

# Endless Summer

## Twist-n-Shout® Culture Sheet

Endless Summer® Twist-n-Shout® Bigleaf Hydrangea  
*Hydrangea macrophylla* 'PIIHM-I' PP20,176



# Twist-n-Shout®

Deciduous/Evergreen: Deciduous

### Northern/Midwest Region Container Production

pH: 5.5-6      EC: 1.5-2.0 in MN and 2.2-2.7 in IL

Hardiness: Zone 4-9

Fertilization Requirements	Incorp at planting (Polyon coated 17-3-10) at 10 lbs per yard and uncoated aluminum sulfate at 16 lbs per yard. Top dress in second season with Polyon coated 22-3-8 at 30 grams per two gallon pot.
Overwintering Practices and Temperatures	In MN, the plants are overwintered in two ways; in a covered structure or outside using double poly method. Covered structure: coldframe or greenhouse structure are covered in a dual-side black and white poly and heated to keep temperature at a minimum of 28°F. Double poly method: In colder climates, plants are consolidated, tipped, and covered with alternating layers of 3-4 mil poly and 3" of sudan grass. With this method, temperatures remain constant from 28-32°F. At the IL location, plants are consolidated into poly houses and covered with a frost cloth where temperatures stay safely at or above 22°F. If long durations of cold occur, it is recommended to add an additional blanket. The blanket/frost cloth is removed in early March to help keep the plants dormant until they naturally wake up with warming temperatures. In general, we remove the blanket after temperatures have been consistently 50s in the greenhouses with the doors shut. We have also opened doors and left the blankets on to cool the inside of the houses in late February and early March with good success in more mild years.
Light Levels	Full sun
Water Requirements	Prefer to run on the drier side during vegetative growth, to limit growth (over watering will keep plant vegetative). When flowers are present, do not dry stress or flowers will burn. Use acidified water if needed.
Planting Season	Planting is from March 15th to September 1st.
Propagation Method and Notes	Stick softwood cuttings in a 38 plug/quart. Incorp aluminum at 8 lbs per yard and controlled release fertilizer (Polyon coated 17-6-12) at 5 lbs per yard. The cuttings are stuck around August 1st and overwinter in the greenhouse at 27°F. Please note for areas that experience harsh winters and long duration of cold where temperatures are at or below 27°F for extended periods of time, we recommend overwintering at 33°F air temperature.
Pest/Disease Management	Anthracnose, powdery mildew, aphids and mites can be a problem. H. macrophyllas are very sensitive to pre-emergent herbicide. Do not use the miticide; Spiromesifen on Hydrangeas.
PGR Application	Common chemicals used are daminozide and paclobutrazol. Do not use ethephon.
Flowers on new or old wood	Blooms on new and old wood.
Special Notes	Lots of buds form in fall or early spring. If cut back end of May/June, will get a light show of flowers. When it is extremely hot, water to cool. Shade could benefit to keep flowers from burning. It is important to keep them hydrated when they start to bloom as this will cause the blooms to stay fresher, longer. May need to water late morning and then later in the afternoon during hot weather.

### Estimated Finishing Times

	8" container	#2 container	#3 container	#5 container
Liner	Finish in 10 weeks using LO 38 plug.	Finish in 14-16 weeks using LO 38 plug. Finish in 10-12 weeks using Jumpstarts™.	Finish in 10 weeks using #1 bareroot liner. Finish in 6-8 weeks using 8" upshift.	Finish in 12 weeks using #1 bareroot liner. Finish in 8-10 weeks using 8" upshift.
JumpStarts™	6-8 weeks	8-10 weeks	14 weeks	

## **Pacific Northwest Region Container Production**

pH: 4-5.5      EC: 0.5-2

Fertilization Requirements	8 month (Polyon coated 18-6-11) incorp at planting. Coated aluminum sulfate is added at 10 lbs per yard.
Overwintering Practices and Temperatures	Plants are consolidated into poly houses and cover with a frost cloth. Temperatures are 22 °F or greater. If long durations of cold occur, it is recommend to add an additional blanket.
Light Levels	Full Sun
Water Requirements	Medium to high water requirements. (over watering will keep plant vegetative)
Planting Season	Plugs are planted in May and bareroot is planted in fall.
Propagation Method and Notes	Stick softwood cuttings in a 38 plug/quart. Incorp aluminum at 8 lbs per yard and controlled release fertilizer (Polyon coated 17-6-12) at 5 lbs per yard. The cuttings are stuck around August 1st and overwinter in the greenhouse at 27°F. Please note for areas that experience harsh winters and long duration of cold where temperatures are at or below 27°F for extended periods of time, we recommend overwintering at 33°F air temperature.
Pest/Disease Management	Aphids and two spotted spider mites have been observed. Do not use the miticide; Spiromesifen on Hydrangeas.
PGR Application	Daminozide and paclobutrazol have been used. Do not use ethephon.
Flowers on new or old wood	Blooms on new and old wood.
Special Notes	Shade to keep blooms from burning.

