



SHADE CLOTH, MISTING, & INSULATION FOR DAHLIAS GROWERS: a photo essay from John Mani

Dahlias love sunshine. However, excessive heat can wilt plants or even kill them. Dahlia growers feel that dahlia bloom colors are enhanced by using shade cloth. Many dahlia fanciers think that the large “AA” and “A” blooms can only be optimally grown in hot weather areas. My dahlia garden is located in Novato, California, where summer temperatures often exceed 100 degrees F. for prolonged periods.

In addition, my backyard is adjacent to a golf course, infested with rabbits, moles, voles, and gophers that drove me into container growing.

I first attempted to grow dahlias in plastic pots. Novato’s summer heat killed some plants and “cooked” others as the plastic pots’ internal temperatures rose to a point that my bare hand in the potting soil felt “hot.” My solution: shade cloth, misting, and insulation wrap for my containers.



(I must state at the outset that I make no claim to being an expert in these areas. I was asked to write of my experiences so that readers/growers could use, modify, and improve upon what I have done. We all seek the same goal: to grow the perfect dahlia.)

CONTAINER INSULATION

I built “grow pots” or “earth pots” from information gathered off the internet. These are “self-watering pots” created by placing one 5 gallon plastic bucket inside another 5 gallon bucket. (How to build a “grow pot” for dahlias will be dealt with at another time.) These thin plastic buckets, unfortunately, transfer heat from the sun and the ambient hot summer air sufficient to kill dahlia plants.

The solution: simply wrap the outside of the buckets with insulation. I chose a 16 inch wide 5/16 inch thick wrap of foil/reflective bubble wrap. Cost of a 16 inch wide and 125 feet long roll is \$83. That is enough to wrap 41 buckets (3 feet of circumference per bucket).

Many insulation companies sell this product. One is EcoFoil.com, Tel.1-888-349-3646. I used a piece of thin aluminum bailing wire to hold the insulation in place. Initially, I used wide rubber bands to hold the insulation in place. However, the sun destroys the integrity of the rubber so I now use aluminum bailing wire.

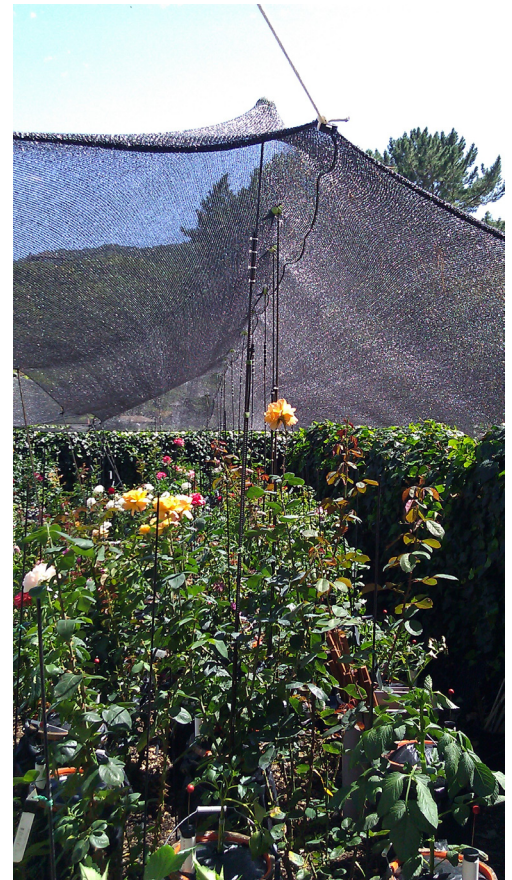


SHADE CLOTH

This cloth can be purchased from many internet companies. My 50% shade cloth (blocks 50% of available sun) was purchased from Gempler's.com, Tel: 1-800-382-8473. Shade cloth comes in 30% to 70% blockage. You can buy a black 50% shade cloth, 12 feet x 50 feet for \$97.25 plus a small shipping cost. I also use 50 green shade cloth, an old purchase, cut into 40 inch squares, to shade individual plants, newly potted, for a few days, to protect the stressed plants from the hot sun.

