

Hoop House

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Update: The hoop house is still standing 1 yr later. It has survived several Oklahoma thunderstorms with winds in excess of 70mph. We have made some more updates adding a thermostat controlled fan and automatic irrigation system. I think that the next hoophouse we build will have metal braces instead of PVC to hold up better. Also the addition of the fan made a considerable difference in the strength of the plastic on windy days. All things considered it has stood up quite well. Update:: One of the things we wanted to be able to do with our Market Garden is have fresh tomatoes at the market when it opens for us on May 1st. But because of the long growing period for tomatoes this is not possible in our part of the country without the aid of a greenhouse. So we set out to find an economically way to start vegetables much earlier than mother nature would allow. We were fortunate to go to a seminar where Elliot Coleman spoke. If you haven't had a chance to see Elliot or read one of his books we highly recommend him. One of Elliot's messages was how he is using greenhouses to garden year around without heat in Maine. So we decided if this can be done in Maine then surely it is possible in NorthEast Oklahoma with our much warmer winters. Even though Elliot has some brilliant ideas for building Greenhouses we weren't quite ready to bite the bullet financially for a permanent structure. After some debate and some internet research we settled on a hoophouse. Our hoophouse took some ideas from various drawings online and we made a few changes to deal with the brutal winds we can get in spring thunderstorms here in Tornado Alley. Here are the steps we used: First we built a 10' x 28' wooden frame out of 2x6 treated lumber. The treated lumber was a hard decision for me and may ultimately need to be replaced for our Organic Certification, however we have severe termites here and conventional lumber will not last 1 yr. on the ground. We are making provisions to insure the lumber cannot contact any soil we are growing in but we may ultimately have to replace this. Once we had the frame in place we started attaching 3/4 inch pvc pipe in an arc onto the frame. The boys loved helping with this part because the pipe liked to spring around which they thought was funny. Here are the brackets we used. We placed each pvc pipe about 2' apart to hopefully add enough strength. Once we had all the pipe placed next we built a wooden frame on each end and placed a pvc pipe down the top to tie everything together. Unfortunately I didn't take a picture of the wooden frame at this point but here is what the completed pipe and frame looked like. Next we went online and found a greenhouse supply store and ordered 6-mil greenhouse plastic. This plastic is supposed to last four years and is fairly inexpensive for the size we needed. We waited for a calm day. (Hard to come by during the spring in Oklahoma) and stretched the plastic over the frame. Everything went on real smooth. Attaching the plastic was one part of this project that we wanted to be sure and do right. I am of the opinion that each place I staple or put a hole in the plastic to attach it was going to be a place where the wind would eventually rip it. Because of this we cut more boards for the base and sandwiched the plastic between the two with screws. This will hopefully increase the surface area holding and help prevent wind damage. Next we put plywood on the ends sandwiching the plastic again and built our doors. Because heat is also going to be a factor this summer we wanted plenty of ventilation on each end. Once completed we added rock to 2/3 thirds of the floor and built a bench to start plants on. Eventually we intend to have benches down one entire side and a raised bed on the other for our all winter long greens.