tain heat. The roof is also left open in the event of snow. Snow on and around the containers helps to insulate the pots and supplies a slow, steady source of moisture. If the containers become too wet, we simply leave the roof closed the next time it rains. If the trees become dry and there is no precipitation in sight, we can irrigate using our frost-free system.

With the high competitive level in the horticultural industry, Princeton Nurseries keeps the legacy of improved plant material at a high level. To get to this standard of excellence, the company makes sure to use the right methods and techniques and at the same time makes an effort to keep the human touch between employees so you, the customer, receive a quality product that follows industry guidelines and makes us really proud.

Propagating *Asclepias tuberosa* from Seed: The Process©

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INTRODUCTION

Midwest Groundcovers is a wholesale nursery specializing in the production of groundcovers, ornamental shrubbery, perennials, and natives. A large portion of our perennial stock is propagated through division and softwood cuttings, but others, which cannot be produced in this method, rely on seeds to propagate. *Asclepias tuberosa* is one of those unique plants that is difficult to propagate vegetatively from cuttings but has a high percentage when using seed. In the past we used to buy in divisions, but quickly found that we would lose more then 50% of the crop within 2 to 3 weeks of planting. It was soon decided that an alternative method was needed to produce this plant. Seed propagation seemed the most logical step to take so we began by trialing this technique by directly seeding into 1-gal containers. Immediately we saw great success with 100% of the crop surviving and flourishing. We understand that planting *Asclepias* in this method doesn't produce a large quantity of blooms until the second season, but with careful production timing, anyone can have a beautiful crop in a limited amount of time.

PROPAGATION METHODS

The following describes our propagation system for producing *A. tuberosa* from seed.

Seed Propagation. At Midwest Groundcovers we buy in thousands of *Asclepias* seeds in late fall. Buying at this time guarantees that you will receive fresh seed from the corresponding summer crop. There is no seed treatment necessary for this crop, so it is put into cold storage at 36 °F until the following spring. The seeds are then planted in the middle of April to ensure a successful crop that can be sold that fall (Figs. 1 to 7). With this method, a ½-inch hole is dug, filled with twenty to 25 seeds, and covered with vermiculite. This will ensure the seed stays moist while allowing light to penetrate the substrate and therefore allowing the seed to germinate. The plant is immediately covered with 30% shade cloth for 3 to 4 weeks and is misted every hour until germination. After the 3 to 4 weeks of shade cloth, the

Figure 1. *Asclepias tuberosa* seed.

Figure 2. Planting seed of *Asclepias tuberose.*

Figure 3. Quantity of seed per container is 20 to 30 seeds.

Figure 4. Seed covered with vermiculite.

Figure 5. *Asclepias tuberose* 3 months later.

Figure 6. *Asclepias tuberose* 3 months later in a 1-gal container.

Figure 7. *Asclepias tuberose* 1 year later in a 1-gal container.

plant is put into full sun and is drenched with systemic fungicides to discourage any crown rotting. The plant is put on a strict continuous fertilizer regime after about 8 weeks and is kept on this program until sold.

CONCLUSION

At Midwest Groundcovers we pride ourselves on being very successful growers and propagators. With *A. tuberosa*, we were given the challenge of finding a cheap way to produce a plant that historically has been difficult to propagate. By utilizing seed to manufacture this crop, we have dramatically cut costs while reducing labor and gaining a much more successful percentage. Seeding is the most efficient and effective way of producing this plant and has proven itself through years of seed propagation.