

Land Investment Monthly - December 2020

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Photo: Omar Ornelas/The Desert Sun

Singapore, a City of Skyscrapers and Little Land, Turns to Farming

Land is so scarce in Singapore that the government continually reclaims territory from the sea to build new urban infrastructure.

Instead, businesses are trying to reinvent agriculture. Industrial buildings are being converted into vertical farms with climate-controlled grow rooms. Rows of lettuce and kale are nourished not by soil, but via automated drips of nutrient-infused water. LED lights substitute for the sun.

More than a dozen such high-tech farms have sprung up in recent years, some in the midst of semiconductor factories and car dealerships. One company converted the rooftop of a parking garage into a greenhouse where lettuce, basil, and a popular leafy green called choy sum are grown for supermarkets. Another plans to expand fishery operations after online orders for Asian sea bass surged.

The government's goal is to have 30% of the island's nutritional requirements produced in Singapore by 2030, up from less than 10% today—a target some say would be a heavy lift. [Read More](#)

USDA Exempts Family Farms from Limit on Farm Subsidy Recipients

In a reversal, the USDA said on Wednesday that family-run farms are not subject to a rule that tightens eligibility standards for crop subsidies — the opposite of what it announced three months ago. A small-farm advocate criticized the “correction,” which applies to the bulk of U.S. farms, as a violation of the rule-making process and encouraged the incoming Biden administration to void it.

At issue was an Aug. 24 regulation that requires people to perform at least 500 hours of active management or at least 25% of the management work needed in a year on a farm in order to qualify for a subsidy check as a manager. Almost [96%](#) of farms in America are family-owned, so the new standard was [hailed by reformers](#) as a step against farm program abuse.

Congress has tried since 1987 to limit crop subsidy payments to those “actively engaged” in farming, defined as providing land, funding, or equipment to an operation as well as performing labor or management. But there have always been ways to get around the limits. The maximum payment per person is \$125,000 a year. In 2018, the Government Accountability Office reported finding a farming operation that had received \$651,000 in subsidies in 2012, with 16 of its 22 members claiming they had provided active management. [Read More](#)

The Future of Residue Management

As crop genetics improve and the push for conservation tillage practices grow, so does the need to reevaluate how to manage and slice through residue across seasons.

The gold standard of conservation tillage has long been no-till. But Justin Render, farmer and product specialist with Kinze Manufacturing, has seen staunch no-till and vertical-till farmers switch their practices and take advantage of hybrid tillage equipment.

“These farmers often use hybrid tillage machines as a kind of rotational piece. It comes down to the way our genetics are changing and making plant material more difficult to break down,” Render explains.

Render, who calls himself a “dirt nerd,” says strategically utilizing tillage helps break residue into smaller pieces. Smaller pieces have more points of entry for the soil microbes to break down and incorporate the material faster. This improves nutrient cycling and soil density, and also helps reduce the risk of erosion, particularly following cover crops. [Read More](#)

These CRISPR Edited Seeds Are Planting A Sustainable Future For The Agricultural Industry

Agriculture is one of the most inefficient industries on the planet. Current industrial farming methods demand unsustainable amounts of water, fertilizer, and land. This demand will only intensify as our global population climbs towards 10 billion by 2050. To sustainably feed our world, we need a second agricultural revolution.

It’s no surprise to find synthetic biology leading this revolution. To disrupt and transform old industries, we need to work with nature, not against it. That’s the philosophy behind [Inari](#), one of the newest companies reimagining the agricultural space. Inari is leveraging the gene-editing technology CRISPR to build the

world's first Seed Foundry™. We spoke with Ponsi Trivisvavet, CEO and director of Inari, about the company's process and vision for the future of agriculture. [Read More](#)

Farmworkers should be prioritized for COVID-19 vaccine, coalition of advocacy groups says

California farmworkers, who have been hard-hit by the coronavirus as they have grown and harvested fruits and vegetables throughout the pandemic, should be prioritized for the COVID-19 vaccine when a safe and effective one becomes available, according to a coalition of 11 farmworker advocacy organizations.

Acknowledging that many agricultural workers distrust the country's health care system, the organizations are also calling on state officials to begin working immediately, alongside community organizations, health promoters, labor groups and faith communities, on a targeted public health campaign that educates workers about the vaccine and addresses any fears. [Read More](#)