

Imagine more



### **Contents**

- Flower Background
- Propagation
- Growth
- Harvest
- Post Harvest
- Pest & Diseases
- Commercial Varieties
- Competitors



## **Botanical Background**

- Solidago is a perennial: it can produce several flowering flushes in a span of 1 to 2 years.
- Solidago is a quantitative long day plant: it requires a minimum of 12-13 hours day light in order to elongate and flower.
- Kingdom: Plantae
- •(unranked): Angiosperms
- •(unranked): Eudicots
- •(unranked): Asterids
- Order: Asterales
- •Family: Asteraceae
- Subfamily: Asteroideae
- Tribe: Astereae
- •Genus: Solidago



## Physiological Background

#### Day Length

Exposure to a minimum of 13 hours daylight.

#### Temperature

Cold temperatures inhibit the reaction to day length. High temperatures quicken the process from induction until flowering.

#### Light Intensities

Influence the inflorescence habit



## Propagation

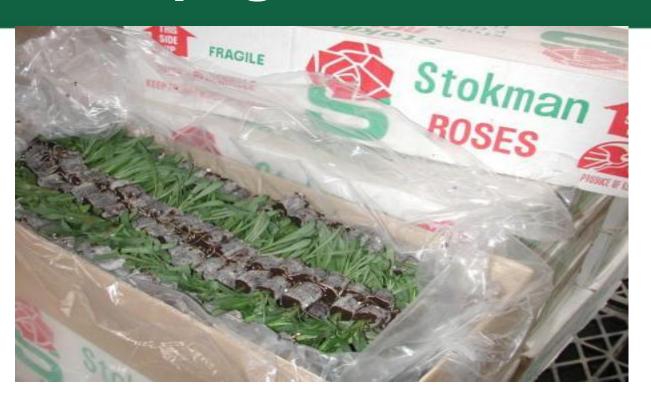
• U.R.C taken from the Mother stock and than transmitted to rooting area to develop the root system in the plug.







# Propagation





Rooted plants



## The Growth Cycle

- Planting
- Plant development
- Pinching
- GA treatments
- Long Day treatment
- Thinning out
- Flowering
- Harvest
- Pruning
- GA for second flash



## **Planting Time & Development**

- Solidago can be planted anytime of the year.
- It is best to plant under cool weather conditions.



## **Plot Preparation**

- 1m bed, 0.5m path way.
- 2 drip lines along the bed.
- 1.6-2 L/H drippers every 20cm.
- Main and secondary support ladders.
- Artificial lightning system- 3m between lamps and 3m between the lines.
- Preparation for shading net.





## Planting

- Recommended planting density: 20 plants per net square meter.
- Plant in 4 rows per bed.
- 20 cm between the plants.



## Irrigation & Fertilization

- For first 2 weeks after planting use overhead irrigation.
- High levels of Nitrogen in relation to Potassium cause yellowing of leaves.
- During the warm seasons when it is necessary to obtain strong branches the recommended proportion is: 1.5: 1 K / N, in cold seasons work on the proportion of 1: 1 K / N. The critical period to adhere to this ratio is about a month before harvest.
- Fertilization rates during the growth:

| Element | N | Р | K | Ca | Mg |
|---------|---|---|---|----|----|
| Ratio   | 8 | 3 | 5 | 3  | 6  |



## Pinching

- Pinching is preformed about 3-5 weeks after planting.
- Preformed low on the central stem.





## Pinching



Not ready for pinching



**Pinching time** 



## Long day treatment

- Artificial lighting is used to simulate long day conditions. It is important to note:
- 1. Light intensity should be aimed at a minimum of 120 Lux.
- 2. Light can be applied intermittently, at a proportion of 1:2.
- 3. Day should be lengthened to ~16 hours.
- 4. The light should be placed high enough to cover two beds underneath.
- 5. In most varieties 'Long day' treatment is stopped at bud formation.

In Golden Glory<sup>™</sup>, when stems are ~ 40-50cm long.







### **GA Treatments**

- GA applied after pinching in first flush.
- In following flushes it is applied after pruning when enough new potential shoots have developed.
- A solution is prepared and sprayed on the apex of the plants.
- Recommended concentrations vary from 75 to 100 ppm. Application every 7-10 days until plant reacts.







## Thinning out

- 4-5 uniform stems left on each plant.
- Preformed when shoots are 10-15 cm long.





### Harvest

• Harvest stage: The top flowers of the inflorescence begin to open.







### **Post-Harvest**

- Post Harvest Solution:
- 1. STS T.O.G 75 (S.T.S.): 0.1%
- 2. T.O.G 4 (*Hydroxyquinoline* 100g / L): 0.1%
- Before packing and bunching, dry any residual water on foliage. The technique used in Kenya: usage
  of fans and drying on benches.
- Before sleeving, spray with 'Polar' (Polyoxin 50%),
   at a concentration of 3 gr' per 10 Liters.





#### **Post-Harvest**

- The branches are harvested and placed in a bucket containing the solution and are kept for 4 hours in the shade and not refrigerated.
- Then branches are sorted and the lower leaves are removed. They are then kept in cooling (2°C) until delivery of the buckets with the same solution.
- Branches can be refrigerated up to 3 days.
- be careful not to place too many branches in one bucket, thus allowing better cooling and branches to be shipped out will be at a suitable temperature (2°C).



### Pests and diseases

#### **Pests:**

- White Fly
- Aphids
- Leaf Miner
- Caterpillar

#### **Diseases:**

- Powdery Mildew
- Rhizoctonia
- Agrobacterium



### Pests and diseases







GOLDEN GLORY™





• ANGELS GLORY™





MOONLIGHT GLORY™





ROMANTIC GLORY™





SOLAR GLORY™