### **Estimated Finishing Times**

Liner	8" container	#2 container	#3 container	#5 container
LO 38 plug	Finish in 14 weeks.	Finish in 16-18 weeks.		
JumpStarts™	7 weeks	12 weeks	16 weeks	6 months
Bareroot		Finish in 10-12 weeks using #1 liner.	Finish in 12-14 weeks using #1 liner.	Finish in 16-18 weeks using #1 liner.
upshift			Finish in 14 weeks using 8" container.	Finish in 16-18 weeks using 8" container.

## **Southern Region Container Production**

pH: 5.5-6.5      EC: 0.5-1.5

Fertilization Requirements	Composted pine bark amended with 9 lbs (15-6-11) controlled release fertilizer. Supplement with weekly application of liquid feed (12-3-6) from mid-summer until fall.
Overwintering Practices and Temperatures	Plants are consolidated. Use frost blanket if temperatures reach 22-23 °F. Remove when temperatures are around 50°F or when watering is needed. It is also recommended that plants go fully dormant to avoid winter injury.
Light Levels	Plants are kept under 47% shade starting April 1st.
Water Requirements	Water thoroughly when soil media is dry. Two minute cooling cycle required in extreme afternoon heat.
Planting Season	Early spring to summer.
Propagation Method and Notes	Softwood cuttings anytime during growing season. Single or multiple node cuttings treated with 1000 ppm of KIBA. Off mist in 30-45 days.
Pest/Disease Management	Spray every 15-21 days all summer with common fungicides, insecticides, and miticides. Do not use any pre-emergent herbicide.
PGR Application	No experience with PGRs.
Flowers on new or old wood	Blooms on new and old wood.
Special Notes	Best when all hydrangeas are grown in isolated area. Plants will not root if kept too wet. Applied low to medium rate of Florikan Sapphire Aluminum sulfate.

### **Estimated Finishing Times**

	8" container	#3 container
Liner	Finish in 3 months using 2 1/2" plug.	Finish in 1 year using 2 1/2" plug.

## **Minnesota Bud & Bloom (Greenhouse) Production**

pH: 5.5-6

EC: 1.5-2.0

Fertilization Requirements	Incorp at planting (Polyon coated 17-3-10) at 10 lbs per yard and uncoated aluminum sulfate at 16 lbs per yard. In fall drench with Aluminum sulfate at 12 grams per #2 pot. Top dress second season at (Polyon 17-5-10) at 30 grams per #2 pot and do a spring drench of aluminum sulfate at 12 grams per #2 pot.
Overwintering Practices and Temperatures	Overwintering temperatures are kept at 35 °F. Greenhouse is covered with black/white poly to maintain stable temperatures.
Light Levels	Full sun
Water Requirements	Prefer to run on the drier side during vegetative growth, to limit growth. When flowers are present, do not dry stress or flowers will burn. Use acidified water if needed. (over watering will keep plant vegetative)
Planting Season	Plant overwintered quart liner in spring to force for next year's bud & bloom production.
Propagation Method and Notes	Stick softwood cuttings in a 38 plug/quart. Incorp aluminum at 8 lbs per yard and controlled release fertilizer (Polyon coated 17-6-12) at 5 lbs per yard. The cuttings are stuck around August 1st and overwinter in the greenhouse at 27°F. Please note for areas that experience harsh winters and long duration of cold where temperatures are at or below 27°F for extended periods of time, we recommend overwintering at 33°F air temperature.
Pest/Disease Management	Anthrachnose, powdery mildew, aphids and mites can be a problem. H. macrophyllas are very sensitive to pre-emergent herbicide. Do not use the miticide; Spiromesifen on Hydrangeas.
PGR Application	Daminozide is used. Applied every 10-14 days during rapid growth. Do not use ethephon.
Flowers on new or old wood	Blooms on new and old wood.
Special Notes	It is important that the pH of the soil is between 4.5-5.8 and has the presence of aluminum in the soil during and after flower bud development to turn blue. This crop is a terminal bud crop. Last cut back date is July 25th. PGRs are applied to keep plant at 6-7" going into winter. Growing temperatures need to be at 50°F. If temperatures are warmer, it will cause the flowers to flop when in color.

### **Estimated Finishing Times**

	8" container	#2 container
Terminal Crop	Finish in 55 days at 50°F	Finish in 65 days at 50°F

Edited 10/12/2016

Note: The information presented should be considered as a starting point for best practices. Production times and product applications will vary depending on the growing region and conditions. It is the responsibility of the applicator to follow all current manufacturer label directions in a responsible manner.