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Getting the Most Out of Your Angel's Trumpets

Angel's Trumpets, whether *Datura* or *Brugmansia*, have long been garden favorites prized for their large showy flowers, and for many, for their wonderful fragrances. The large trumpet shaped flowers open at night and each flower can last for a few to several days. Once flowering begins it can last for months if they are well cared for, making these the star and often times the center piece of the garden. Like many night blooming flowers, the fragrance of the Angel's Trumpet often doesn't begin to express itself until sunset providing a beacon in the dark to the large often light colored flowers for hummingbird moth pollination (a common name applied to Sphinx moths and inclusive of a broad variety of other large pollinator moths) and other smaller moths as well. Plant them close enough to doorways, walks, and outdoor sitting areas where the fragrances can be appreciated throughout the growing season but allow ample room for them grow into their beautiful natural forms.

The difference between *Datura* and *Brugmansia*



Brugmansia 'Cherub'

Until the early 1970's both *Daturas* and *Brugmansias* were grouped under the genus *Datura*. By using the current genus classification, it will help us to separate the two as there are a variety of important differences. *Datura* species tend to be much smaller growing plants with flowers that typically point in an upward or at least somewhat upward to sideways direction and one common name, which we find appropriate, as it helps to separate the two, is Devil's Trumpets. Most of the garden variety *Datura* types are annuals and tender perennials but there are also a few perennial types as well depending on your zone. Colors range from white, through yellows, and into purples for the most common types and some of the most popular forms are double flowered. Plant size ranges are from 2-4' (-5') high for most of these and they tend to be somewhat shrub-like in nature.

Daturas produce a rounded capsule of seeds about the size of a golf ball or

slightly larger and they may be spiked, to smooth, or bumpy. Each fruit contains many seeds from which new plants can easily be started each spring which is often easier than trying to overwinter plants. In cross section the fruit is somewhat reminiscent of a tomato or tomatillo fruit.



Datura metel 'Double Yellow'



Brugmansia 'Frosty Pink'

The large, generally fragrant flowers of *Brugmansias* always hang down and so are maybe more appropriately called Angel's Trumpets and one old name applied to *B. arborea* was Wedding Bells. The name Angel's Trumpet has been applied to both *Daturas* and *Brugmansias* causing some confusion among amateur gardeners and causing disappointment when they try to establish the annual or tender *Daturas* as 'perennials'. In their native South America and in tropical climates *Brugmansias* naturally develop into semi-woody large shrubs to small trees ranging from 12-25' high and in typical garden settings reach 6-15' high depending on climate, growing conditions, and cultivar. Although a rarity in most gardens, pollinated *Brugmansia* flowers may produce a narrowly elongated fruit from which seedlings can be grown as well. Fortunately for gardeners in the US, these wonderful tropical to subtropical plants can also be grown as die-back perennials that return each year even into parts of zone 7 provided they are properly protected for winter. Otherwise cuttings and containerized plants can easily be overwintered to be replanted or moved back outdoors in the spring once all danger of frost has passed outside of their hardiness range. Variegated cultivars should be overwintered as cuttings or in containers generally

speaking to ensure that these chimera forms come back true as they may revert to solid green. These easy to grow tropical plants also make wonderful free flowering container plants. Flower colors range from white, to pinks, to yellows, oranges, and near reds, to red and can be single, double, triple, or more. Many are nicely fragrant and it can be more or less intense and may last longer into the day depending on the species or cultivar.

Angel's Trumpets, both *Daturas* and *Brugmansias*, begin to set the most flower buds once they have developed a Y-shaped branching pattern although some cultivars may produce some flowers at a much younger stage for example 'Cypress Gardens'. In sunny conditions and when they are grown as die-back perennials they can begin to flower much shorter and we have seen them flowering profusely at 4-6' high with multiple stems protruding from older established clumps here in zone 8B. In the lower south where summers are hottest, Angel's Trumpets often grow and flower best where they get midday or afternoon shade. This may also help the flowers to last longer as the plants and flowers themselves tend to be under less stress. In northern latitudes, generally speaking zones 5-7, full sun is often preferred. Often the most beautiful and floriferous plants are plants that have been trained into single or few trunked tree-like specimens where the multitude of showy dangling trumpets of the *Brugmansia* are shown off to best effect even from a distance.

When cutting them back to move them indoors for winter it is recommended that, whenever possible, you try to leave at least a portion of some of the Y-shaped branches so that they will begin to flower earlier when you put them back outdoors in the spring. Where they have to be overwintered indoors you can even plant container and all in the ground and dig up the entire pot once you are ready to begin to prepare to move them indoors. The 'pot in the ground' technique will also help to prevent them from



Brugmanisa 'Goldflame' (Double)



1Datura metel '

blowing over once they have rooted into the soil as well as to help them to provide at least some of their own water and nutrients during the growing season. This is generally done once the plants are in 3 – 7-gallon nursery containers and does not suit everyone's needs or tastes.

