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THE HINDU BusinessLine

A cool solution for farmers



In Nigeria, ColdHubs' solar-powered walk-in fridges are helping to reduce farm produce waste

For millions of Nigerians in rural Kaduna state, a trip to an outdoor food market provides cheap and ready access to the staples of a traditional diet. In a normal week, dozens of wicker baskets overflow with ripe tomatoes, an essential ingredient in the rich stews favoured by locals.

Yet, over the summer, market-goers were dismayed by the spiralling costs of a fruit that has come to be seen as a national necessity. After a moth epidemic ravaged some 80 per cent of the region's tomato farms in May, sending the price of a basket zooming from \$1.20 to more than \$40, Kaduna's authorities were forced to declare a state of emergency.

Kaduna's 'tomato emergency' was triggered in part by a national dip in food production that has Nigeria's food security experts very concerned. In the north-east, production in large parts has been all but abandoned in the face of continued attacks by Boko Haram militants, putting millions at risk of famine.

Yet, even in areas where food production remains strong, poor handling, storage and delivery methods mean that much of Nigeria's food is spoiled before reaching those in

need. In a bid to minimise post-harvest losses — which the government estimates could be higher than 50 per cent for some fruits and vegetables — businesses are beginning to develop new technologies to assist farmers.

Enter ColdHubs

For one entrepreneur, the causes of post-harvest losses are obvious. “Most of the spoilage starts on the farms because delivery trucks don’t visit farmers every day,” said Nnaemeka Ikegwuonu, Chief Executive of ColdHubs, a cold storage company.

“Sometimes it takes three or four days for trucks to get to the farm. So, these farmers keep the food in a shed or try and cover it, but by the time the truck comes in, the food is already spoiled. The trucks take a long trip to the market, and the spoilage accelerates.”

That’s a problem common to farms across the continent. In 2011, the UN World Food Programme estimated that annual food losses in Sub-Saharan Africa exceeded 30 per cent of the total crop production and cost farmers some \$4 billion in value every year.

ColdHubs offers a simple solution. It installs walk-in refrigeration units near farms and markets in an effort to preserve valuable crops in the crucial period before they reach consumers. Tomatoes, which would have rotted near the vine, are swiftly dispatched to a nearby unit, where farmers are charged around 50¢ per crate per day to cool the produce.

ColdHubs abides by a pay-as-you-go model, which allows farmers to dodge pricey storage agreements that tie them to excessive payments regardless of production.

Expanding the network

What’s more striking is that in a country where 95 million people are estimated to have no access to electricity, ColdHub refrigeration units are entirely solar-powered. Whether the units are installed in remote rural villages or bustling urban markets, the power of the sun can be harvested to save, rather than spoil, produce.

It’s an affordable and eco-friendly model that does not need expensive infrastructure; it’s a model that the company believes can be quickly rolled out across the continent, beginning with further expansion in Nigeria and a potential franchising scheme in Kenya.

“In five years, we want to have 1,000 units installed in Nigeria, and in the future, there could be 1 million units all over Africa,” said Ikegwuonu.

“We’re very ambitious because there’s lots of market opportunity. You can use them in schools, hospitals, airports — anywhere you need to store food.”

For hawkers and worried consumers in Kaduna, it may be the first step towards ensuring that 2016's tomato emergency remains little more than an unpleasant memory.

Mixed trend in pulses



INDORE, NOVEMBER 2:

Pulses and pulse seeds showed a mixed trend on `muhurat trading' with tur (Maharashtra) declining to ₹5,800, tur (lemon) ruled at ₹5,900, while tur (Madhya Pradesh) quoted at ₹5,000-5,200 a quintal. Tur dal (sawa no.) being quoted at ₹9,200-9,300, tur dal (full) ruled at ₹10,200-11,300, while tur markaquoted at ₹10,800-900. Moong (bold) being quoted at ₹4,900-5,100, while moong (medium) ruled at ₹4,200. Moong dal (medium) being quoted at ₹5,900-6,000 , while moong dal (bold) at ₹6,000-6,100. Urad (bold) rising to ₹6,800-7,000, while urad (medium) ruled at ₹6,000- 6,200. Urad dal (medium) being quoted at ₹8,500-8,700, urad dal (bold) at ₹9,000-9,200, while urad mongar ruled at ₹11,300-500 a quintal respectively.

