

are right recipe, say experts

Food for thought

While none of the fruit, vegetables or pork we tested contained any pesticides, some surprising findings emerged. These are the most significant

KEY	
Metals	
Nutritional values	
Nutritional values (Organic)	

APPLES 100g

Price: Wellcome (HK\$2.23), wet market (HK\$3), City'super (HK\$9.50, organic, US; and HK\$6, organic, Australia), Great (HK\$9.99, organic, France), ThreeSixty (HK\$7.50, organic)

Chromium (mg/kg)

FDA standard <0.1

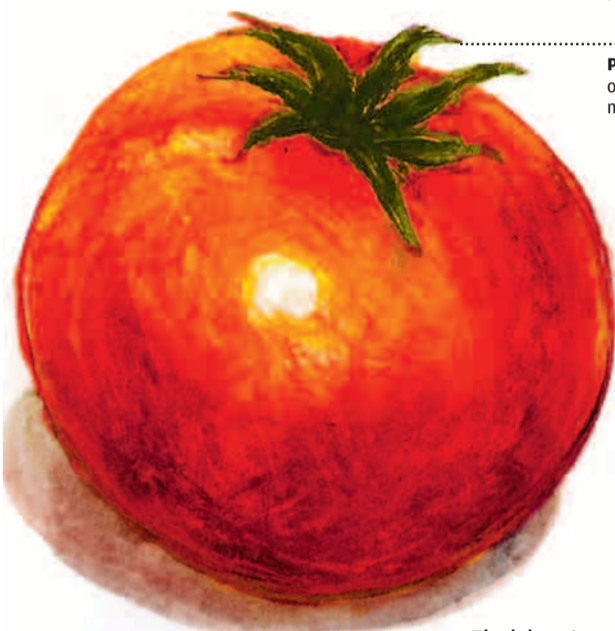
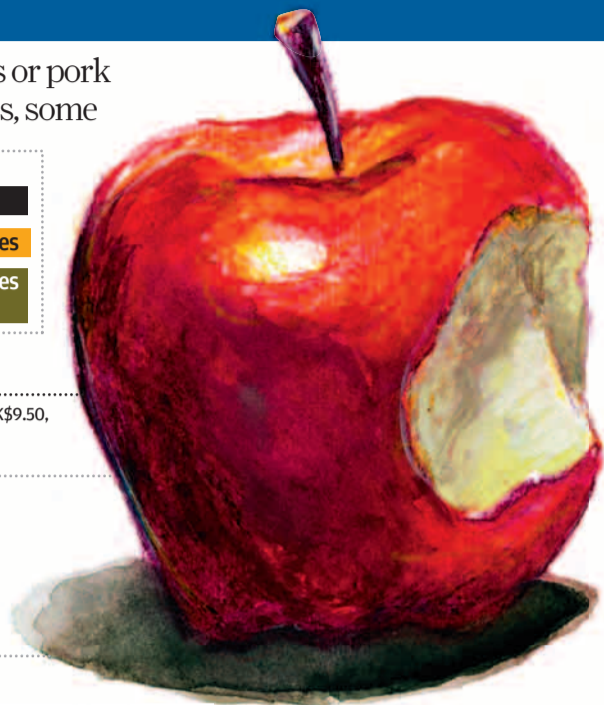
City'super* **0.2**

Great **0.13**

Other samples came in under FDA limit

Nutrients

All samples had very similar nutrient levels



SMP GRAPHIC

TOMATOES 100g

Price: Wellcome (HK\$1.65), wet market (HK\$2), City'super (HK\$7.33, organic, HK\$12 on-the-vine from Holland), Great (HK\$15.80, organic, mainland), ThreeSixty (HK\$8.30, organic from Malaysia)

Lead (mg/kg)

FDA standard 0.1

City'super* **0.11**

Other samples came in under FDA limit

Beta-carotene

All tomatoes - whether organic or not, expensive or cheap - contained nearly identical levels

Vitamin E (mg/100g)

Wellcome **0.63**

Wet market **1.06**

City'super* **0.6**

Great **1.49**

ThreeSixty **0.92**

BROCCOLI 100g

Price: Wellcome (HK\$4.90), wet market (HK\$4), City'super (HK\$23.90, Australia), Great (HK\$25.39, France), ThreeSixty (HK\$12.90, Malaysia)

Lead (mg/kg)

FDA standard 0.1

Wellcome **0.15**

Wet market **0.11**

Other samples came in under FDA limit

Chromium (mg/kg)

FDA standard <0.1

Wellcome **0.27**

ThreeSixty **0.49**

Other samples came in under FDA limit

Calcium (mg/kg)

