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## Propagation Methods for *Agave*®

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**There has been an increase in interest in succulent plants, including agaves, likely because people are becoming more conscious of the need to reduce water use in their landscapes. There is also better availability of agaves because of advances in propagation methods. This talk will address the propagation methods we use at our nursery, including seed propagation, rhizome cuttings, planting bulbils produced in the inflorescence and the division of pups, both naturally forming and those induced by damaging meristematic tissue. The general principles of micropropagation for this group of plants will also be discussed.**

### INTRODUCTION

*Agave* is a genus of succulent monocotyledons grouped taxonomically with other plants that in the past were placed in the Liliaceae, then Amaryllidaceae and currently in the Agavaceae. The Agavaceae also includes the genera *Beschorneria*, *Furcraea*, *Hesperaloe*, *Hesperoyucca* (syn. *Yucca*), *Manfreda* (syn. *Agave*), *Polianthes*, and *Yucca* though recent treatment has merged *Manfreda* and *Polianthes* into *Agave* (Thiede, 2001). There are over 200 species in the genus with a main concentration from Mexico and 15 species within the boundaries of the United States with the rest distributed through Central America and the Caribbean basin (including Venezuela). They are found from arid deserts to lush forests from sea level to 7,000 ft (Irish and Irish, 2001). There are also many selections and cultivars with a total of 1,393 plants currently described (International Plant Names Index, 2009).

Agaves are rosette-forming plants with spirally arranged leaves that emerge from a central stem. The leaves vary in width, succulence, texture, and color. Some have spines on the leaf margins and/or leaf tips while others are unarmed. Most agaves are monocarpic, meaning they bloom once in the life of the plant, and most go many years before flowering and then dying. Many species offset prolifically from short rhizomes so that a clump may live on after a flowering event, while others are solitary and the entire plant dies after flowering (Gentry, 1982).

San Marcos Growers was growing just one agave, *A. attenuata*, when the nursery was established in 1979 and has since added additional species and cultivars each year. Our current product list has 79 different taxa and we are evaluating an additional 53 more. These plants, once only available at specialty succulent nurseries, are now more prevalent in retail nurseries and in the landscape. Our nursery has been a factor in the increased awareness and availability of new agaves and also the improved methods of propagation have helped fulfill the demand for these plants. This talk will address these methods and share our experiences in propagating and growing agave.