Hydrangea Production Program

Media and Temperature

For the production of hydrangeas (also called hortensia) start with a media that provides good drainage, while maintaining a high water-holding capacity. The ideal starting soil temperature is around 16^{O} C, while air temperature should be slightly cooler at 14-16^{O} C. Monitoring pH and salts level is very important. The pH of blue hydrangea should be 4.8 - 5.4 and salts no higher than 1.2. For pink hydrangea, pH should be above 6.0 and salts around 1.5. Flower production is achieved by the forcing of plant development, which is directly related to daily temperature. Plants can be forced in 80-100 days using 16^{O} C nights and 21^{O} C cloudy day/24^{O} C sunny day temperatures until flowers begin to develop and show colour. Once colouration begins, temperature should be dropped to 12^{O} C night and 18^{O} C day to intensify flower colour. Avoid excessively warm temperatures during forcing to reduce the occurrence of small plants, small inflorescences, less intense colouration, and a poor quality plant.

Most hydrangea cultivars require height control during forcing. First applications of grow retardant (B-nine) should be made when 3-5 leaf pairs begin to unfold (2-4 weeks after the start of forcing). Under poor light conditions, repeat applications at 10-14 day intervals. Treatment should be discontinued prior to flower buds reaching ¾" in diameter.

Fertilization

Growing

Fertilizer should not be applied until root activity and transplanting have occurred. Start with one application of **Plant-Prod® 10-52-10 Starter** or **Plant-Prod 20-20-20 All Purpose**. The presence and availability of aluminum determines the colour of flowers in certain cultivars of hydrangeas with pigments. Those without pigments maintain white flowers. The absence of aluminum leads to pink flowers, while high availability of aluminum results in blue flowers. The availability of aluminum is greater in soils with low pH.

For growing pink Hydrangea, start with **Plant-Prod® Solutions 17-5-17 Complete** at 100-200 ppm nitrogen. Every third feeding, apply **Plant-Prod 15-30-15 High Phosphate** at the same rate. The high phosphorus will tie up excess aluminum in the soil, resulting in a strong pink colouration in the blooms.

Plant-Prod® 15-30-15 High Phosphate

Provides a high level of phosphorus. The abundace of phosphorus immobilizes excess aluminum in the soil, providing a strong pink coloration.

For growing blue hydrangeas, start with two feedings of 100 g of **Plant-Prod 20-0-20 Hydrangea** with 1.3 g iron EDTA chelate in 100 L of water to provide a rate of 200 ppm nitrogen. This should be followed by a single feeding of 100 g of **Plant-Prod 20-2-20 Acidic High Nitrate** and 1.3 g iron EDTA chelate in 100 L of water. Ensure to monitor pH throughout production. If pH goes to 4.7 – 4.8, **Plant-Prod 12-0-44 Finisher** should be used alone. If salts are higher than 1.2, irrigate with clear water. The application of aluminum sulphate is recommended when flower buds are very small. This should be applied 3-4 times at 7 day intervals at a rate of 1 kg in 100 L of water.

Finishing

Fertilizer should be reduced by half at the start of flower colouration in order to harden off plants. Shading to prevent overheating is beneficial during the last few weeks of production. Desirable temperature during this period is between 13-15^{O} C. Watering should be slowly reduced, but plants should not be allowed to wilt as they will never fully recover.

Plant-Prod® 10-52-10 Starter

Contains a high level of phosphorus necessary for root system growth. Has a low salt index and no sulphates or chloride, making it an ideal fertilizer for transplants.

Plant-Prod® 20-20-20 All Purpose

A balanced formulation that suites a wide range of plants. Provides all nutrients required for plant growth while promotting lush foliage.

Plant-Prod® Solutions 17-5-17 Complete

Contains 3% calcium and 1% magnesium and is an all-in-one formula. Over 70% of N is in nitrate form. Contains a full micronutrient package.

Plant-Prod® 20-0-20 Hydrangea

Designed specifically for blue hydrangeas and crops requiring calcium and low phosphorus. Over 50% of the N is in the form of nitrate. Contains secondary nutrients and chelated micronutrients, providng complete nutrition.

Plant-Prod® 20-2-20 Acidic High Nitrate

High acidifying potential helps to maintain low pH. Provides a low level of phosphorus.

Plant-Prod® 12-0-44 Finisher

All N is in nitrate form with a high potential to raise pH. Provides excellent green-up in low temperature conditions and extra protection against drought during shipping. High level of potassium can assist in the bluing of hydrangea.

Plant-Prod™
HIGH PRODUCTIVITY PLANT NUTRITION

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