Top grade accorded to Cuttack semen bank by Ministry of Agriculture and Cooperation

BHUBANESWAR: The Ministry of Agriculture and Cooperation has accorded Grade A to Cuttack-based Frozen Semen Bank (FSB).

Of 56 semen stations in the country, 32 got Grade A and FSB, Cuttack was one of them. Fifteen stations got Grade B and two were rated as non-graded by the Central Monitoring Unit (CMU). Two semen stations have not been evaluated.

The CMU, constituted by Department of Animal Husbandry, Dairy and Fisheries of the Union Ministry, evaluates FSBs based on various parameters such as management of donor bulls, disease protocol, semen collection procedure, laboratory practices, bio-security and progeny testing.

The good performance of FSB, Cuttack is also seen as the result of establishment of andrology laboratory, incinerator, improvement in bio-security measures, isolation shed, hydroponic unit, maintenance of pedigree record and progeny testing programme for evaluation of bulls as per the recommendation of CMU from time to time. It is also going to induct Binjharpuri bulls for which seven calves have already been procured.

The FSB, Cuttack was established in 1978-79 under Indo-Danish collaboration and saw upgradation under various national projects.

Anna University shows the way in water conservation



CHENNAI: The bustling Anna University campus generates over 3.50 lakh litres of waste water each day. While most of Chennai is letting such sewage into the heavily polluted Adyar and Cooum rivers, the university is quietly raising a greenbelt watered by the waste recycled in the campus.

By ensuring that the waste water generated by the departments, canteens and hostels is recycled, the campus has managed to save as much as 3.50 lakh litres a day. Using this, it now has a greenbelt consisting of landscaping and gardening, and ornamental plants spread across over 32,000 square metres, shrubs and evergreen trees in another 18,000 sqm, said Centre for Environmental Studies director Dr S Kanmani.

The university used to discharge the waste into the nearby Adyar river till 2000. But the then vice chancellor, A Kalanidhi, suggested setting up the greenbelt. In the initial years, however, students used the sewage treatment plant for their research. "In 2010, it was modernised with latest facilities," added horticulture expert in the university, K Muruganandam.

Explaining the network, Prof Kanmani said the treatment plant collects the waste water from all sources and puts it through various stages of cleaning. Organic waste is removed and the water undergoes various stages of purification and treatment, including biological processes. The cleansed water is then sent to seven distribution sumps and from there to the sprinkler system for gardening.

Meanwhile, the sludge is de-watered in a drying bed, and later used for manure instead of chemical fertilisers.

Business Standard

Scientists discover green rice in Chattisgarh



Chhattisgarh has discovered a new variety of rice that is light green in colour.

Though the development is at an early stage, scientists in the state have started scientific study of the variety. Only after conducting a detailed research, the scientists will come out with the character of the seed.

“The seed discovered is rare and is light green in colour,” A K Sarawgi, head of department of genetics and breeding in Indira Gandhi Agriculture University, told Business Standard. The university is conducting an in-depth study of the variety, he added.

The seed sample was provided to the university by farmers from Dhamtari and Durg districts. The farmers had stocked the sample as the variety was discovered far back and the farmers had even taken the crop.

Based on the sample, the university scientists were conducting the study. According to Sarawgi, the result will provide the additional characters of the variety that include its medical benefits, crop economy.

This year, farmers were given sample seed for multiplying. The scientists were waiting for the harvest that would enable them to further study the variety's character. More varieties of paddy seeds were expected to come out in the state.

Chhattisgarh is traditionally known as the Rice Bowl of India. Over 20,000 rice varieties have been recorded in the region. These are a result of centuries of rice farming through selection and adaptation to a variety of soil, water and micro-ecosystems conditions including predators.

According to experts, the varieties were extinct following market forces promoting high-yielding varieties and synthetic fertilizer and pesticide-based cropping.