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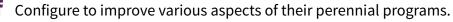
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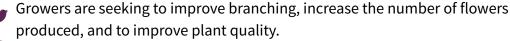
Enhancing Perennial Production

By Paul Pilon



Many perennial growers have been trialing the plant growth regulator







Configure is a plant growth regulator that contains the synthetic cytokinin benzyladenine or 6-BA (N-(phenylmethyl)-1H-purine-6-amine). Cytokinins are essential hormones involved in numerous functions within the plant including the release of lateral buds from apical dominance and cell division. Growers most commonly apply Configure to promote lateral and/or basal branch development and to enhance flowering.

Fine Americas, Inc. brought this plant growth regulator to the market a few years ago and it becoming very popular for growers to use to promote basal and lateral branches in perennial crops. Growers should note that Configure does not work on all perennial varieties and that the rates may vary across differing cultivars within the species that do respond to it.

The remainder of this article provides numerous guidelines that will prove useful for growers to improve the success of their applications, demonstrates numerous examples of crops that have responded well to Configure applications, and provides rate recommendations for growers interested in conducting trials on their own perennials.

Application Guidelines for Enhanced Results

• Each plant species as well as specific cultivars within the same



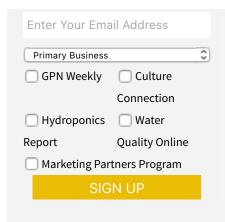
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species respond differently to Configure applications and may require different rates and application frequencies to achieve the desired results.

- Configure is primarily absorbed by plant leaves spray applications are the most effective application method.
- Configure takes several hours to be fully absorbed into the leaves.
 Therefore, applications should occur at times of the day where the leaves can remain wet for long durations (more than four hours).
 Target applications to occur either early or late in the day when the sun is low, on cloudy days or when the humidity is high.
- Avoid overhead irrigation for at least four hours after spraying
 Configure, otherwise the results of the application will be reduced.
- Complete coverage using the appropriate volume is essential.
 Within the plant, it moves upward from the point of contact.
 Therefore, when promoting lateral branching is the goal, it is important that the spray solution reaches and properly covers the axillary buds in the leaf axils to have the most response to the application.
- A good rule of thumb (and volume specified on the product label) is to apply 2 quarts of spray solution per 100 square feet of production space. Higher spray volumes may be necessary after the canopy has closed over or when basal branches are desired on plants that develop as rosettes or have tight crowns. Lower volumes will result in no or insufficient (variable) results. Many growers do not obtain adequate results with plant growth regulators due to improper spray volumes.
- Spray timing is very important. To promote lateral branches, it is
 important the plants being treated are healthy and actively growing
 and not under stress (heat, moisture, etc.). Plants are most
 responsive to Configure applications when they are growing
 vegetatively. Plants that have shifted to a reproductive mode and
 are not developing new vegetative branches tend to respond poorly
 and develop few, if any, new branches following Configure
 applications.
- Multiple applications at 10 to 14 day intervals often provides better results than when a single application has been made. In most instances, growers using multiple lower rate applications receive better results than when a single higher rate application has been made.
- In many instances, using a labeled surfactant, such as Capsil, is helpful to improve coverage and leaf absorption.

Effective Rates

The following tables contain numerous perennials that researchers and growers have trialed Configure on. One table contains the plant species that have responded well to Configure applications, and the other



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provides a listing of varieties that either didn't show any response or there was significant injury to the plants following applications of Configure at the rates tested.

When determining the optimal rate to use on specific perennial variety, growers need to consider that rates used in research are often higher than the effective rates growers use. In many instances, researchers are looking for a plant response to the growth regulator and may not necessarily be honing in on the optimal rates that growers should be using. Always consider the source of information as well as your specific location and growing practices when determining which rates to apply to your crops.

As you can see in the table above, effective use rates vary widely by plant variety. Additionally, there are often rate variations observed between differing cultivars of the same plant species. For growers just beginning to look at using Configure on perennials, the best approach is to use two rate ranges; one for herbaceous perennials and one for hostas.

For perennials that respond to Configure applications, the effective rates to apply range between 300 and 600 ppm. In many cases, better results can be obtained by making multiple applications using lower rates (150 to 300 ppm). Hostas typically require higher application rates to obtain basal branch development than most herbaceous perennials. The effective application rates for hostas range between 1,000 and 3,000 ppm; similar to the comments made above, growers often obtain better results when making multiple applications with lower rates (500 to 1500 ppm). Typically, Configure is applied at 10- to 14-day intervals when multiple applications are being made.

I recommend growers test small blocks of plants before making applications over an entire crop. This allows them to determine, or refine, effective application rates at their operation. Whenever conducting grower trials, be sure to include treated and untreated plants in the study and apply Configure according to the directions on its label.

Phytotoxicity

There have been a few plants where slight to significant amounts of plant injury has been observed following Configure applications. Plant injury due to Configure is the exception and not the norm. In many cases, the phytotoxicity is the result of plant stresses at the time of application or the surfactant being used, but some plants are sensitive to Configure and may become injured following its application regardless.

Some of the most common phytotoxicity symptoms observed include leaf yellowing, leaf cupping, leaf edge necrosis and changes in leaf morphology. The symptom(s) observed vary largely by plant variety and application rate applied. Phytotoxicity can be greatly reduced or negated by applying Configure to plants that are not stressed, by omitting



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surfactants, and when making multiple applications with lower rates.

Summary

Configure is being successfully used by numerous growers to improve branching and appearance of numerous perennial crops. This plant growth regulator is not a cure-all, but can be a valuable tool for growers to use on certain crops. Success with Configure applications is a function of plant variety, application rate, spray volume, and plant stage of development. Like any PGR, most growers will have to refine rates and application techniques to match their growing conditions.

Paul Pilon

Paul Pilon is a horticultural consultant, owner of Perennial Solutions Consulting (www.perennialsolutions.com), and author of Perennial Solutions: A Grower's Guide to Perennial Production. He can be reached at 616.366.8588 or paul@perennialsolutions.com.

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