

The Happy Days Dahlia Collection

Background Information

This series is new for 2011-2012. It is somewhat similar to the Happy Single Series in that it is bronze leaf with anemone type flowers. The Happy Days series finishes more evenly and is generally the finish height of the Gallery Dahlia Series. Many growers use the Gallery and Happy Days together for a 6" / 1 gallon program. Both series also complement each other for Mothers' Day sales in finishing 8" to 10" pots with 2 or 3 cuttings per pot. The Happy Days Series flowers heavy and continuously. The finish time is about 7-8 weeks from pinching.

Soil

Use a well drained, sterilized planting medium, PH 6.5 – 7. The medium should not contain bark.

Planting: Fungicide drench

1. Pinch cuttings when potting, leaving 2 sets of leaves. Generally a single pinch produces 3-4 breaks and a good finished plant. A second pinch may be necessary.
2. Dibble rooted cuttings into pre-watered pots and bury 1 set of leaves to firm up the plant.
3. A fungicide drench is always a good preventative, especially for pythium.

4. <u>Container size</u>	<u># of cuttings</u>	<u>finish time</u>
6" or 1 gallon	1	7-9 weeks
8"-8.5"	2 or 1 with double pinch	7-9 weeks
10"-12"	3	7-9 weeks

Fertilization & Watering

1. Dahlias require that the planting medium stays moist, but not wet.
2. Week 1-5 the E.C. can be maintained for around 0.6. The next four weeks can be slightly higher.
3. Osmocote 14-14-14 can be incorporated into the soil at a rate of 4-6 pounds per cubic yard.
4. Constant liquid feed can be used at 175-200 ppm of 20-10-20, alternating with 15-0-15.
5. A combination feed of using a multi-headed injector with 20-10-20, 15-0-15 and 20-35 ppm magnesium.
6. Potassium nitrate can be used to build stocky stems at 200 ppm.

Temperature – Humidity

1. Ideal growing temperatures range from 67-70 degrees during the day and 65-70 degrees at night.
2. Temperatures above 80 degrees can delay flowering – shading may be necessary.
3. Humidity levels range from 60% to a high of 85%.

Light Conditions

1. Grow Dahlias with a maximum amount of available light with a minimum of 2000 footcandles.
2. If low light conditions persist, 400 footcandles of HID lighting can be added.

Flowering – Photo Period Requirements

1. Long days are needed for quality Dahlia vegetative growth and timely bud development.
2. A 14 hour day is required to keep Dahlias vegetative. Use mum lighting.

Spacing Requirements

Spacing allows more air movement and helps prevent fungal and stretching problems.

Pest & Disease Prevention

1. Thrip, mite, aphid and whitefly are potential pests.
2. Effective control can be used using Marathon, Avid, Maverik, Thiodan, Talstar, Orthene, T
3. Use of Dursaban and Vydate can cause leaf burn.
4. A fungicide spray in combination with an insecticide spray is recommended (Zyban, Heritz

Use of Growth Regulators for Height Control

1. The grower should evaluate growth at 2 – 3 weeks after pinching. Warmer weather will help plant is making.
2. Use 15 – 30 ppm of Bonzi can be used as a spray when needed.
3. Height control is similar to Gallery Dahlia.

Tips for Growing Dahlias - 2011

1. All dahlias need 14 hours of day length to grow and stay vegetative.
 - Growers must extend the day with mum lighting to 14 hours.
 - Failure to do so causes dahlias to form tubers, flower profusely and shut down growth and become dormant.
 - Bury 1 set of leaves which helps firm up the plant as it grows.
2. Low temperatures can cause dahlias to grow very little if at all.
 - Day and night temperatures of 65 F. keeps dahlias growing. We use 68 F. as the bench mark to keep roots moving and vegetation forming.
 - Initial temperatures are key to plant growth and development.
 - Low temperatures can also cause roots to remain wet and contribute to root rot and other fungal diseases.
3. Using a fungicide drench as a preventive.
 - November - February plantings (and later) of dahlia must consider a fungicide at planting or within 5 to 7 days.
4. Combating powdery mildew and botrytis.
 - Powdery mildew and botrytis need to be considered even when recommended temperatures and conditions are followed.
 - Changes in the amount of light or swings in daytime temperatures can contribute to conditions causing fungal and mildew problems (humidity, temperature and light levels).
 - Use a fungicide spray with an insecticide spray to help with prevention.
5. Feed moderately = 100 ppm of 20-10-20, 75 ppm of 15-0-15, 25 ppm mag. (200 ppm)
6. Height control: most growers are using Bonzi as a spray or drench. Every series is different – see detail for each series.
7. Summary: good growing means evaluating plants & conditions daily.

