remarks	Leaf Spot	Powdery Mildew	Rust	Yellow Mosaic Virus
Copper-based Fungicides	M 01	P		✓	✓	✓	
Chlorothalonil	M 05	P		✓	✓	✓	
Mancozeb	M 03	P		✓	✓	✓	
Azoxystrobin	11	P + C	Maximum 4 times per crop cycle	✓	✓	✓	Use resistant varieties or disease-free seeds
Propamocarb	28	P + C					
Cymoxanil	27	C	Tank mixed with preventive (Chlorothalonil or Mancozeb)				Manage whitefly
Metalaxyl	4	P + C	High risk of resistance (only use 2 times per season)				
<i>Bacillus subtilis</i>	BM02	P		✓	✓		

Mode of Action (MoA) based from FRAC; P = preventive (only effective when disease symptoms have not appeared yet), C = curative

- 1** Wear protective gear
- 2** Good weather
- 3** Good nozzle
- 4** Wash after spraying



# KNOWLEDGE TRANSFER

<https://growhow.eastwestseed.com>

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Agrochemical recommendations have been developed in cooperation with Wageningen University & Research