

Catch Frame for Cherry & Berry Harvesting

By Bob Bors

Background

The following catch frame was designed with sour cherries in mind. The general concept was my idea but Forrest Scarf and Rick Sawatzky decided the materials, built the frame, and improved on it. The frame was taken to an upholsterer who used a nylon mesh for the fabric. The frame is placed into a cherry bush and two people on either side grab and push branches into it and shake the fruit off into the frame. The frame is designed to harvest only one side at a time. The people standing on either side of the frame help block the cherries that might fly off in that direction. The bush itself blocks most cherries flying back into the bush. We would do one side of a row then go down the other side. We did not patent this device. If you do make one, please let us know how it turned out. We'd especially be interested if it gets used on other crops.



Figure 1. Photo of catch frame showing front and side views. There is no need for the front part to be shorter than the back. We could have trimmed that back part to be the same height.

Shaking technique

I preferred to grab branches in both hands and hit them together. Others preferred to shake the branches violently to knock off the fruit. I think my method requires less work, but if you need the exercise try the other way. Once we got into it we timed ourselves...it took only 1.5 minutes to harvest all the fruit from ½ of a full grown bush, regardless of how much fruit was on it. So

that's 3 minutes per bush that could have 30 lbs of fruit or more. It had been taking some of our students 30 minutes or more to hand pick a productive bush!

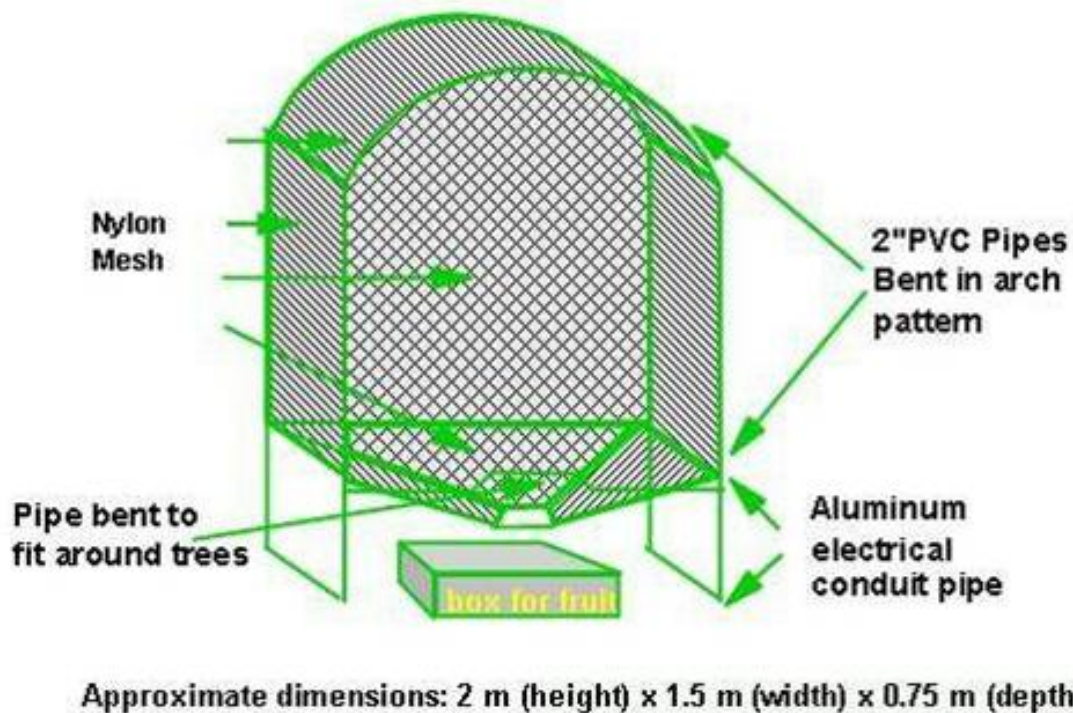


Figure 2. Catch Frame design. A bit hard to see is the indented electrical conduit pipe on the lower edge. This allows the frame to fit closer into the bush. It is a very good idea to have the bottom legs connected in a single piece. Single legs (like those of a chair) would get bent as they occasionally get dragged over the soil, especially since this is made from Aluminium pipe that is easily bent.

Earlier versions

Learn from our mistakes! The original prototype had a few flaws. We had wheels on one side; we thought one person could roll it into place. However, on rough cultivated soil the wheels would not roll. It was much easier to have 2 people carry it and place it near the bush to be harvested. On the bottom is a fabric 'funnel' which did not have a steep enough angle to make all the fruit easily funnel down. Probably a 45 degree angle would be best. Also, I would make the funnel longer going closer to the ground. Right now our catch frame's funnel stops a foot too short.

Think Summer ... Think Swimming pools

If bushes are really small you might be able to use children's swimming pools. I was able to find some pools at Canadian Tire that were the same shape as our catch frame. Coincidentally it was nice that they were purple and so matched the fruit juice colour of Haskap! The smaller bushes are too difficult to do just half a bush and pick out individual bushes. We found it was best to have 2 people on either side, each with a pool in hand. Reach into the bush and shake the whole

bush at once. We did this with Haskap, which worked nicely, but that fruit crop has easily detached berries. We heard a Haskap grower has improved on our method. Rather than shake the bushes he uses a high powered leaf blower to knock of the fruit and also to blow out and loose leaves that come with it. But he is still using the kids' swimming pools so our research lives on. I can't wait to try that leaf blowing improvement this coming season.



Figure 3. Swimming pools being used to harvest Haskap Berries. The previous year we had tried using umbrellas. The umbrellas kept breaking from the strain of too much fruit! Only Bob didn't break his umbrella, because he emptied it before it got too full. But 3 other umbrellas were goners!

Suggestions for other crops

It might be nice to make adjustable legs that can go closer to the ground or just build a smaller catch frame if you are working with fruit crop that has a smaller bush. Our Cherries are about 7 feet tall. I'm sure that a smaller version could work with Haskap (also called blue honeysuckle). A visiting grower of High Bush Blueberries thought it would work with them. We tried it on Saskatoons but the berries held on too tightly. Maybe a bigger version could work with plums or apricots.

Let us know

If you build a better catch frame or use one on another crop, please contact us and let us know. We'd be curious to see a picture of what you build.