Wellcome **552**

Wet market **395**

City'super **282**

Great **578**

ThreeSixty **578**

CARROTS 100g

Price: Wellcome (HK\$1.38), wet market (HK\$2), City'super (HK\$5.50, organic, Great (HK\$13.27, organic, US), ThreeSixty (HK\$8.30, organic, US; HK\$10, organic, Japan)

Chromium

Wet market carrots

exceeded FDA

standard by

34%

Beta-carotene (mg/100g)

Wellcome **2.02**

Wet market **2.1**

City'super **2.92**

Great **4.30**

ThreeSixty* **4.54**

Potassium (mg/kg)

Wellcome **595**

Wet market **1,693**

City'super **2,780**

Great **2,280**

ThreeSixty* **2,841**

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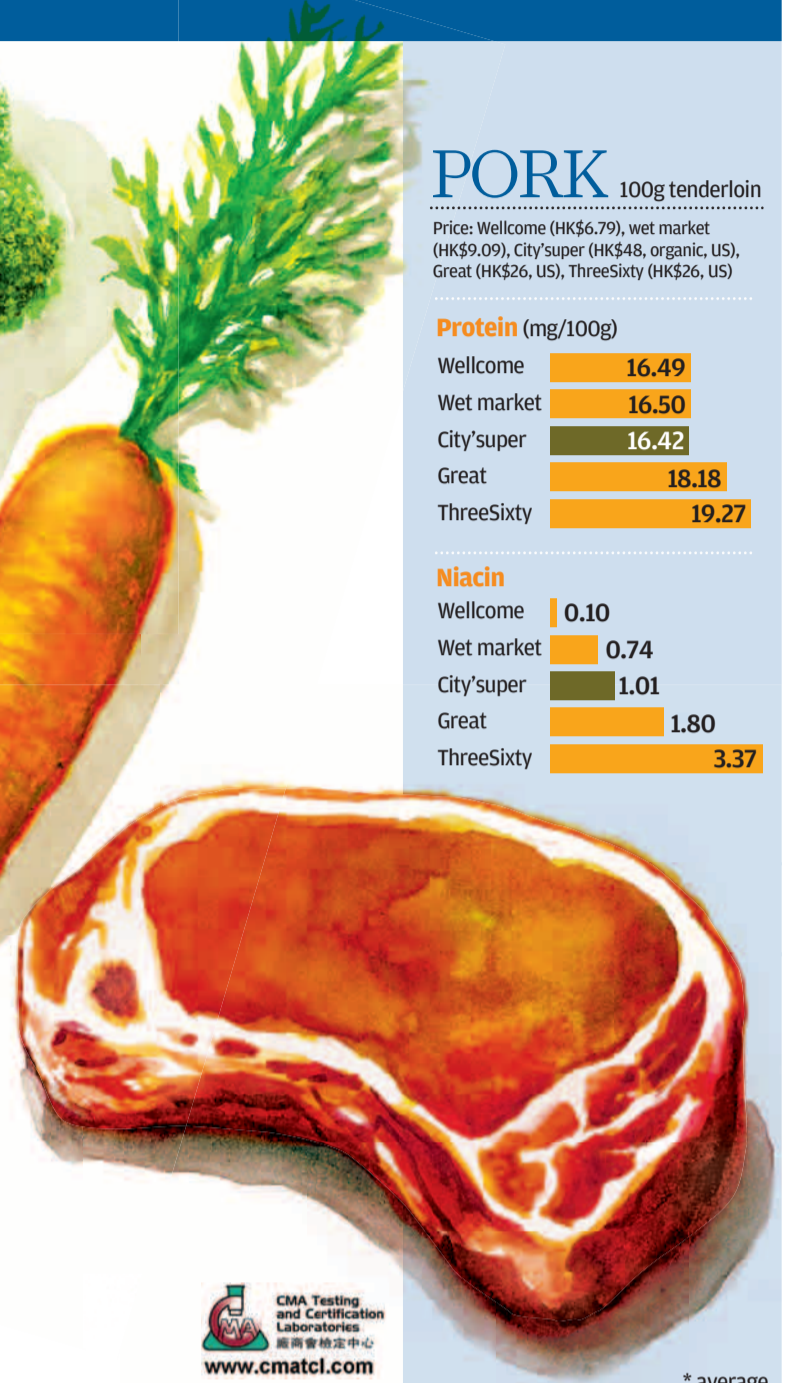
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PORK 100g tenderloin

Price: Wellcome (HK\$6.79), wet market (HK\$9.09), City'super (HK\$48, organic, US), Great (HK\$26, US), ThreeSixty (HK\$26, US)

