Bedding and Pot Plant Centre: Programming herbaceous *Salvia* for production as impact bedding plants

Jill England (ADAS) and David Talbot (ADAS)

Breeders, seed houses and plant producers continually develop new breeding lines and growers select those with visual appeal for consumers, precocious flowering lines, attractive colour ranges, and intrinsic branching habits. Growers also select plants for genetics that impart resistance to pests and diseases, compact plants that require no or minimal plant growth regulator (PGR) application, and that are easily scheduled. This enables premium quality plants to be produced, suitable for a range of markets, with minimal inputs. Herbaceous *Salvia* are increasingly popular, flowering well into the autumn, with the range of species, cultivars and colour combinations available fast expanding.

Trials carried out under the Bedding and Pot Plant Centre explored scheduling of a range of *Salvia* through two trials carried out in 2021, comparing production in 1 L pots from two transplant dates

With careful species selection, perennial Salvia can be produced in 1 L pots to a marketable specification, some within four and five weeks of transplant.

The full report for the work can be found at: PO 019d - Bedding and Pot Plant Centre. WP3. Salvia programming report 2021.pdf (windows.net)

Below are the main outcomes from the work:

***Salvia* 'Amistad'**
• The plugs for transplanting in week 16 arrived on site with particularly long internodes. Application of an early plant growth regulator (PGR) improved plant form somewhat: Dazide Enhance (4 g/L) and Bonzi (1 ml/L), applied in 300 L/ha water. Internodes were shorter in the plugs transplanted in week 19 and no early PGR was required. • Plants were affected by the cold, causing chlorosis. Cold damage was more pronounced for plants transplanted in week 16 than in week 19 . While most plants had grown through this by 11 June, others suffered permanent cold damage. ***'Amistad' may benefit from production in warmer conditions under glass.***
***Salvia* 'Big Blue'**
• Plants were slow to establish and grow away. • None of the 'Big Blue' plants flowered during the trial (in 1 L pots) Quality was impacted by lower leaf speckling on some plants. ***'Big Blue' may benefit from warmer growing conditions than provided by an unheated tunnel, particularly for early transplant dates in cold seasons.*** ***'Big Blue' may be more suitable for larger pot sizes, potentially with multiple plants per pot.***

Salvia greggii 'Joy'

- 'Joy' was in flower and marketable by five weeks (week 21) and four weeks (week 23) after transplanting in weeks 16 and 19 respectively.
- 'Joy' was susceptible to stem base (*Botrytis*) / root disease which caused plant losses, often leaving remaining plants brittle and easily damaged. All 'Joy' plants were treated with metalaxyl-M (Subdue). Some of the remaining plants had brittle / weak stem bases.
- Quality was improved from transplanting in week 19 where plants experienced warmer conditions and were less affected by disease.

A stronger or second cut back could produce a stronger, woody base.

Salvia microphylla 'Hot Lips'

- 'Hot Lips' were in flower and marketable by week five weeks (week 21) and four weeks (week 23) after transplanting in weeks 16 and 19 respectively.
- The flowers usually have a white upper lip and red lower lips but petal colour is influenced by temperature and can be predominately red in cool, moist conditions and white in hot, dry conditions.

Production in warmer conditions would achieve the full colour contrast potential

Salvia 'Rockin' Deep Purple'

- The plugs for transplanting in week 16 arrived on site with particularly long internodes. Application of an early PGR somewhat improved plant form: Dazide Enhance (4 g/L) and Bonzi (1 ml/L), applied in 300 L/ha water.
- 'Plants showed cold damage similar to 'Amistad' but were generally less affected, and the effect was more transitory leaving the plants looking healthier.

'Rockin Deep Purple' may benefit from production in warmer conditions under glass.

Salvia 'Wendy's Wishes'

- The plugs for the week 16 transplanting arrived with particularly long internodes. Large internodes were still present, but less obvious, by the end of the trial. Application of an early PGR improved plant form: Dazide Enhance (4 g/L) and Bonzi (1 ml/L), applied in 300 L/ha water.
- Internodes were shorter from the week 19 transplanting with no early PGR required.
- Flowers and buds were present by the 11 June 2021 from a week 16 transplant, but buds only in the week 19 transplants.
- Some leaf yellowing (lower and mid plant) appeared over time.

Inspect plugs on arrival to determine any PGR requirements.

Action points

- For early marketing, select species for disease resistance and cold tolerance.
- Produce temperature sensitive varieties under glass, heated as appropriate to the plant and prevailing conditions to avoid cold damage.
- Match plant with the most suitable pot / container size for greatest impact.
- Ensure plugs of more vigorous varieties are pinched if this hasn't already been done by the propagator.
- Applications of a plant growth regulator (PGR) may improve plant form and control height. Consider applying a higher rate PGR, but test on a small number of plants before widespread use.
- Take care to allow the growing media to dry back before irrigating susceptible species to provide unfavourable conditions for pathogens.