The Happy Single Dahlia Collection

Background Information

This new bronze leaf dahlia series is a tuberous type from the breeders of the Gallery, Melody, and Karma dahlias. The 'Happy Single' dahlias bloom profusely and have many 'Happy Single' anemone type flowers. They can be sold in 6" to 12" pots, used in landscaping and for borders. Eight colors are offered with more to follow. Your customers will enjoy these beautiful flowers with contrasting bronze foliage. The finish time is about 8 weeks from pinching.

Soil

Use a well drained, sterilized planting medium, PH 6.5 – 7. The medium should not contain bark.

Planting: Fungicide drench

1. Bury 1 sets of leaves to firm up cutting. Pinch leaving 2 sets of leaves above the soil level.
2. Dibble rooted cuttings into pre-watered pots and bury 1 set of leaves to firm up the plant.
3. A fungicide drench is always a good preventative, especially for pythium.

4. <u>Container size</u>	<u># of cuttings</u>	<u>finish time</u>
6" or 1 gallon	1	8-9 weeks
8"-8.5"	2 or 1 with double pinch	8-9 weeks
10"-12"	3	8-9 weeks

Fertilization & Watering

1. Dahlias require that the planting medium stays moist, but not wet.
2. Week 1-5 the E.C. can be maintained for around 0.6. The next four weeks can be slightly higher.
3. Osmocote 14-14-14 can be incorporated into the soil at a rate of 4-6 pounds per cubic yard.
4. Constant liquid feed can be used at 175-200 ppm of 20-10-20, alternating with 15-0-15.
5. A combination feed of using a multi-headed injector with 20-10-20, 15-0-15 and 20-35 ppm magnesium.
6. Potassium nitrate can be used to build stocky stems at 200 ppm.

Temperature – Humidity

1. Ideal growing temperatures range from 67-70 degrees during the day and 65-70 degrees at night.
2. Temperatures above 80 degrees can delay flowering – shading may be necessary.
3. Humidity levels range from 60% to a high of 85%.

Light Conditions

1. Grow Dahlias with a maximum amount of available light with a minimum of 2000 footcandles.
2. If low light conditions persist, 400 footcandles of HID lighting can be added.

Flowering – Photo Period Requirements

1. Long days are needed for quality Dahlia vegetative growth and timely bud development.
2. A 14 hour day is required to keep Dahlias vegetative. Use mum lighting.

Spacing Requirements

Spacing allows more air movement and helps prevent fungal and stretching problems.

Pest & Disease Prevention

1. Thrip, mite, aphid and whitefly are potential pests.
2. Effective control can be used using Marathon, Avid, Maverik, Thiodan, Talstar, Orthene, Tame, Decathlon and Duraguard
3. Use of Dursaban and Vydate can cause leaf burn.
4. A fungicide spray in combination with an insecticide spray is recommended (Zyban, Heritage, and Compass).

Use of Growth Regulators for Height Control

1. The grower should evaluate growth at 2-3 weeks after pinching.
2. 15-45 ppm of Bonzi can be used as a spray on shorter varieties like First Love, Romeo, and Juliet.
3. 5-7 ppm of Bonzi as a drench can be used on the more vigorous varieties such as Flame and Kiss + 8-10 ppm on Date, Party and Wink.

