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He's Growing Bananas In Saskatchewan

Dean Sopher is bringing the tropics to central Saskatchewan, Canada. He raises tropical fruit all winter long.

After doing extensive research on other greenhouse projects, the former home builder built a 3,000-sq. ft. greenhouse for summer and winter use on his farm.

"I had the relevant skills and knew about solar power and calculating the sun's angle in northern regions, so I went ahead and built one," says Sopher.

The all-weather greenhouse is better insulated than a standard house with R60

insulation in the roof and R48 in the walls. Insulation is also placed deep underground to keep frost from creeping in. The south face consists of glazed 8-mm twin wall polycarbonate placed on 2 by 6-in. framing with the glass glazed only where the sun hits. Dark concrete and thermal mass water tanks store the sun's energy by day and release it for heat during cold winter nights.

"Being so far north, my specific design is for our latitude and sun angle. The winter solstice goes down to 14 degrees while the summer solstice is 63 degrees, so there's no

sense in having glazing on the roof when all the heat loss is in the back wall. If I did one in North Dakota, Arizona, or other parts of the world, there would be different modifications to the structure. Here, it's built exactly for the sun's local influence," Sopher says.

The climate in the greenhouse is somewhere between Tropical and Mediterranean and supports numerous tropical plants and fruit, including two types of bananas, three orange varieties, figs, guava, lemons, limes, ginger, passion fruit, eucalyptus plants, and grapefruit. He's expecting a few hundred pounds of oranges this year and 300 plus bananas.

Ten 250-gal. gravity-fed sun-heated rain-water tanks deliver water for the plants but also house tropical tilapia fish.

"They're black tanks, so in the winter, the sun keeps them warm as all the water is a thermal mass," Sopher says. "I fertilize my plants with the dirty fish water when I do changeovers, so I don't have a fertilizer cost."

Due to the sun's angle in summer, it's

cooler in the greenhouse than outdoors. With tropical fruits, he needs the temperature to stay above 10 degrees C in the winter, so he uses a small amount of supplemental natural gas and wood stove heat. His total increase in utility costs for using extra electricity and natural gas on the coldest nights was \$800 for the entire winter. Operational costs are about \$1,000 per year.

Sopher used repurposed material, cull lumber, and cast-off insulation to build the greenhouse and estimates he spent approximately \$60,000, not including labor, working part-time on the construction over 2 1/2 years.

The greenhouse already provides plenty of produce for his extended family. In the future, he plans to sell fresh tropical produce direct to consumers.

He encourages interested parties to check out his free YouTube channel for more detailed information.

Contact: FARM SHOW Followup, Dean Sopher (arkopia@hotmail.com; www.arkopia.ca; YouTube: Arkopia).



Sopher's 3,000 sq. ft. greenhouse grows bananas, oranges, figs, guava, lemons, limes, ginger, passion fruit and grapefruit year-round in Canada.

Aerial Farm Photos Printed On Rugs

Aerial farm photos are coming off the wall and finding new homes on rugs or floor mats, or you can wrap yourself up in a blanket that features your farmstead.

Thanks to Susan David and Les Finemore at Aerial Rug, you can get down on the floor and farm your favorite fields with the grandkids. You can even have your favorite farm reproduced on poker cards, mouse pads, car seats, and more.

David got the idea for farm scenes on rugs while watching her young son play with his toy tractors and thinking how much fun it would be if he could roll his tractors over an image of their farm.

"We came up with the idea late last fall, got a website up, and started taking orders," recalls David. "When we started, we had pre-designed aerial views, but quickly realized people were only interested in custom work."

One of the most interesting aspects of the work they do with Aerial Rugs is the variety of scenes that are submitted. They've reproduced images of feed lots and farmsteads, city views and a small town in Kansas, as well as a fruit orchard in New Mexico.

"We get a lot of requests from people interested in the toy segment with some wanting 1/64th scale reproductions," says David. "That can limit the view to 20 acres with a 5 by 7-ft. rug."

Images submitted vary from old-school fly-over photos to photos of photos and even one taken with a drone. If the desired image is available, simply upload it with an online order. If not, the company may be able to help.

"We have a few places to source fly-over images," says David. "We can produce really high-quality images."

In the months since the business got off the ground, orders have come in from around the country, as well as from other countries. "We've had orders from Mexico, Germany,



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Ireland, and most recently Australia," says David. "There are only a handful of states in the U.S. that we haven't done one for."

Turnaround on the rugs and other items runs from 10 to 14 days for orders in the U.S., once finalized. However, David suggests getting Christmas gift orders in early.

"We'll likely cut off orders the first week or so of December to allow for enough time for manufacturing and shipping," she says.

Images can be printed on polyester blankets starting at \$31.04 for a 30 by 40-in. size. A 5 by 7-ft. outdoor rug with a logo is \$45.25, while a woven rug for indoor use starts at \$135 for a 35 by 63-in. size. Heavy-duty printed floor mats start at \$75 for a 24 by 36-in. size.

Contact: FARM SHOW Followup, Aerial Rug (hello@aerialrug.com; www.aerialrug.com).

Buttercup Chickens: A Rare Backyard Breed

Sicilian buttercup chickens are a rare old-world breed still finding their way into U.S. backyard flocks today. The bird's distinctive cup-shaped comb and golden plumage are reminiscent of the flower blossom that gave the breed its name. The buttercup comb is made of two single combs that connect over the beak and in the back. On the most show-worthy birds, this forms an even "crown" of regularly spaced points on top of their head.

Unlike many chicken breeds, buttercup hens and roosters are different colors. Roosters are reddish-orange with black tails, while hens are golden with black spangles across their back. But what both sexes have in common are striking green legs with yellow feet.

This heritage bird hails from Sicily. Sicilian farmers bred birds with similar combs as the Buttercup for centuries but didn't actively select for the yellow comb and green legs that the breed is now known for.

Buttercups were first introduced to the United States around the 1830's when they were brought on a ship to provide meat for the passengers. However, their friendly nature and large eggs soon won them fans, and the passengers decided to continue raising them on land.

A buttercup chicken breed club was formed in 1912 that quickly amassed hundreds of members. By 1918, buttercup chickens were recognized in the American Poultry Association *Standard of Perfection*. A bantam variety was developed in the mid-1900's and gained admittance to the APA Standard in 1960. However, their popularity was short-lived, and the breed slowly lost traction in the United States to more prolific egg-layers. These non-broody birds will produce between 140 to 180 eggs a year, making them a fairly mediocre producer.

Buttercup chickens don't do well in the cold. They're excellent foragers that thrive in



Photo courtesy of Jeannette Beranger/The Livestock Conservancy.

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free-range conditions, especially when given access to a compost pile to scratch around in. Just be warned they might not stay out of your landscaping. Personality can vary significantly by bird, with some strains being friendly and inquisitive around people and others semi-feral. Socialize them early, and they should do well in your yard.

Like many heritage breeds, buttercup chickens fell into near-obscurity in the 20th century as commercial egg production began to take off. A few dedicated breeders kept the strain from facing extinction and contributed to their resurgence today.

While Buttercups remain rare, it's possible to find breeders nationwide. Connect with the Livestock Conservancy to learn more about this special Sicilian chicken.

Contact: FARM SHOW Followup, The Livestock Conservancy, P.O. Box 477, 33 Hillsboro St., Pittsboro, N.C. 27312 (ph 919-542-5704).