This month, the Southern California Horticultural Society invited Greg Starr, owner of Starr Nursery (<u>www.starr-nursery.com</u>), to present some basics about agaves and then move into some of the best species for landscape use in the Southwestern U.S.

These are Greg's answers to questions we were unable to answer live.

1. Any organic control for agave weevil? I lost two huge gorgeous agaves to them - one in an area I hope to use as a desert tortoise habitat, plus I have a dog. I farmed 140 acres organically for 30 years, so I would hate to start using chemicals now!

I am unaware of any organic control for the agave weevil aside from physical removal and crushing either or both the grub and beetle.

2. What type of planting mix do you recommend for in-ground versus planters?

I do not amend the native soil when I plant agaves in the ground. However, if your soil is heavy clay, dig a large hole and add some sand. If your soil is very sandy, try adding some loam.

3. Explain agave edema.

I'm not sure edema can be explained. I have noticed that the damage occurs when transporting plants in a closed vehicle, mostly going from a cooler climate to a warmer one. I have also noticed the edema-like damage if the day is cool and sunny, and then a quick cloud cover moves in. Well-watered plants seem to be more susceptible to the damage and damage occurs when there is a rapid change in light (from sun to dark) while the plant is photosynthesizing. I have not had bare root plants that are shipped in a dark box exhibit the damage.

4. Do all the agaves that bloom produce seeds?

No, some agaves are not self-fertile. Sometimes even cross-pollinating two of the same species does not produce seed when they are cultivated.

5. What is the best type of fertile room for agaves?

I'm not sure what a fertile room is?

6. For so many agaves from limestone areas and soil, what about adding limestone to pots and soil? Any specific products?

I buy CaMg from a local horticultural supply outlet.

7. How long does it take a seed from Queen Victoria to grow large enough to plant in the ground?

Probably anywhere from 5-10 years, depending on how fast you grow it in a pot and how big you want it to be when you put it in the ground.

8. Please spell the systemic insecticide you recommended.

I use dimethoate. That may not be available through *any* nursery, so look for a product with an active ingredient of imidacloprid.

9. I have a very bad problem with mealybugs.

If the problem is very bad as suggested, it might be time to trash the plant. Otherwise try using a product with imidacloprid as the active ingredient.

10. Agaves that grow on limestone: what soil amendments should be added?

I usually add CaMg to my soil. I do not believe the limestone growing agaves need limestone, but that they are more tolerant of it. Use the limestone to bring an acidic soil to be more neutral.

11. Any thoughts on managaves?

There are some awesome xMangaves available. They seem to be a little more delicate for landscaping though.

12. Why doesn't ovtifolia set seed? I had one bloom last year - no seed or bulbils in Long Beach, CA.

Same for me. I believe it is not self fertile and you would need two distinct clones.

13. Coconut coir vs. peat moss: advantages / disadvantages?

I have tried coconut coir and did not like it for agaves. It tends to float in the mix and causes the agaves to sink down pulling the growing tip below the top of the soil.

14. How sensitive are agaves to transplanting?

Going from pot to pot is not an issue. Pot to ground is usually fine as long as the plant is watered properly. Ground to ground is a little more touchy. Do not transplant a large plant as that tends to trigger flowering.

15. There was a skinny leaf one that I missed the name.

Maybe Agave geminiflora?

16. What is the purpose of the fibers produced at the tips of Agave species such as A. albopilosa? Is it a protective measure as that species lacks spines on the margins?

I have pondered the meaning of the fibers and do not have any idea. I don't think it is a protective measure because it grows on nearly inaccessible cliffs and the tufts are not sharp and would not be much of a deterrent.

17. Do agave seeds generally prefer an overripening period or do you sow them fresh?

I tend to sow fresh seed or at least within 2-3 years. I have germinated 15-year-old seeds, but I think that was an anomaly.

18. Can you call offsetting "pupping" as well?

Yes, both terms, offsets or pups, are acceptable

19. Will breaking the ovatifolia inflorescence cause bulbils to form?

It is worth a shot. Break off the top 1/4th.

20. What's your opinion about Manfredas being considered Agaves?

I keep the two genera separate.

21. I have heard that plants should be watered before the sun hits water droplets on leaves which causes damage. Is this true?

In the summer, I usually try to water early in the morning before it gets too hot. Or water in the evening when the sun is low in the sky. In the winter, I only water in the morning and let the sun warm the soil.

22. Is there a best time of year to core agaves?

It is best to core when the plant is actively growing, so time of year will vary with the climate. Probably don't core when the temperature is over 100F.

23. Have you been poked by an Agave needle and had a bad reaction?

I have been poked and prodded numerous times with varying degrees of reaction. Some agaves are worse than others.

24. I have the Agave book mentioned at the beginning. Do you have other books? Or will you be writing any new books?

I was a co-author on the Field to the Cactus and Succulents of Arizona. I am currently working on a revised edition of Cool Plants for Hot Gardens and have started working on a second Volume of the Agaves.