Tips for Growing Dahlias - 2011

1. All dahlias need 14 hours of day length to grow and stay vegetative.
 - Growers must extend the day with mum lighting to 14 hours.
 - Failure to do so causes dahlias to form tubers, flower profusely and shut down growth and become dormant.
 - Bury 1 set of leaves which helps firm up the plant as it grows.
2. Low temperatures can cause dahlias to grow very little if at all.
 - Day and night temperatures of 65 F. keeps dahlias growing. We use 68 F. as the bench mark to keep roots moving and vegetation forming.
 - Initial temperatures are key to plant growth and development.
 - Low temperatures can also cause roots to remain wet and contribute to root rot and other fungal diseases.
3. Using a fungicide drench as a preventive.
 - November - February plantings (and later) of dahlia must consider a fungicide at planting or within 5 to 7 days.
4. Combating powdery mildew and botrytis.
 - Powdery mildew and botrytis need to be considered even when recommended temperatures and conditions are followed.
 - Changes in the amount of light or swings in daytime temperatures can contribute to conditions causing fungal and mildew problems (humidity, temperature and light levels).
 - Use a fungicide spray with an insecticide spray to help with prevention.
5. Feed moderately = 100 ppm of 20-10-20, 75 ppm of 15-0-15, 25 ppm mag. (200 ppm)
6. Height control: most growers are using Bonzi as a spray or drench. Every series is different – see detail for each series.
7. Summary: good growing means evaluating plants & conditions daily.

The Melody Dahlia

The Melody Dahlia series is a great series for finishing in larger patio (decorative) pots, garden settings and for cut flower bouquets. The finish time is about 8-9 weeks from pinching.

Soil

Use a well drained, sterilized planting medium, pH 6.5 – 7. The medium should not contain bark.

Planting: Fungicide drench

1. Pinch cuttings when potting, leaving 2 sets of leaves. Generally a single pinch produces 3-4 breaks and a good finished plant.
2. Plant rooted cuttings into pre-watered pots and bury the first set of leaves.
3. A fungicide drench is always a good preventative, especially for pythium.

4. <u>Container size</u>	<u># of cuttings</u>	<u>finish time</u>
6.5" -7.5"	1 pinched	8-9 weeks
8"-8.5"	2 pinched	8-9 weeks
10"-12"	3 pinched	8-9 weeks

Fertilization & Watering

1. Dahlias require that the planting medium stays moist, but not wet.
2. Week 1-5 the E.C. can be maintained for around 0.6. The next 4 weeks can be slightly higher, at 0.7 – 1.0 E.C.
3. Osmocote 14-14-14 can be incorporated into the soil at a rate of 4-6 lb per cubic yd.
4. Constant liquid feed can be used at 175-200 ppm alternating 20-10-20 and 15-0-15.
5. A combination feed can be used with a multi-headed injector with 20-10-20, 15-0-15 and 20-35 ppm magnesium totaling 200 ppm.

Temperature – Humidity

1. Ideal growing temperatures range from 65-70 degrees during the day and 65-68 F. at night.
2. Temperatures above 80 degrees can delay flowering – shading may be necessary.
3. Humidity levels range from 60% to a high of 86%.

Light Conditions

1. Grow dahlias with a maximum amount of available light with a minimum of 2000 footcandles.
2. If low light conditions persist, 400 footcandles of HID lighting can be added.

Flowering – Photo Period Requirements:

1. Long days are needed for quality dahlia vegetative growth and timely bud development.
2. A 14 hour day is required to keep dahlias vegetative. Use mum lighting.

Spacing Requirements

Spacing allows more air movement and helps prevent fungal and stretching problems.

Pest & Disease Prevention

1. Thrip, mite, aphid and whitefly are potential pests.
2. Effective control can be used using Marathon, Avid, Maverik, Thiodan, Talstar, Orthene, Tame, Decathlon and Duraguard.
3. A fungicide spray in combination with an insecticide spray is recommended.
4. Zyban, Heritage and Compass can be used as preventative sprays.

Use of Growth Regulators for Height Control –

1. The grower should evaluate growth at 2-3 weeks after pinching.
2. 15-45 ppm of Bonzi can be used as a spray. Bolero and Dixie can be controlled with lower amounts of Bonzi spray.
3. A Bonzi drench of 3-8 ppm can be used on varieties other than those in #2 at approximately 3 weeks after pinch.