I use 3/8 inch diameter rebar, an iron rod, sold at builders' supply stores, to prop up the shade cloth. An iron rod cutter is available at these stores so that you may cut the 20 foot lengths into 7 to 10 foot pieces. 3/8 in. diameter rebar costs \$4 for a 20 foot length. Local tennis pros will give you as many used tennis balls as you can use. I drill a hole in one side of an old tennis ball, jam it onto the tip of an 8 foot length of rebar and these "props" hold up my shade cloth. (Pic. 1). Notice how the tennis balls seem to jut up into the shade cloth. This is due to my using a "purse string entrapment" technique with an upholsterer's needle and stout nylon string.

(See Pics 2 & 3) This technique "anchors" the tennis ball so that the wind cannot cause the vertical pole to migrate or fall over. Tension is needed in suspending the shade cloth to prevent the wind from creating a shade cloth "sail" in high wind conditions and possibly damaging or destroying your shade cloth and the plants beneath.

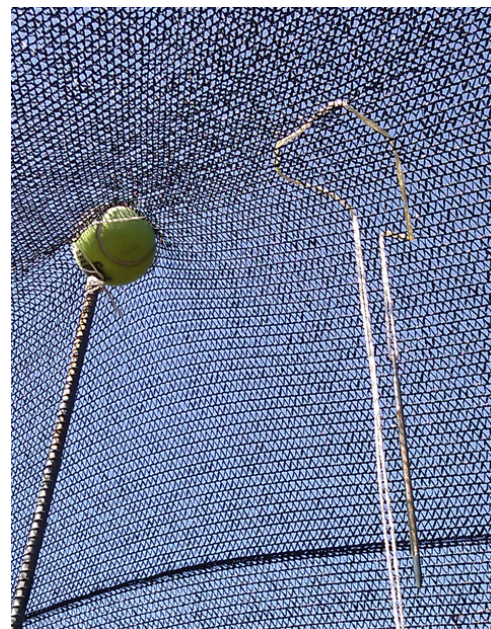


(Pic. 1)



(Pic. 2)

Pic. 2: Shows the black shade cloth, rebar prop with tennis ball entrapped, and 1/4 in. dia. water supply line with terminal misting emitter (black arrow on white paper). Note the zip tie around the body of the emitter.



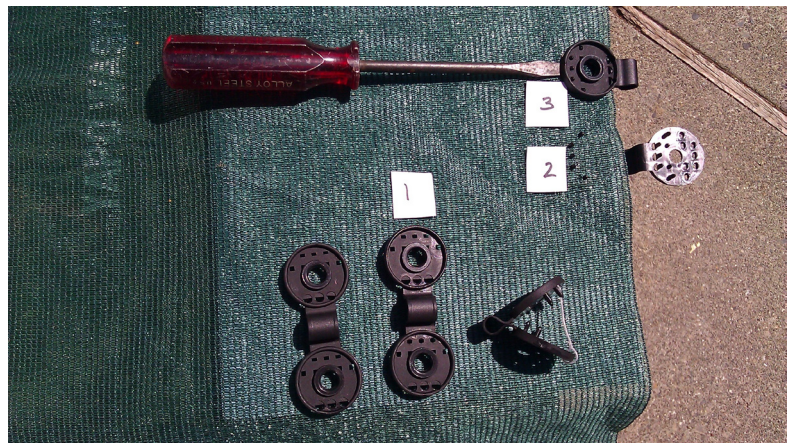
(Pic. 3)

Pic. 3: Upholsters' needle + nylon string used in creating the "purse string entrapment" of the tennis ball into the summit of the shade cloth.

SHADE CLOTH (continued)

Using a large upholster's needle and attached string, a large round "purse string circle" is made in the shade cloth. The tennis ball is then placed in the center of the string circle and the two ends of the string are pulled downward strongly around the ball. The elastic shade cloth is dragged downward with the string around the ball entrapping the ball into the cloth. The two strings ends are then tied to the pole below the ball preventing the ball/pole from migrating. For want of a better term I call this technique: "purse string entrapment".

If purchasing Gempler's shadecloth, also consider buying an essential item called a "hinged grommet fastener." These snap shut fasteners sell for \$16.50 for 30. Their picture and use are shown at right.



