

Sheep pruning black locust trees.



They're Growing Foliage For Forage

Alix Daguin has planted thousands of trees, vines, shrubs, and berry canes to produce nuts, fruit, and forage. Her 14-acre farm, called All for One One for All (AOOA), includes beds of annuals and perennials to provide nectar for the farm's bees and more produce for the farm stand. It also hosts a small but growing sheep flock, as well as 300 egg layers and several 60-bird batches of broilers each year.

AOOA is a non-profit founded in 2019 by Daguin and her mother Ariane. It was the next step for the Daguins. Ariane pioneered chef-quality, ethically raised meats from small farms and ranches in the early 1980's. She

built her company D'Artagnan into a national brand, including Green Circle, her line of slow-growth, naturally raised chicken. Now, she and Alix are pioneering a new concept of food production.

"We wanted to create a system where everything can work closely together with orchard rows and fodder trees and grazing animals moving through the spaces," says Alix. "Our goal is to connect people to a productive landscape. We want them to think about where their food comes from."

The Daguins started with a property that had a dog kennel and nine horse paddocks. It was overgrazed with compacted soil from

too many horses. While her mother spends weekends on the farm, Alix is the hands-on operator.

They purchased the farm in January 2020, and by the end of the year, more than 1,500 trees, shrubs, and vines had been planted. Ducks, chickens, geese, and bees were introduced. That winter, a farm stand was readied for a summer opening.

With the help of a professionally trained forester and a locally raised farm hand, the worn-out fields have been transformed. There are 60 orchard grazing blocks, each with a wide array of vegetation. Fruit to be harvested include apples, cherries, pawpaws, persimmon, peaches, pears, plums, and more. Berries include blackberries, blueberries, raspberries, elderberries, and mulberries. Other trees and shrubs are nut producers like chestnuts and walnuts.

"Instead of using permaculture zones, ours is a more applied system," says Daguin. "We wanted to maximize how sheep and chickens can graze, but we wanted to be able to drive a tractor and trailer through it."

AOOA is still a young operation. Alix is quick to admit they're learning and adapting. Some trees and shrubs didn't work, while others worked even when mistakes were made.

"Seaberries were a total mistake," says Alix. "However, black locust and hybrid poplar have performed well for us."

At one point early on, the sheep girdled many of the black locust trees. Alix cut them short and discovered that they quickly regrew like a bramble. She put a tree tube

on a potential leader and left the others to be grazed. She also practices pollarding, a European method of clipping a young tree to induce more growth.

Alix admits many questions are yet unanswered, such as what happens to the hybrid poplars as nearby chestnuts get big. "It's beautiful on paper but challenging and ever-changing as everything matures," she says. "The diversity is intimidating at times but we see the multiple benefits. Not only do the trees help with erosion, but the shade makes the pasture better and the sheep healthier, and the trimmings provide fodder for the sheep. Branches and uneaten stems are used for brush piles that host wildlife and insects. It's pretty neat to see how it all comes together."

What's also coming together are the educational components of AOOA. They started educational workshops in the summer and fall of 2021. Workshops, including fiber arts, are held for kids and others in the original barn. Eventually, the barn will host a full restaurant. A limited menu currently offers salads, soups, sandwiches and more. In the meantime, it houses a farm store featuring the farm's produce, honey, lamb, chicken, and eggs.

Non-food products include worsted and bulk wool from the Karakul sheep flock. A local weaver makes carpets from the wool and sells them in the store.

Contact: FARM SHOW Followup, All For One One For All, 221 Craigville Rd., Goshen, N.Y. 10924 (ph 845-320-2773; www.alloneoneall.com).

New Style Bellows Built To Last

French entrepreneurs are reinventing protective bellows for hydraulic and pneumatic cylinders using origami folding principles. The unique bellows are a circular tube with polygonal faces that allow it to fold by a factor of 10 as the cylinder retracts or unfolds as the cylinder extends.