For container culture, the Brugmansias can easily be kept in 12-16" W x 12-16"H (5-7 gallon) or similar containers. Periodic repotting and pruning, including root pruning, will be required to maintain them indefinitely in this container size. Daturas can generally be kept in smaller containers 8-10" x 8-10" containers easily enough. Make sure that you use a good quality potting soil. You can add medium orchid bark to help the mix last longer and improve drainage. You may also want to consider adding larger perlite or pea gravel to the mix to help ensure that you have good drainage especially for the Daturas and slower growing or less vigorous Brugmansia cultivars. During the growing season they will use a substantial amount of water but once growth slows and when they have been moved indoors water usage will be reduced proportionately. Daturas easily succumb to being overwatered when indoors during winter, Brugmansias are generally less likely to be overwatered but can also succumb under extreme conditions. As with any indoor plant during winter, water only as needed. Remember a saucer under the container is

great for keeping water off of floors and counters but it is NOT meant as a water reservoir for these types of plants so once the soil is saturated (after about 30 minutes or so), empty any remaining water in the saucer. Sitting in standing water is a sure way to cause root rot in Angel's Trumpets sending them into decline and eventual death.

When indoors, provide your Angel's Trumpets with as much direct sunlight as possible. A south facing window is optimum but a sunny east or west facing window should be sufficient as well. If nighttime temperatures are maintained above 55°F some cultivars may produce flowers throughout the year under good cultivation. *Daturas* prefer temperatures to remain above 55°F and *Brugmansias* can tolerate slightly cooler temperatures, although both types often begin to lose foliage below about 45°F. *Brugmansias* can tolerate a light frost fairly easily but will often suffer freeze damage for any period below 32°F though they will typically return from the undamaged buds in the crown and roots if mulched and protected in areas where the soil does not freeze. Many *Brugmansia* cultivars are considered hardy into zone 7B if proper consideration is given to protect the crown of the plant for winter. Use a breathable, insulative mulch, such as pine straw, to a settled depth of about 4-6" deep and consider selecting a warm protected site near the south or east side of your house or other protective structure.

During the growing season, spring through fall, Angel's Trumpets will need ample nutrients to put on sufficient growth to produce a near continuous display of flowers. As container plants it will be up to the gardener to supply the nutrients and these are heavy feeders preferring a monthly, or more, dose of a balanced liquid fertilize along with a steady supply from a slow release, non-burning fertilize. If flowering is poor you might consider using a formulation with a higher phosphorous (the middle number of the N-P-K ratio) or if foliage color is yellow green to yellow or growth is less than vigorous consider using a formulation with a little extra nitrogen (the first number). In the garden a soil test is always better than guessing and your [local county extension office](#) can help you with that.



Brugmansia 'Supernova'

Don't be disappointed if when your first flower buds appear if they do not look just like what you imagined. Nearly open flower buds of Frosty Pink, Cherub, Peruvian Princess and most others often appear lighter colored when they first

open. This is all normal but soil fertility, light intensity, and soil pH can cause slight variations in flower color even within the same cultivar. An interesting and often easy way to tell what color group an Angel's Trumpet (*Brugmansia*) will be in is by the teeth or lack thereof along the leaf edges: Orange and yellow flowered forms often have semi-serrate (they have a few obvious teeth on at least some of the mature leaves) leaf edges whereas pinks and whites typically have smooth (no teeth) leaf edges. This test is not fool-proof but can be a good general indicator, especially on some of the older cultivars.

Brugmansias and *Daturas* are in the Nightshade family along with the Tomato and all plant parts are considered poisonous including the sap which can cause dermatitis and large amounts left on the skin can even cause chemical burns. Wash thoroughly with soap and water after handling if you do accidentally get sap on your skin and don't rub your eyes or other sensitive areas. We have grown these plants for many years without any doctor visits and as long as you use common sense there should not be any real issues.



Braconid Wasps on Horn Worm

Like Tomatoes, *Brugmansias* and *Daturas* can be bothered by a variety of plant pests. Moth caterpillars are one of the main pests and include the Tomato and Tobacco Hornworms as well as looper moths and probably a variety of other moth species. The Tomato Hornworm becomes the Five-spotted Hawkmoth and the Tobacco Hornworm becomes the Carolina Sphinx Moth, both are pollinators and may be seen late in the evening visiting Four O' Clocks and other garden flowers including your Angel's Trumpets. Hopefully natural predators like ladybugs, lacewings, paper wasps, Braconid wasps, and the *Copidosoma* wasp populations will help to keep the caterpillar populations in check. Whiteflies, mealybugs, and spider mites can also be problematic but these may also be attacked by natural predators. Selecting an open site where your plants have good air circulation can help to provide access by natural predators which will help to prevent infestations. Before bringing your plants indoors for winter, check your plants thoroughly for pests, many of which can be removed mechanically (by hand or similar means). Spider mites can often be washed off by a strong spray of water but this must be



Copidosoma floridanum Wasps much larger than lifesize one on the tip of a ballpoint pen for reference



thorough and repeated over several days to be effective and may damage tender buds and foliage. There are a variety of pesticides including mild insecticidal soaps that will do the job while hopefully doing minimal damage to the pollinator and natural predator population. Check with your [local county extension agent](#) if you have additional questions about which pesticide would be best to use.



Soybean Looper Moth



Soybean Looper Moth Caterpillar



Soybean Looper Moth filled with *Copidosoma floridanum* Wasp Cocoons

References and Additional Resources:

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Angel's Trumpet, Brugmansia by Susan Mahr – University of Wisconsin Extension – Madison

<http://wimastergardener.org/article/angels-trumpet-brugmansia/>

International Brugmansia and Datura Society's iBrugs Resource Center (invaluable!)– FAQs, Knowledge Center, Resource Directory, Photo Directory, Cultivar Name List

<http://ibrugs.com/Resources/iBrugsResourceCenter.aspx>