

Made-It-Myself Bird Feeder

Wayne Gadaw of Amory, Miss., devised his own squirrel and raccoon-proof bird feeder. "Trying to keep critters from climbing a shepherd's hook bird feeder hanger proved futile. I came up with this idea."

Gadaw dug a 1 1/2-ft. deep hole to place a treated 4 by 4 post and filled around it using 60 lbs. of quick-set concrete. He then put a 6-in. diameter PVC pipe (approximately 5 ft. 8 in. tall) over the post and built a 40-in. by 24-in. plywood roof covered with mineral paper. He added metal trim on the ends.

Once he anchored the 40-in. 4 by 4 post with roof attached over the upright post, he drilled a hole to run a stove bolt through 1 by 4s on each side of the post and put in several 3-in. screws and short corner brackets under the 40-in. long roof post.

"To add to the non-grip of the PVC, I sprayed it with Rain-X. I added four screw hooks to hang the feeders from. Squirrels and raccoons can eat the seeds the birds drop on the ground from the feeders. I placed the feeder several yards from trees/bushes. Problem solved with much less seed wasted," says Gadaw.

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Gadaw sprayed Rain-X on PVC to make his bird feeder difficult for squirrels and raccoons to climb.



Hiebert's unit is the FP 300 pilot model, which will produce 100 tons of green anhydrous ammonia annually.

On-Farm Green Ammonia Production System

FuelPositive, a Canadian technology company, is inching closer to its goal of activating its first scalable and modular green ammonia production system on the Hiebert farm in Sperling, Manitoba.

The on-farm modular container facility was placed on site in June 2024 and initially expected to be in operation by late July after completing last-minute regulatory obligations. However, due to unforeseen complications, the company discovered that two necessary Manitoba certifications still needed to be addressed.

"We've now taken care of these issues and are moving full speed ahead as we wait on these last Inspection and Technical Services (ITS) approvals," says company CEO Ian Clifford. "We're also working with the Manitoba government on specific project funding for our activation. They're very supportive and excited about our technology."

Clifford expects the Hiebert system to go online in early 2025 and to continue operating year-round. "We'll be running it in the harshest conditions, which is great for us. This will prove it's viable at -40 C (-40 F) or in the worst snowstorms."

The FuelPositive system is modular to manipulate and scale ammonia production better. The Hiebert unit is the FP 300 pilot model, which will produce 100 tons of green anhydrous ammonia per year. FuelPositive will also offer an FP 1500 capable of producing up to 500 tons yearly.

The company is moving its initial manufac-

turing operation from Ontario to the greater Winnipeg, Manitoba, area due to the appeal of hundreds of viable farms, a green power grid, and a supportive government.

"Our focus is Manitoba first," Clifford says. "If we can get it right there, it'll work anywhere in the world. We want to make the province the center of global excellence for this kind of business. After we start up the Hiebert unit and run it for a few months, we'll address the dozens of interested parties waiting to buy."

Clifford hopes to expand on FuelPositive's continuous improvements by working more with Canadian-based resources, suppliers, skilled labor, raw materials, and engineering.

One significant change the company is making is moving from pressurized storage tanks to on-site refrigerated storage systems, as much less steel is required.

"We at FuelPositive are developing a paradigm shift in how ammonia is produced globally," Clifford says. "If we alter the entire supply chain and move production on-farm to empower farmers, it'll have an incredibly significant effect."

The FP 1500 green ammonia production unit will be offered for between 4.5 to 5 million dollars (CAD) plus the cost of site preparation.

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Save Space Growing Potatoes In Bags

If you're looking to maximize your summer harvest despite space constraints, a successful garden might take creativity. One solution is growing potatoes in bags. These "grow bags" are increasingly popular, especially where in-ground gardening isn't feasible. Though some gardeners claim you'll get upwards of 20 lbs. of potatoes per bag, it's better to set your expectations to a harvest of around five to 10 lbs., depending on bag size.

Most grow bags are made of polypropylene, a durable, breathable material available in various sizes. They range in price and are sold at garden retailers nationwide and online. Other options include doubling up trash bags, feed bags, seed bags or even burlap. However, burlap, a natural material, is more prone to rotting. If using watertight bags, be sure to add drainage holes. For best results, choose dark-colored bags that hold around 50 quarts of soil.

Success also depends on choosing the right potato varieties. Potatoes are divided into two categories: determinate and indeterminate. Determinate varieties grow in one layer, and the stem stops growing once the plant produces berries. This means mounding more soil on the plants is a wasted effort. The potatoes are ready early, around 70 to 90 days, but they don't store as well as indeterminates. Popular varieties include Yukon Gold and Kennebec.

Indeterminate potatoes, in contrast, grow in layers along the stem even after fruiting. Mounding soil on top of plants (ensuring the leaves stay uncovered) maximizes yields, making them ideal for potato towers. While indeterminate potatoes take longer to mature (110 to 135 days), they tend to store better. Popular varieties include Russet, German Butterball and French fingerlings, which are especially effective in grow bags.

For best success, set up the grow bags in an easily accessible space. That increases the chance you'll be consistent with watering and upkeep. Consider placing the bags on wooden pallets to prevent direct contact with the ground. It's also wise to pay attention to heat reflection, as container plants are at a greater risk of getting fried. Fill each bag halfway with a mixture of compost and



Photo courtesy of Amazon.com

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potting soil. It's best to avoid soil with too much clay, as that can limit potato sizing. Dampen the mix without soaking it, then set the seed potatoes on top. Each plant requires about 2.5 gal. of soil, meaning a 50-quart bag will support five to six. Cover with 2 in. of dampened soil.

Water the grow bags whenever the soil feels dry, ensuring that it stays damp, not soggy. Leaves and stems should emerge within two weeks. As the plants grow, you'll add more soil to keep the stems buried and producing more potatoes. Shaking shovelfuls of soil over the plants makes it easier to unbury any leaves.

Potatoes are ready for harvest once the plant above the soil line wilts and turns brown. Shovel soil out of the bags until they are light enough to dump into wheelbarrows. Sift carefully, as many small potatoes may be hiding.

Let the bags air out and dry completely before storage for next spring. With proper care, you can use them to reap the rewards of homegrown potatoes for years.



Grady says the hay feeder roof has worked well for over 10 years and even outlasted the first hay ring it was attached to.

Roof Keeps Hay Ring Dry

"We have a small cattle farm, and spoiled hay was a problem," says James Grady. "To keep the hay in a large round bale dry, I added a 6-ft. by 10-ft. metal roof to a round bale feeder."

Grady bolted 1 1/2-in. dia. EMT metal piping to the bale ring as uprights and cross supports. The pipes were attached to a 2 by 6 and 2 by 4 roof substructure, topped with galvanized roof panels.

"I chained a heavy-duty 4-in. dia. pipe to the EMT cross supports at opposite ends of the bale ring," says Grady. "When I want to move the feeder to a new bale, I slip my front-end loader bale spear into the pipe. I can lift

it off the old bale and set it down on a new bale. My 45-hp Kubota handles it easily."

Grady says the hay feeder roof has worked well for over 10 years and even outlasted the first hay ring it was attached to.

"The reason I bolted the EMT uprights in place instead of welding them is that bale rings tend to rust out fast," says Grady. "This way, I was able to move the roof to a new hay ring about three years ago. I bolted it on in just a few minutes."

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