



## How to Build a Garden Hail Shield

Instructions prepared for Estes Valley Community Garden by Fritz Sampson, EVCG volunteer, March 2018.

This document is available on the Community Garden website, [evcg.org/resources](http://evcg.org/resources)

### **Note about hail cloth**

Hail cloth, developed for use in commercial orchards, has been purchased in bulk by EVCG Board in 2016 and 2017 for re-sale to individual Community Gardeners. The huge sheets are cut into 10 x 8 ft. pieces for individual installation. The sheets have lasted for 2 seasons with no apparent damage, and should survive for at least 1-2 more seasons of use if not more.

Many plots already have hail shields, and there are several hail cloth pieces left from the 2017 purchase that were not distributed. But, if enough gardeners request it, a bulk purchase could be made this spring. Information about this will be emailed to all gardeners.

## HOW TO BUILD A GARDEN HAIL SHIELD

Gardening at 7700 feet is tough. Estes Park gets hail, lots of hail, real hail, the type that will shred your garden and pound what is left into the ground. So hail shields are a necessity. This is how to build one fast and cheap:



### 1. Materials List

- a. 6 – 10'x 1/2" PVC tubing - available at all the hardware stores. Avoid the temptation to use larger diameter because it does not bend as easily- if at all.
- b. 20 – 3/4" conduit strap brackets – look in the electrical department at the hardware store.





c. 50 – 2” wood screws or drywall screws. There is no magic here. Use what you have so long as it is at least 1 ½ inches to anchor into the 2” lumber on the raised bed.

d. 15 to 30 – 6” cable ties.

e. Hail cloth or wire mesh called “galvanized hardware cloth”. The Hail Cloth needs to be at least 10’ long. If you use galvanized hardware cloth it needs to be at least a 4’x10’ sheet with a ¼ inch mesh.

See <https://www.ebay.com/i/121625192377?chn=ps&displtem=1&var=420610727658> Hail Cloth is easier to use.



## 2. The Steps

a. Each raised bed is 10'x4'. So you will want to space 5 PVC tubes equally along the length. One in the middle at 5', one on each end, and the other two spaced between them. Use a tape measure and mark your points, ensuring that you place your marks at the same place on both sides of the bed.

b. Take 10 conduit brackets and screw them into the 5 spacing marks on one side with one on top and one about 6" lower on bottom.



c. Take the other 10 conduit brackets and do the same on the other side.

d. Take your 5 PVC tubes and stick them in the slot made by the conduit brackets on one side. Each PVC tube should be sticking straight up all by itself.

e. Now bend each tube and insert it in the opposite conduit bracket slot. It won't break.

f. You have one more piece of PVC tube. It needs to be attached to the 5 hoops you now have as a center pole to stabilize the structure. You have a choice, but both

require a hole to be drilled in the PVC. Drill a hole in each end PVC hoop at its crown smaller than the diameter of your wood screw or a bit larger than your cable tie.



g. If you want to attach the center line using screws, just drill a hole about 5" from each end of the center pole, and then screw the PVC center line onto the end hoops. Then just drill and screw the remaining 3 holes. The same technique works for cable ties. But, some people just drill the ends, thread a cable tie through the end holes, and then just use 2 crisscrossed ties each on the 3 middle tubes.

h. Attach the hail cloth or wire mesh using cable ties. If you use wire mesh, trim any sharp wire or use some good duct tape as a border to cover the little wire protrusions.

You are finished. Plant your garden.