

Refrigeration - 'Sparky Dryer' and 'Cold Hubs' mean cold food in hot sun

Food waste is a big problem in Africa. Farmers in Africa harvest food but 50% goes bad before they can sell it. Why? Because there is no electricity and no refrigeration. Refrigeration helps to keep food fresh. Millions of people in Africa are hungry. If we can find a way to keep food fresh we can feed 300 million hungry Africans.

Now, maybe there is an answer; 'Cold Hubs' and 'Sparky Dryer'. 'Cold hubs' are small rooms. They get electricity from solar power cells on top of the room. You can put your crates of fresh food in there and they will stay fresh for up to 21 days. This is enough time to take the food to market and to sell it.

Farmers put their harvest in the 'cold hubs' and they pay a flat fee per day for each crate of food. Each hub uses 1KW (kilowatt) of electricity. So it is cheap. Also, if there isn't any sun the 'Cold Hub' can operate for three days. If farmers use 'Cold Hubs' to store fresh food, they can save 80% of their cost of lost food. Farmers can store meat, fish, fruit and veg.

Uganda is in East Africa, They have more refugees than any country in Africa. They produce more food than they eat but there are food problems. The United Nations World Food Programme says one in three schoolchildren in Uganda doesn't have enough to eat.

But maybe there is an answer. 'Sparky Dryer'. 'Sparky Dryer' dries food. It dehydrates it. It uses bio-fuel from farms and burns it. Bio-fuel means sticks or leaves and has zero-carbon emissions. This can dry fruit like mangoes, guavas, pineapples. It can also dry cereals like maize and sorghum.

This is another example of how African technology can lead the world. It's called alternative technology. It uses natural energy. It uses the sun, water and air to make electricity.

If African scientists can invent this they can use it everywhere in Africa. But they can use it in other hot countries too. As the world becomes hotter, maybe African scientists will be the most important inventors of global energy solutions.

New words for this article

food waste	food that you can't eat because it is bad.
to keep fresh	to continue to be fresh
harvest	collect food on the farm when it is ready to eat.
refrigeration -	make food cold electronically.
solar power cells -	sun power not electric power
crate	a large box for food (or other things)
flat fee	one small price
to store	to put in a place where you can find it
to dehydrate	to make something dry
To burn	Make a fire and light it

Comprehension Questions

1. What power do 'Cold Hubs' and 'Sparky Dryers' use?
2. How much fresh food becomes waste in Africa?
3. How many people need fresh food but don't have it?
4. How long is food fresh in a 'cold hub'?
5. How much electricity does a cold hub use?

Answers
 1 solar power/ solar energy
 2 50%
 3 About 300 million
 4 21 days
 5 1 kilowatt

Answers