Tips for Growing Dahlias - 2011

1. All dahlias need 14 hours of day length to grow and stay vegetative.
 - Growers must extend the day with mum lighting to 14 hours.
 - Failure to do so causes dahlias to form tubers, flower profusely and shut down growth and become dormant.
 - Bury 1 set of leaves which helps firm up the plant as it grows.
2. Low temperatures can cause dahlias to grow very little if at all.
 - Day and night temperatures of 65 F. keeps dahlias growing. We use 68 F. as the bench mark to keep roots moving and vegetation forming.
 - Initial temperatures are key to plant growth and development.
 - Low temperatures can also cause roots to remain wet and contribute to root rot and other fungal diseases.
3. Using a fungicide drench as a preventive.
 - November - February plantings (and later) of dahlia must consider a fungicide at planting or within 5 to 7 days.
4. Combating powdery mildew and botrytis.
 - Powdery mildew and botrytis need to be considered even when recommended temperatures and conditions are followed.
 - Changes in the amount of light or swings in daytime temperatures can contribute to conditions causing fungal and mildew problems (humidity, temperature and light levels).
 - Use a fungicide spray with an insecticide spray to help with prevention.
5. Feed moderately = 100 ppm of 20-10-20, 75 ppm of 15-0-15, 25 ppm mag. (200 ppm)
6. Height control: most growers are using Bonzi as a spray or drench. Every series is different – see detail for each series.
7. Summary: good growing means evaluating plants & conditions daily.

The Gallery Dahlia

Soil

Use a well drained, sterilized planting medium, pH 6.5 – 7. The medium should not contain bark.

Planting: Fungicide drench

1. Bury 1 set of leaves to firm up the plant and pinch leaving 2 sets of leaves above the soil.
2. Dibble rooted cuttings into pre-watered pots and bury 1 set of leaves to firm up the plant.
3. A fungicide drench is always a good preventative, especially for pythium.

4. Container size	# of cuttings	finish time
6" or 1 gallon	1	7-9 weeks
8"-8.5"	2	7-9 weeks
10"-12"	3	7-9 weeks
Combination planters	1	7-9 weeks

Fertilization & Watering

1. Dahlias require that the planting medium stays moist, but not wet.
2. Week 1-5 the E.C. can be maintained for around 0.6. The next four weeks can be slightly higher.
3. Osmocote 14-14-14 can be incorporated into the soil at a rate of 4-6 pounds per cubic yard.
4. Constant liquid feed can be used at 175 - 200 ppm with 20-10-20 or 15-0-15.
5. A combination feed using a multi-headed injector with 20-10-20, 15-0-15 and 20-35 ppm magnesium, totaling 200 ppm.
6. Potassium nitrate can be used to build stocky stems at 200 ppm.

Temperature – Humidity

1. Ideal growing temperatures range from 65-70 degrees during the day and 65-68 F. at night.
2. Temperatures above 80 degrees can delay flowering – shading may be necessary.
3. Humidity levels range from 60% to a high of 85%.

Light Conditions

1. Grow Dahlias with a maximum amount of available light with a minimum of 2000 footcandles.
2. If low light conditions persist, 400 footcandles of HID lighting can be added.

Flowering – Photo Period Requirements

1. Long days are needed for quality Dahlia vegetative growth and timely bud development.
2. A 14 hour day is required to keep Dahlias vegetative. Use mum lighting.

Spacing Requirements

Spacing allows more air movement and helps prevent fungal and stretching problems.

Pest & Disease Prevention

1. Thrip, mite, aphid and whitefly are potential pests.
2. Effective control can be used using Marathon, Avid, Maverik, Thiodan, Talstar, Orthene, Tame, and Decathlon and Duraguard. 3. Use of Dursaban and Vydate can cause leaf burn.
4. A fungicide spray in combination with an insecticide spray is recommended.
5. Zyan, Phyton 27, and Chipco can be used as preventive sprays.

Use of Growth Regulators for Height Control

1. The grower should evaluate growth at 2-3 weeks after planting.
2. 15-45 ppm of Bonzi can be used as a spray or 3 ppm of Bonzi as a drench on the more vigorous varieties.

Tips for Growing Dahlias - 2011

1. All dahlias need 14 hours of day length to grow and stay vegetative.
 - Growers must extend the day with mum lighting to 14 hours.
 - Failure to do so causes dahlias to form tubers, flower profusely and shut down growth and become dormant.
 - Bury 1 set of leaves which helps firm up the plant as it grows.
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 - Changes in the amount of light or swings in daytime temperatures can contribute to conditions causing fungal and mildew problems (humidity, temperature and light levels).
 - Use a fungicide spray with an insecticide spray to help with prevention.
5. Feed moderately = 100 ppm of 20-10-20, 75 ppm of 15-0-15, 25 ppm mag. (200 ppm)
6. Height control: most growers are using bonzi as a spray or drench. Every series is different – see color sell sheets for detail.
7. Summary: good growing means evaluating plants & conditions daily.