1) the fastener: top, bottom, and side view, 2) the opened fastener in place with plastic spikes protruding thru the shade cloth, 3) the hinged grommet fastener is closed, (squeezed with pliers or struck gently with hammer, rope is an alternative fastening method). 4) If you wish to reuse or remove the grommet—insert screwdriver under edge, twist gently, and your grommet springs open for easy removal and reuse.

SUSPENDING THE SHADE CLOTH

Each shade cloth must be tailored to the individual garden's dimensions. High winds can damage or destroy expensive shade cloth and the precious blooms beneath. You must keep the shade cloth taut and under moderate tension by the use of your individual prop and peripheral fastening arrangement.



Left image shows the peripheral use of rebar pole tips in grommets at angle to provide tension.

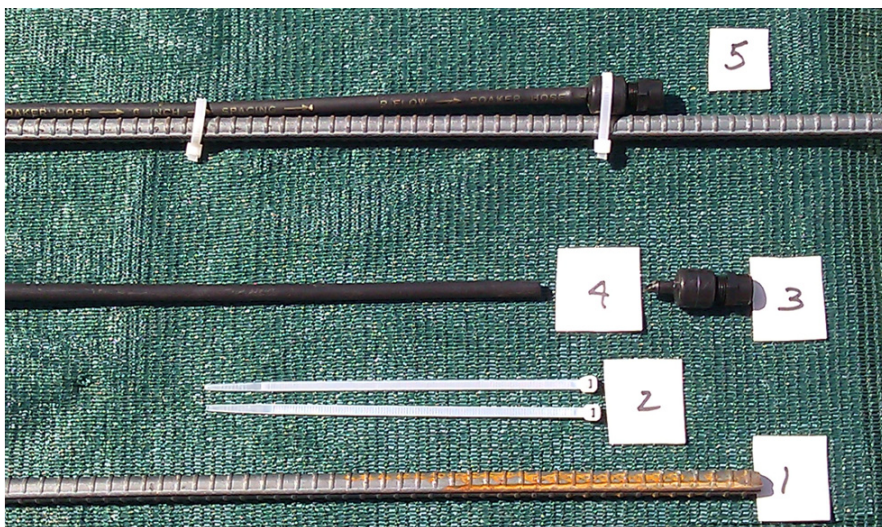
Right image shows peripheral ropes through grommets and tied to available anchors to provide tension.

MISTING

Intermittent misting during the hot part of the day cools and refreshes the plants, lowers the ambient air temperature, adds critical leaf moisture, and builds a somewhat “tropical” climate to enhance dahlia growth. Water mist is heavier than air. The fine droplets gently fall towards the ground, (providing there is no significant wind) and settles on the plants below.

The water supply to my self-watering buckets automatically activates (battery run controller- \$35) 4 times a day, 3 minutes at a time, every 90 minutes from 12 noon to 4:30 PM. Since my misting system is connected to the same water supply, misting occurs 4 times per day as well. This arrangement seems to be optimum for the Novato summer environment.

Zip ties and ¼ inch water line are both inexpensive and available at any hardware store. I purchased my misting emitters from DripWorks.com, Ukiah, CA, Tel: 1-800-522-3747. Cost: \$.57 per emitter. The newer preferred misting emitter, casts a misting diameter of 4 feet—from DripWorks). Using 8-foot rebar shade props allows me the opportunity of using this prop to also hold a misting emitter and its ¼ in diameter water supply line. My shade props are 3-4 feet apart. Upon each prop, zip ties hold a 6-foot 6 inch segment of ¼ in water supply line terminating in a misting emitter.



- 1) 3/8 in. diameter rebar.
- 2) zip ties.
- 3) misting emitter
- 4) 1/4 in. dia. water supply line.
- 5) various parts assembled.

Thank you, John, for taking the time, taking the pictures, and taking the initiative to share all your innovations with your fellow DCSers. Without experimentation we gain no improvements. Not only did we see how well your dahlias bloomed last year, but we heard how early your dahlias germinated this year. What a great system! Thank you for sharing it with all of us. I hope your essay spurs other DSC members to write up their forays into better ways to take care of our favorite flower!

Yours in Dirt,
Deborah

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Originally Organized
In 1917
In San Francisco

the Dahlia was adopted as the
Official Flower of San Francisco
on October 4, 1926
by its Board of Supervisors

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