## Freeze Protection, It Is Time San Antonio Express News

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We are close to the average first freeze date in the San Antonio area. It is time to move some plants to shelter and to be ready to protect others.

Bouganvillas quit blooming when we have a few days near 40 degrees and are damaged with temperatures at 32 degrees. They need to be protected from freezing temperatures, but they do not need to have light all winter. They do perfectly well piled-up in the corner of a garage of shed as long as it never falls below 32 degrees in the building.

Bouganvillas are easier to store if you cut them back to a relatively compact crown because the thorny branches seem to reach out and grab anybody who walks close to them.

Plumeria can be stored in the same conditions as bouganvilla—in a dark environment—but mandevilla, oriental hibiscus, geraniums and other cold-sensitive plants require light and cold protection if they are going to survive the winter. A greenhouse is ideal. A glassed-in sun porch also works. Some gardeners place them in a sheltered location on the south or east side of the house and then rely on applying a cloth or canvas cover when cold temperatures are forecast.

In the vegetable garden, if you have tomatoes they are providing or close to providing fruit. Quite often you can protect the plants from the first freeze with a covering over the cage and then expect 3-4 weeks of mild weather., Have enough agricultural fiber (Insulate and others) or blankets ready to drape over the cages on the evening that the freeze (or near-freeze) is forecast. With a second or more severe freeze, an option is to pick all full-sized fruit and let it ripen in the house.

Plastic is good for protection from cold winds, but it does not work well when the plastic touches the plant. If plastic is used, use a layer of cloth between the plant and the plastic or use a frame to form a tent so that air insulates the plant from contact with the plastic. Once the sun comes out, the plastic tent must be opened so that the tomatoes are not overheated.

If you want a freeze protection material that has the good characteristics of cloth and plastic, check out "Plankets." It is a plasticized fabric that is easy to use. Don't over-estimate its

protective power, however. In my experience, they protect about as well as a sheet or thin blanket. Plankets are available in rectangle or round shapes. They work especially well for citrus in containers.

In the landscape, citrus needs cold protection depending on how cold it gets and for how long. Kumquats, calomondin, changsha tangerine and satsumas have the most cold tolerance. Lemons and lime are especially vulnerable to freezing temperatures. I don't cover my calomondin in the ground, but cover the rest of the citrus whenever the forecast is for temperatures below 28 degrees. Changsha tangerine, kumquats, and satsumas, especially the Orange Frost selection, can usually tolerate 26 degrees, but it is easier to be safe than sorry.

If temperatures fall below 26 degrees or it is expected to be below 28 degrees for more than 2 or 3 hours, it is advisable to put a heat source under the freeze-covered plant. That means extending an outdoor-rated extension cord from the power source and attaching a poultry heat lamp or mechanics light.

My radio colleague, Jerry Parsons, and I have disputed the cold tolerance of cyclamen. These "discussions" have resulted in us agreeing that the foliage is very tough but the blooms can be knocked off by freezing temperatures. The best strategy seems to be to cover the plants whenever the temperatures are forecasted to fall below 30 degrees. A strip of Insulate, blanket or "Planket" laid over the top of the plant will do the job. The same treatment sometimes works for petunias, snapdragons, stocks, dianthus and calendula. Pansies are the most cold hardy winter bloomer and do not need covering.