April 20, 2012

Hi Fruit Growers,

There seems to be some freeze damage on blueberry flowers this year. The severity is not yet known. If you suspect a substantial damage and are thinking about what you might be able to do to help, an application of Gibberellic acid (GA) might improve fruit set and fruit size. We do not have any research data on this type of application on blueberries here at The Ohio State University South Centers, so if you do decide to try it, please try it on a small scale and follow label directions. Make sure you leave a check or control so that you can compare.

One commercial form of Gibberellic acid is ProGibb, which is marketed by Valent. Follow this link for more information: [http://www.valent.com/agriculture/products/progibb/index.cfm](http://www.valent.com/agriculture/products/progibb/index.cfm). You can also locate a sales representative on the website. Be very precise with the rate since GA is a plant growth regulator. More is not better. Too much GA can do more harm than good!

One of my favorite phrases this season is “uncharted territory.” This is one of those instances too. Let me know how it turns out, if you do try it.

Sincerely,

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Attachment: A reprint of *Gibberellic acid use on blueberries* by Dr. Eric Hanson
Gibberellic acid use on blueberries

Posted on May 2, 2006 by Eric Hanson, Michigan State University Extension, Department of Horticulture

Editor’s note: This article is from the archives of the MSU Crop Advisory Team Alerts. Check the label of any pesticide referenced to ensure your use is included.

Bloom is a critical time for blueberry producers. When bees are numerous and weather is warm and calm, 80 to 100 percent of flowers may set fruit. Pollinated flowers drop their corollas (petals) while they are still white and fruit begin growing rapidly. Berry set and growth is dependent on the production of gibberellin and perhaps other growth promoters in the ovary tissues and viable seeds.Berries appear to require a minimum number of seeds to attain full size. If pollination is adequate, most all berries contain 20 to 60 seeds, well over this minimum seed number. If pollination is limited, final berry size may be proportional to the number of seeds.

Cold and windy weather during bloom can prevent bees from transferring pollen to flowers or prevent the transferred pollen from fertilizing the ovaries of the flowers. Under these conditions, flowers may set no fruit while others set fruit that contain too few seeds to grow to full size. Under these conditions, bushes may benefit from supplemental gibberellin (GA) sprays. Several GA products (ProGibb, GibGro) are labeled for highbush blueberries. GA typically results in greater retention of some parthenocarpic (seedless) fruit that would have dropped and also increases the size of berries without a full complement of seeds. GA can be applied in a single spray during bloom (80 gram active ingredient per acre) or two 40 g sprays, one during bloom and the second 10 to 14 days later. Higher spray volumes (40 to 100 gallons per acre) may improve coverage and effects. Slow-drying conditions also increase absorption. Also make sure your spray water pH is not above 7.5. Since the response to GA can be inconsistent and subtle, leave non-sprayed rows so you can later judge whether the treatment was helpful.

Since the cost of 80 g of GA is over $100, it is important to know when pollination is limiting and GA may be helpful. If weather has been reasonable good for bee activity and the white corollas fall easily from the bushes, pollination is probably adequate. Keep in mind that blueberries can bloom over a long time, and often only a few days of good conditions is enough to provide adequate pollination and fruit set. Consistently cold, rainy and/or windy weather through bloom causes pollination problems. If the corollas stay on the bushes and turn red-purple before eventually dropping, pollination may have been inadequate. The corollas of pollinated flowers drop readily while still white. Varieties with fruit set problems (Jersey, Coville, Earliblue, Berkeley, Blu-ray) are most likely to benefit from GA. Jersey, for example, is relatively unattractive to honeybees, and berry numbers and size are often limited by inadequate pollination.

Rabbiteye blueberry growers in the Southwest have found that GA may also help overcome slight freeze damage to flowers. The rabbiteye recommendation is to apply 24-32 oz ProGibb just after a damaging frost event and repeat the application in 10-18 days. There is some observational evidence that this can work in Michigan highbush as well. If you use GA after a frost event, please leave untreated areas as checks. Contact me by phone (517-355-5191) or email (hansone@msu.edu), as I would like to assess the effect.

Dr. Hanson’s work is funded in part by MSU’s AgBioResearch.

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Link: http://msue.anr.msu.edu/news/gibberellic_acid_use_on_blueberries