"In the beginning, we were exploring using the design technology to make pneumatic cylinders," says Mathieu Cazard, Eclore Actuator. "We saw that the design was very strong and could also be used to make protective bellows."

Eclore bellows are built to last. The polymer bellows have a projected life of 10 million cycles and are resistant to shock, abrasion, ultraviolet light, hydrocarbons, and solvents. They have a temperature range of -40 to 176 F. They also are two to five times more compact and up to six times

lighter than competitive bellows.

According to Cazard, one of the key selling points of the bellows is the length. "Not many manufacturers can offer such stroke length as we do," he says. "Our largest is 100 mm (4 in.) in diameter and 800 mm (31 1/2 in.) long, although there really isn't a limit for length. Multiple bellows can be connected."

Eclore bellows range in diameter from 35 mm (1 1/3 in.) to 100 mm and in length from 100 mm to 800 mm in length. Prices range from 10 to 50 euros (\$10.75 to \$53.76).

The company is introducing bellows with new materials and new shapes this coming year. The current bellows are round. One new style will be in a U-shape, open on one side.

"We'll be introducing two other new products in 2024," says Cazard. "One is a vacuum gripper for use by the robotics industry. The other is for the pneumatic

cylinder market we started exploring in 2019. However, we'll continue to market our bellows."

Eclore Actuators doesn't yet have a distributor in North America. Currently, the company is marketing its bellows in Europe through farm and construction equipment manufacturers and machine tool makers. "We sell directly to OEMs to install on their equipment, as well as to cylinder manufacturers," says Cazard. "Bellows will increase the working life of cylinders, and our bellows are stronger and will last longer than competitive designs."

Contact: FARM SHOW Followup, Eclore Actuators, 2 Rue Robert Le Ricolais, 44300, Nantes, France (ph 02 55 10 42 53; contact@eclore-actuators.com; www.eclore-actuators.com).



Polymer bellows have a projected life of 10 million cycles and are resistant to shock, abrasion, ultraviolet light, hydrocarbons, and solvents.

Tillage And Seeding Machine Improves Soil Sustainability



Renovator is designed to help stop erosion and get maximum benefit from fertilizers.

With soil sustainability in mind, Wingfield Manufacturing has created the 3-pt. hitch Field and Pasture Renovator to limit erosion and accurately place fertilizer.

"We need to stop soil erosion and still get the maximum benefit from our fertilizer," says owner Dean Wingfield. "The best way to do this is by placing fertilizer properly. Our Renovator opens the soil so the roots can go down deep."

The Renovator is available in 6, 8, and 11 ft. lengths featuring four, five, and seven shanks and coulters respectively. Bolt-on wing extensions are optional.

The equipment uses specially designed

mole knives that loosen ground to a depth of 12 in. without bringing soil to the surface. This allows water to soak deep into the ground, reducing runoff losses. Shear bolts protect the shanks and mole knives even in rocky fields.

Knife spacing can be set between 15 and 30 in. without frame modification, plus a hydraulic top link cylinder changes the angle of soil penetration.

Seed and fertilizer applicators or broadcasters can be mounted on the machine or towed behind. Since the mole knives don't disturb the surface, farmers can save trips over the field by renovating and placing seed and fertilizer in fewer passes. The unit can even be used in existing plant growth by changing the shank spacing.

"It's a great product for smaller farmers," Wingfield says. "They're sometimes left out because no one is telling them how to farm small. It's usually about how big you can get and how fast you can pull something."

The Renovators are built on-site in Illinois



Seed and fertilizer applicators or broadcasters can be mounted or towed.

and shipped LTL on pallets throughout North America.

Prices range between \$12,000 and \$15,000 plus S&H, depending on size and options.

Contact: FARM SHOW Followup, Wingfield American Harrow, 5811 N. High Cross Road, Urbana, Ill. 61802 (ph 800-637-6712; info@americanharrow.com; www.americanharrow.com).

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