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## “Floating Garden” Never Needs Watering

No matter how dry it gets this summer, E.A. Arldt of Paige, Texas, will spend no time at all watering his garden. That’s because it floats on a small pond and gets all the moisture it needs whenever it needs it.

The “floating garden” is an 8 by 20-ft. platform with a bed made out of 6-in. dia. plastic pipes. An 8-in. deep layer of composted leaves covers the bed. Plant roots reach down between the pipes and into the water, giving them a constant supply of moisture. Since there are no weed seeds in the compost there’s no need for weeding or herbicides.

Arltd grows cabbage, lettuce, cauliflower, and beans along with vine crops like squash, watermelon and cantaloupes.

“I use it all year long. It lets me grow a lot of food in a small area, and it tastes really good,” says Arldt, who built his first floating

garden six years ago.

The frame around the garden has sloping sides covered with 1/4-in. galvanized hardware cloth so vines have somewhere to go.

The big plastic pipes that support the garden bed are sealed at either end to hold air and float the garden. They’re held in place by 2 by 4 rails.

A 16-ft. long metal walkway runs from the shore out to garden. The walkway also acts as an anchor to hold it in place.

“It’s the slickest garden system I’ve ever seen,” says Arldt. “A garden this size will produce all the vegetables and fruit that even a big family could use. Last year we gave away a lot of vegetables and fruits to neighbors. People tell me the watermelons and cantaloupes are the best they’ve ever tasted.

“I came up with the idea after we had an extremely dry summer. I tried using city water but the plants didn’t grow well on it, and hauling water from the pond was too much work. I built it in my back yard and then took it to the pond. The composted leaves are very rich which allows me to plant everything real thick. One year we had 57 cantaloupes from just two stalks. I don’t plant in rows but simply broadcast the seed by hand onto the leaves. There are walkways above the garden bed so I don’t step on the thickly seeded plants.”

The crop takes up a lot of nutrients, so every year Arldt removes all the old leaves and replaces it with new material.

His area gets occasional freezes during the winter, but he says that steam coming off the pond during cold weather provides so much frost protection that he can grow crops all



Sealed 6-in. plastic pipes float on water.

year long. “The plants won’t freeze until the temperature reaches about 20 degrees above zero. Last year we had fresh strawberries for six months in a row, and I was able to grow potatoes - a very frost sensitive crop - all year long.”

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## Combine “Elevators” Unload Seed From Semi Trailer

Don and Jason Jaquish figured they could save time and reduce damage to seed if they could fill their planter directly from the semi trailer they used to bring seed home.

Since their trailer has two compartments and two unload hoppers, they needed two identical unloading units. With that in mind, the Eau Claire, Wisconsin father-son team went looking for something that would work.

They found a couple of junked John Deere 95 combines and removed the clean grain elevators. “The elevators have rubber paddles in them so we figured they would be good for handling seed,” Don says. “Early versions of the 95 model had flat chains, but these were later versions with roller chains.”

With help from part-time employee Dave Dohms, they replaced the rubber paddles and restored the elevators to near new condition. The original cross augers that pulled clean grain into the elevators were shot, so they installed new 6-in augers. They also constructed new hoppers to fit the unload hoppers of the trailers to accommodate the new augers.

While it sounds simple enough, working out the drive system proved to be a challenge. They decided on hydraulic motors to power the augers, and figured they’d drive the elevator from the end of the auger shaft. Trouble was, the elevators originally were driven from the top, so they had to make several changes to make it work the way they wanted.

An 8 hp Briggs and Stratton engine, coupled to an old double hydraulic pump, provides more than enough oil flow for both of the seed transfer elevators. “The double pump is actually two pumps in one,” Jaquish says. “With it, we can use either or both of the seed transfer elevators at once.”

They mounted the engine, pump and a 5-gal. reservoir on a bracket under the trailer, between the two seed handling hoppers.

The elevators themselves fit close to the trailer side. “Our hopper bottom trailer is 8 ft. wide. To be road legal, we couldn’t make the entire unit more than 8 ft. 6 in. wide,” Jaquish notes.

The elevators lift the seed 10 ft. and empty it into telescoping flexible plastic tubes, which the Jaquishes use to fill their planter boxes.

“There’s an electric solenoid valve on each of the elevators to shut them off. The switches are located near the end of the drop tube, so we can control them while we’re filling. We used a heavy-duty coiled extension cord from the switch to the valve, so it slides back and forth with the tube,” Jaquish tells. “In total, we probably spent around \$1,000 for everything, including the engine, hydraulic parts and the new solenoid valves, which were \$150 apiece. Really, it took more time than money.” He figures they spent around 200 hours in the shop rebuilding the elevators and piecing everything together.

To their surprise, everything worked the



Don and Jason Jaquish save time and reduce damage to seed by filling their planter directly from the semi trailer they use to bring seed home.

first time. “We’ve made a lot of things over the years that didn’t always work the way we would like without further modification.”

Once they were able to fill the planter quickly, another bottleneck in their system came to light. “We found we were spending most of our time putting inoculant on the seed,” Jaquish says.

After giving that matter a little thought, they decided they could add the inoculant in the horizontal feed auger. “We were already using liquid inoculant, so we ran lines to the auger and installed a couple of solenoid valves from an old sprayer to turn the inoculant valve on and off. We put sink valves from the hardware store in the lines to

let us increase or decrease the flow. The solenoid valve is wired to the shutoff switch for the elevator, so when we shut off the elevator, the inoculant flow stops, too.”

He says it takes two people about two hours to attach the seed hoppers to the semi trailer and hook up the wiring and hydraulics. “That’s nothing to the amount of time it saves us in handling bean seed. And you only have to do it once a year,” he says. “Taking it off is easier, though, and only takes about 45 minutes.”

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