

SPRING BEDDING PLANTS

AGRONOMIC PROGRAM

Spring production can be the most difficult time of year because of the large variety of bedding plants produced. Ensuring your crops are protected from propagation to shipping is essential for a successful season.

The following agronomic programs may be used as examples for controlling common diseases and insects in bedding plants or other herbaceous crops. Alternating fungicides and insecticides with different modes of action are used in this program for optimal control and proactive resistance management.

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SEEDLINGS & PLUG PRODUCTION

Sanitation is critical to produce healthy plugs or liners. Fungus gnats, shore flies, root and crown rots, and damping-off can be problematic. Start the applications below four days after stick or when the first true leaves emerge.

APPLICATION	FRAC/IRAC	PRODUCT (RATES PER 100 GAL)	TARGET DISEASES & INSECTS
Heavy Spray	7+11	Mural® fungicide 4 oz.	Stem & Root rots
Heavy Spray	17	Citation® insect growth regulator 2.66 oz	Fungus gnats, Shore flies Reapply as needed on a 10-14 day interval
Heavy Spray	49 OR 4	Segovis® 0.5-1 fl. oz. OR Subdue Maxx® fungicide 0.25-0.5 fl. oz.	Damping-off, <i>Pythium</i> , <i>Phytophthora</i>

AGRONOMIC PROGRAM FOR 4- AND 6-INCH POTS

WEEK	APPLICATION	FRAC/IRAC	4-INCH POT (RATES PER 100 GAL)	6-INCH POT (RATES PER 100 GAL)	TARGET DISEASES & INSECTS
1	After Transplant (Drench)	4 + 11 OR 4+12	Subdue Maxx 1 fl. oz. + Heritage® 1 oz. OR *Medallion® WDG 1-2 oz. fungicides	Subdue Maxx 1 fl. oz. + Heritage 1 oz. OR *Medallion WDG 1-2 oz.	<i>Pythium</i> , <i>Phytophthora</i> , Downy mildew, <i>Rhizoctonia</i> , <i>Fusarium</i> Use Medallion on crops prone to <i>Thielaviopsis</i>
2	Spray (Optional)	6 OR M5	Avid® 0.15 EC insecticide 8 fl. oz. OR **Daconil Ultrex® fungicide 22 oz.	Avid 0.15 EC 8 fl. oz. OR Daconil Ultrex 22 oz.	Use Avid 0.15 EC for crops prone to Mites and Thrips Use Daconil Ultrex for control of Botrytis, Leaf spots, Powdery mildew, Rust
3	Spray	7+11 + 28	Mural fungicide 4 oz. + Mainspring® GNL insecticide 4 fl. oz.	Mural 4-6 oz. + Mainspring GNL 4-8 fl. oz.	Botrytis, Leaf spots, Powdery mildew, Rust Thrips, Aphids
4	Spray/Drench (Optional)	49	Segovis 1-2 fl. oz.	Segovis 1-2 fl. oz.	Optional treatment for crops prone to Downy mildew and <i>Phytophthora</i> diseases
5	Spray	7+11 + 28	Mural 4 oz. + Mainspring GNL 4 fl. oz.	Mural 4-6 oz. + Mainspring GNL 4-8 fl. oz.	Botrytis, Leaf spots, Powdery mildew, Rust Thrips, Aphids
6/7	Spray (Optional)	6 OR 5		Avid 0.15 EC 8 fl. oz. OR Conserve® SC insecticide 6 fl. oz.	Thrips
6/7	Spray (Optional)	9+12 OR 17		*Palladium® 6 oz. OR Decree® 50 WG .75-1.5 lbs. fungicides	Botrytis

*Do not use Medallion or Palladium on impatiens or geraniums

**Daconil Ultrex or Daconil WeatherStik® fungicides can be used

AGRONOMIC PROGRAM FOR 10-INCH POTS

WEEK	APPLICATION	FRAC/IRAC	10-INCH POT OR LARGER (RATES PER 100 GAL)	TARGET DISEASES & INSECTS
1	After Transplant (Drench)	4 + 11 OR 4+12	Subdue Maxx 1 fl. oz. + Heritage 1 oz. OR *Medallion WDG 1-2 oz.	<i>Pythium, Phytophthora</i> , Downy mildew, <i>Rhizoctonia, Fusarium</i> Use Medallion on crops prone to <i>Thielaviopsis</i>
2	Spray (Optional)	6 OR M5	Avid 0.15 EC 8 fl. oz. OR **Daconil Ultrex 22 oz.	Use Avid for crops prone to Mites and Thrips Use Daconil Ultrex for control of Botrytis, Leaf spots, Powdery mildew, Rust
3	Drench	28	Mainspring GNL 8 fl. oz.	Thrips, Aphids, Whiteflies
4	Spray	7+11	Mural 4-6 oz.	Leaf spots, Powdery mildew, Rust Use heavy spray for crown and stem rots
5	Spray (Optional)	40	Micora® fungicide 4-8 fl. oz.	Optional treatment for crops prone to Downy mildew and aerial <i>Phytophthora</i>
6	Spray	3	Eagle® 20 EW fungicide 6-12 fl. oz.	Leaf spots, Powdery mildew, Rust
7	Spray	7+11 + 6	Mural 6-7 oz. + Avid 0.15 EC 8 fl. oz.	Botrytis, Leaf Spots, Powdery mildew, Rust Mites, Thrips, Aphids, Whiteflies
8	Spray/Drench (Optional)	49	Segovis 1-2 fl. oz.	Optional treatment for crops prone to Downy mildew and <i>Phytophthora</i>
9	Spray	9+12 OR 17 + 5	*Palladium 6 fl. oz. OR Decree 50 WG .75-1.5 lbs. + Conserve SC 6 fl. oz.	Botrytis, Thrips
10/11	Spray (Optional)	7+11 + 6	Mural 6-7 oz. + Avid 0.15 EC 8 fl. oz.	Botrytis, Thrips

*Do not use Medallion or Palladium on impatiens or geraniums

**Daconil Ultrex or Daconil WeatherStik can be used

COMMON SPRING PESTS

Although many insects and diseases can affect spring production, powdery mildew and thrips are two of the most common. Scouting is necessary to limit development and reduce symptoms in the greenhouse. Management practices, such as inspecting all incoming plant material, can prevent insects or diseases from establishing.



Thrips injury on impatiens



Powdery mildew on petunia



Aphids on pansy



Botrytis on impatiens



Broad mite damage on New Guinea impatiens



Early Cercospora leaf spot on pansy

All photos taken by Nancy Rechcigl, Syngenta

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