



- ◊ Read the script and note new vocabulary
- ◊ Write three sentences using new vocabulary
- ◊ Prepare for the discussion questions

**Starting
Off**

This video looks at the growing trend known as vertical farming which aims to eliminate transportation and energy costs while growing great local food.

- 1 Read the **Video Script** below. The words in **bold** are defined in the **Vocabulary** section. Look up any new words in a dictionary.
- 2 Go to the **Your Turn** section at the end of this document. Practice using new words and expressions from the video script to prepare for your next class.
- 3 Look at the **Discussion Questions** and prepare your responses for the next class.

Video Script:

Journalist: Early morning at Sky Greens, and farmer Jack Ng is checking on his **crops**. This is Singapore's farm of the future. Instead of taking up large **tracks** of land, these plants will grow to maturity in **troughs** like this, stacked on aluminum towers. It's called 'vertical farming'. Sky Greens has **patented** this system of rotating vertical racks.



Jack Ng: Singapore is a **land scarce** country, so if we want to produce our own food, we must go for high productivity.

Journalist: At the heart of this system is a water wheel; an ancient idea adapted to modern use. Here it is powering the **pulleys** that move the racks of plants. The farm says the water wheel pump for one tower only needs the amount of energy it would take to power a light bulb. Instead of watering from above, the troughs of plants slowly rotate up and around the towers, **eventually** passing through a base of circulating water.

Jack Ng: So the plants don't over-stress under the hot sun. At the same time they can get nutrients and water equally.

Journalist: The water is then recycled back and then filtered before returning to the plants. This method requires far less water than traditional farming. The farm is also experimenting with water from its own **ponds** where fish help keep the water nutrient-rich.

Sky Greens has just over 100 of these towers in operation with a goal of producing over 2,000 by 2014. The company also hopes to eventually sell its technology in other countries.

This is the first venture into vertical farming in Singapore, and the country is **eager** for high-tech agriculture. With land **at a premium**, traditional farming has been largely **phased out**. The country imports more than 90% of its food. The farm has **backing** from the government which sees the value to the food supply but also sees the commercial value of this type of **sustainable** farming.

Video Script continued on next page...

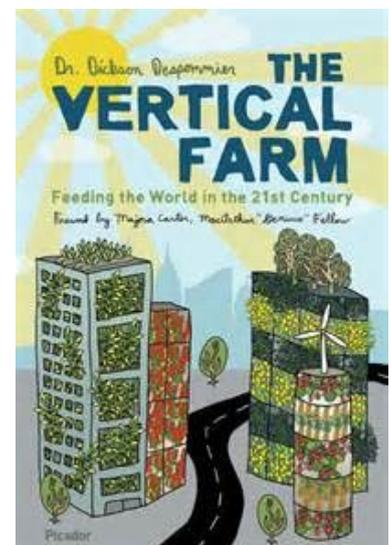
Discussion Questions:

- ◊ Are you concerned at all about the regular practice of importing produce grown from distant countries around the world to your local bodega? Why or why not?
- ◊ What are some of the ways we might be able to encourage the production and consumption of more local food?
- ◊ Have you ever heard of vertical farming? If so, what do you know about it?

Vocabulary:

- **crops** - cultivated plants, fruits and vegetables
- **tracks** - areas of land
- **troughs** - canal shaped containers
- **patented** - secured exclusive rights to the invention
- **land scarce** - not having much usable land
- **pulleys** - rope system connected to wheels that that enable objects to moved vertically
- **eventually** - at some point in time
- **ponds** - small natural pools of water (smaller than lakes)
- **eager** - enthusiastic, excited
- **at a premium** - in demand, scarce, and very expensive
- **phased out** - eliminated over time
- **backing** - support
- **sustainable** - able to be continued over a very long or indefinite period of time

Vocabulary continued on next page...





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Video Script continued...

From the tower to the supermarket compared to imported food, locally-grown food cuts down CO₂ pollution emitted during transport. The **fledgling** has enough volume to place its produce in only a **handful** of stores in Singapore's major local chains, but the supermarket says that in two months sales have **climbed** by 40%.

Supermarket manager: The customers are fully aware that this is coming from the local farm. They know they are able to get fresher vegetables.

Journalist: And customers seem happy to buy Singapore-grown vegetables.

Customer: It's freshly picked this morning... For me, preparation is very easy.

Journalist: Sweet and sustainable. If you want to solve the problem of growing food where land is scarce, reach for the sky!

Liz Neisloss, CNN, Singapore

Vocabulary continued...

- **fledgling** - a business just starting out
- **handful** - a few
- **climbed** - grown