Protein (mg/100g)

Wellcome **16.49**

Wet market **16.50**

City'super **16.42**

Great **18.18**

ThreeSixty **19.27**

Niacin

Wellcome **0.10**

Wet market **0.74**

City'super **1.01**

Great **1.80**

ThreeSixty **3.37**



www.cmatcl.com

* average

The laboratory which carried out the tests used US Food and Drug Administration (FDA) standards, which are stricter than those in force in Hong Kong

SOURCE: CMA TESTING AND CERTIFICATION LABORATORIES

Going organic may not be worth the money, study finds

Daniel Sin

Many health-conscious people seek out imported and "organic" foods, assuming they are safer and more nutritious than other products. But are the supposed nutritional benefits worth the cost?

The *Sunday Morning Post* tested samples of broccoli, tomatoes, carrots, pork and apples bought at a wet market, the Wellcome supermarket chain and upmarket grocery stores City'super, Great and ThreeSixty. Many of the products were imported, and advertised as organic. The tests

measured levels of potassium, calcium, beta-carotene, niacin and vitamin E. Organic foods are those grown without chemical fertilisers and pesticides and supposedly free of human or industrial waste contamination.

Food purchased from high-end shops was found to be generally more nutritious but cost much more than items bought at a local market or supermarket. Organic carrots from City'super contained five times as much potassium as mainland carrots from Wellcome - but they cost four times as much. Potassium helps keep the heart and brain healthy.

Organic Australian broccoli costing HK\$64.90 per 300 grams from ThreeSixty had the most calcium among the samples. Broccoli from Wellcome had almost as much calcium, but at one-fifth the cost. Calcium helps build strong bones and teeth, and helps prevent osteoporosis.

Beta-carotene is a nutrient that the body can transform into vitamin A, and aids night vision and some eye problems. It is also thought to help slow the ageing process. Organic carrots from City'super and Great, which cost HK\$16.50 and HK\$39.80 for 300 grams, respectively, contained

twice as much beta-carotene as those from Wellcome or the wet market, priced at HK\$4.14 and HK\$6.

Many people concerned about cholesterol look for food containing niacin, or vitamin B3, which helps reduce cholesterol build-up, lessening the risk of heart attacks. The tests showed that the amount of niacin in pork tenderloin imported from the US, selling for HK\$87.90 per 300 grams at ThreeSixty, was three times as high as in organic pork offered by City'super for HK\$208.60.

Pork bought from a wet market for HK\$31 contained 97 per cent less niacin

than the same cut from ThreeSixty.

Vitamin E was most plentiful in organic mainland tomatoes from Great, which contained 60 per cent more of the nutrient than Malaysian tomatoes that cost HK\$10.10 more per 300 grams. Vitamin E helps ease heart problems and improves metabolism and the immune system.

Sylvia Lam, chairwoman of the Hong Kong Dietitians Association and a senior registered dietitian, said that although higher-end food products seemed to be more nutritious, they might not be worth the cost.

"When we take a look at the amount of nutrients, the difference is not significant enough to justify the price [difference]," she said.

"What matters is the nutrient content and overall balance of the diet as a whole. A varied and balanced diet that includes plenty of fruit, vegetables and starchy foods should provide all the nutrients that a healthy individual requires, whether the ... components are produced by organic or conventional methods."

Even the Centre for Food Safety suggests that organic food does not guarantee better nutritional value. A

spokeswoman for the centre said: "Overseas studies and international bodies show that foods grown organically do not have any significant differences in respect of nutrition and food safety. To maintain good health, it is essential to eat a balanced diet that includes a wide variety of food to ensure sufficient intake of various nutrients necessary for health."

The centre said organic and conventional products were processed and handled differently but were no different in terms of safety. The centre tests organic food in the same way as other food products.



Chiu Hoi-wah and his wife, Yuen Kam-yuk, began eating organic food for health reasons, even though it is more expensive. Photo: Dickson Lee

Health fears prompt changes in eating habits

Yau Chui-yan

Eating organic food makes the Chiu family feel safer, although they are not really sure about what they are buying.

Chiu Hoi-wah, 60, and his wife Yuen Kam-yuk, 53, have been big fans of organic food for three years. They opt for organic vegetables and organic salt and sugar. They also make their own bread with organic nuts and raisins.

Another new discovery is organic detergent, made of grapefruit. "Only a tiny bit can generate lots of foam, without any chemical," Mrs Chiu said.

When they heard about organic pork, Mrs Chiu said: "I would like to have a try, if it is available."

