## Seed increase manual for Beta

Institute for Agrobotany Külsömezö 15 2766 Tápiószele Hungary

Phone: (36-53) 380071 Fax: (36-53) 380072 Email: jensen@agrobot.rcat.hu

## Site characteristics

Longitude: 01953--E Latitude: 4722--N Altitude: 110-115 m above sea level

Soil type: changing Mean annual temperature: 10.8 °C Mean annual rainfall: 490.2 mm

Remark: In case of *Beta* the multiplication generally is carried out in the frame of country-wide "*Backyard multiplication system*", so these informations concern to Tápiószele

Seed increase manual (biennual)	
	Measure
Seed preparation	Seed dressing
Sowing	March - June, in the open fields
Transplanting	No
Fertilisation	Occasional and changing
Vernalisation	Natural
Cultivation of seed mother plants	Small roots (stecklings) are lifted and clamped in sand-bed in autumn, and are
	replanted into field in March-April at 80 x 60 cm distance between plants
Effective population size	10 - 15 plants
Pollination control	Spatial isolation (150-200 m) in the trial fields of the Institute for Agrobotany, or in the
	separated back-yard gardens of the country-wide multiplying network
Pollination mathed	Wind pollination
Folimation method	
Conditions during cood ringning	Natural
Conditions during seed ripening	
Sood barwast propadura	Single plants are hervested depending on maturity
Seed harvest procedure	
Bro processing of coods	Planta are dried in green houses or plastic tents
Fre-processing of seeds	
Throshing	Manual
Theshing	Ivia i uai
Final processing	Sigving by band, air congrator
Drying before storage	In two steps <b>1st step:</b> Temperature 25-30°C Relative air humidity 20% in a
Drying before storage	annahank pro-drying chamber, about 2 wooks, 2nd step to 5% sood moisture
	genebalik pre-drying chamber, about 2 weeks. <b>Zhu step to 5% seeu moisture</b>
	content. Temperature 15-20 C and Relative all humidity 10% in a genebark drying
	champer, approx. 10 days.
Storage	Air-tied jars at 0 and -20 °C
otorage	nii-iidu jais al 0 anu -20 0.
Germination test	2 x 50 fruits: between filter paper: 14 days period, 20 °C
	2 x 30 muns, between muer paper, 14 days pendu, 20 0
Problems encountered/	
Pomerko	
Remarks	

## Seed increase manual (annual)

	Measure
Seed preparation	Seed dressing
Sowing	March - June, In the open fields
Transplanting	No
Fertilisation	Occasional and changing
Vernalisation	Natural
Cultivation of seed mother plants	80 x 60 cm distance between plants
<b>_</b>	
Effective population size	15-20 plants
Pollination control	Spatial isolation (150-200 m) in the trial fields of the Institute for Agrobotany, or in the separated back-yard gardens of the country-wide multiplying network
Pollination method	Wind pollination
	NL C I
Conditions during seed ripening	Natural
Seed harvest procedure	Single plants are harvested depending on maturity
Pre-processing of seeds	Plants are dried in green houses or plastic-tents
Ihreshing	Manual
Plant and a second as	
Final processing	Sleving by hand, air separator
Drying before storage	In two steps. <b>1st step</b> : Temperature 25-30°C, Relative air humidity 20% in a genebank pre-drying chamber, about 2 weeks. <b>2nd step to 5% seed</b> <b>moisture content</b> : Temperature 15-20°C and Relative air humidity 10% in a genebank drying chamber, approx. 10 days.
Storage	Air-tied jars at 0 and -20 °C
Germination test	2 x 50 fruits; between filter paper; 14 days period, 20 °C
Problems encountered/ Remarks	