Mr and Mrs Chiu, who both

worked as hospital counsellors before their retirement, realised that cancers could be caused by many factors - including eating the wrong type of food over a long time.

They then realised it was about time they changed their eating habits.

First, they bought organic vegetables from a temporary market outside Immigration Tower in Wan Chai every Sunday.

"It is inconvenient as the market is only open on Sunday and it closes around noon, which is too early," Mrs Chiu said. "We have to buy quite an amount and put it in the fridge for a week."

Although it was not easy to get organic vegetables, the couple were fed up with soaking vegetables in water for an hour before cooking to remove

pesticides. Now they try to get organic vegetables every day at a shop near Wan Chai market.

They agree, though, that organic food is expensive. "For example, organic radishes cost HK\$20 to HK\$25 per catty [about 600 grams], but regular radishes cost only HK\$8 per catty," Mrs Chiu said, before adding that spending the extra

money was worthwhile. However, the couple agree they cannot prove the food they buy is organic.

"It is only a matter of trust. Maybe we are being cheated, but we don't know," Mr Chiu said.

He hopes a recognised institution like the Consumer Council will register and provide more information about organic food.

Another shopper, Tomoko Shirashi, buys organic potatoes, onions and broccoli to prepare meals for her family. She shops for organic food three to four times a week, and says that while it is expensive, it gives her confidence her family is safe.

"I have three children and they eat a lot. It costs me quite a lot. I am not sure if organic food is good for our health as we are healthy. But I want to be safe."

Clean bill of health delights local expert in organic agriculture

A local organic-agriculture consultant is surprised by results that Hong Kong's farmed foods are largely free of pesticides and heavy metals.

"If that's the case and it is verified by a lab, I'm delighted," said Bruce Derrick, who has advised clients in Asia for 35 years on fertiliser production, mushroom cultivation and open agriculture projects.

Mr Derrick would have predicted that locally grown foods would show some form of contamination - considering Hong Kong once relied heavily on chemical fertilisers, as well as dangerous pesticides, herbicides and fungicides.

While he believed evidence of tainted soil would "inevitably crop up" in further tests, the 71-year-old expert did agree with the latest findings that organically grown foods contained more nutrients and were more expensive.

"If you ever tasted something that is 100 per cent organic, whatever it is - whether it's meat from an animal that's fed organically or whether it's a vegetable or a fruit - the taste is incredibly different from something that's been raised in chemicals," Mr Derrick said. Organic food, however, should not cost more, he noted.

Globally, organic-food farmers do not use expensive pesticides and fertilisers. They are making their own, he said.

"If it's organic, it should cost the same or preferably less," said Mr Derrick, adding that organic foods have fallen victim to "commercial exploitation".

Mr Derrick maintained that most of Hong Kong's organic-food farmers use methods that are not completely organic. Either the soil is not rehabilitated, fertilisers are not all natural or the employees are not professionally trained, he said.

"The organic people here are great, well-meaning nice people and doing their best, but they're not professional," he said. "They haven't studied the thing, and are [not] doing it the way it should be."

Mr Derrick, cited as an Outstanding



Bruce Derrick has a blueprint for a model farm. Photo: Jonathan Wong

Earth Champion by the Earth Champions Foundation last year, has also some interesting ideas for addressing the world's food shortages. He has blueprinted a model, a self-sufficient farm that can feed 5,000 to 10,000 people a day.

"This can be done anywhere in the world," said Mr Derrick. "I envisaged something like this 30-odd years ago, but the technology in certain aspects was not available. Now it is."

Mr Derrick's dream farm would cover 50 hectares. It would run 24 hours a day with 300 workers on 12-hour shifts. A thousand cattle and 1,500 pigs would eat organic materials before

being slaughtered at a farm-based abattoir, located near research and development workshops and laboratories. Five thousand free-range chickens would roam. Twelve thousand eggs would be handled per week. A mushroom farm would produce five tonnes of fungi a day.

The US\$250 million project, "recoverable over five years", could be built on an island, inside a city centre, even on retired aircraft carrier or a tanker, Mr Derrick said. "We need to produce food and it can be produced on a continuous, high-quality basis."

On his farm, waste would flow into a biogas digester, a contraption that would produce methane for generators and provide carbon dioxide for 50-metre-high greenhouses. Solar panels would generate electricity and heat water.

A 4.5-million-litre freshwater reservoir would be filtered and purified. Nearby trout and yabbies would swim.

Asked why this project was so important to him, Mr Derrick replied: "Why do you buy your wife a diamond necklace?" His answer, with a smile: "Because it needs to be done."

Dan Kadison