

Press release for immediate dissemination

Hong Kong Organic Resource Centre's annual surveys
Press conference on pesticide residues in vegetables and
sales practice of organic produce in wet markets
70% of vegetables are tainted with pesticide residues

Anti-pandemic highlights: chef Edwin Tsui on organic recipes and ambassador Sammy Leung on virus-fighting tips

[Hong Kong 28 April 2020] Our city's only internationally recognised organic certification authority, Hong Kong Organic Resource Centre (HKORC) of Hong Kong Baptist University, held a press conference to reveal results of "Pesticide Residues in Hong Kong's Vegetables Survey" and "Study on the Labelling of Organic Vegetables in Local Wet Markets" on Tuesday, 28 April. Star chef Edwin Tsui and Organic Star Ambassador Sammy Leung were also present at the press conference to disseminate anti-pandemic health message.

"Pesticide Residues in Hong Kong's Vegetables" survey results:
2 local self-claimed choi sum samples contained excessive pesticide residues

Nowadays, fearing of being infected, many people choose to stay home and avoid going out for meals. With enough practices and through trial and error, lots of them even unexpectedly turned into "gourmet chefs". When choosing what to cook, people's awareness of quality, safety and health benefits of food are heightened, as never before.

In the last quarter of 2019, HKORC collected a total of 58 vegetable samples from wet markets, shops, organic product shops and organic farms across 18 districts, for testing their heavy metals contents (antimony, arsenic, cadmium, chromium, lead and mercury) as well as the presence of 352 types of pesticides. These 58 samples consisted of 4 types of vegetables: choi sum, pak choi, amaranthus and spinach. In terms of farming method, they were categorised into 6 main groups: local conventional (4 samples), Mainland conventional (7 samples), local self-claimed organic (31 samples), Mainland self-claimed organic (3 samples), local certified organic (9 samples) and Mainland certified organic (4 samples).

Director of HKORC, Prof Jonathan Wong said, "in terms of heavy metals, all the 58 samples did not contain excessive level of heavy metals. However, in terms of pesticide residues, 41 samples (70.7%) were found containing pesticide residues."

With reference to the standards stipulated in Pesticide Residues in Food Regulation (Chapter 132CM), a total of 37 samples (63.8%) were found containing pesticide residues regulated in Hong Kong. Local conventional (4 samples, 100%) and Mainland conventional (6 samples, 85.7%) had the highest proportion of tainted samples among the 6 types of vegetable samples; followed by local self-claimed organic (23 samples, 74.2%) and Mainland self-claimed organic (2 samples, 66.7%). As for Mainland certified organic samples, 2 (50%) samples also contained locally controlled pesticide residues. On the other hand, **no pesticide residues were found in local certified organic samples**. It was not surprising that local conventional samples contained pesticide residues, however, even the local and Mainland self-claimed and Mainland certified organic samples were tainted. We cannot help but ask, are self-claimed organic produce really organic?

Although there were pesticide residues, their levels did not exceed the Maximum Residue Limit (MRL) stated in the above Regulation, except 2 local self-claimed organic samples (3.4% of all samples), which carried pesticide residues beyond the corresponding legally tolerated limit. The local self-claimed organic choi sum sample purchased from

Chuk Yuen Market in Wong Tai Sin, contained 1.42mg/kg of Acetamiprid, higher than the government's MRL of 1.2mg/kg. The other local self-claimed choi sum sample bought from Tin Shing Market in Yuen Long contained 0.34mg/kg of Cyhalothrin exceeding the stipulated MRL of 0.20mg/kg.

If we are comparing to the EU standard, then, a total of 34 samples (58.6% of all samples) contained pesticide residues exceeding the EU's MRL. Among the 6 groups of vegetable samples, those contained pesticide residues beyond the EU's MRL were: local conventional (3 samples, 75%), Mainland certified organic (3 samples, 75%), Mainland conventional (5 samples, 71.4%), local self-claimed organic (21 samples, 67.7%) and Mainland self-claim organic (2 samples, 66.7%). Based on the EU standard, **local certified organic samples were, again, no pesticides being detected**. This reflects the effectiveness of certification company's measures in combating irregularity in farming practice and deterring the illegal use of pesticides by certified organic farms. It is also worth mentioning that, as shown above, over 60% of local and Mainland self-claimed organic samples were found containing pesticides regulated by the EU, and around 75% of Mainland certified organic contained pesticide residues exceeding EU's MRL. It is possible that either some Mainland certified organic vegetables had been applied with pesticides, a practice against the rules, or had been tainted during transportation. The integrity of organic produce cannot be guaranteed.

Acetamiprid is low in toxic level but is irritating to the skin. Acute poisoning is usually due to consumption by mistake. Toxins can rapidly spread to different organs through the skin, mucus, respiratory track, and digestive system, causing various degrees of harm. According to WHO's standard, the allowable daily intake level of Acetamiprid is 0.07mg per each kg of body weight. Using the most tainted choi sum sample (Acetamiprid, 1.42mg/kg) to indicate, an adult will consume an excessive level of Acetamiprid if he eats 3.5kg or 5.8 catties in a day; and for a kid, eating 0.74kg or 1.2 catties will exceed WHO's allowable level.

Cyhalothrin is another strictly controlled pesticide in Hong Kong. It can be inhaled into the body and result in severely sore eyes. Consuming Cyhalothrin can lead to spasm, cough, sore throat, difficulty in breathing and unbearable heat for the body. According to the WHO, the allowable daily intake level of Cyhalothrin is only 0.02mg per each kg of body weight. In other words, as for the most tainted local self-claimed organic choi sum sample (Cyhalothrin, 0.34mg/kg), an adult will consume an excessive level of Cyhalothrin if he eats 4.1kg or 6.9 catties a day, whereas for a kid, 0.9kg or 1.5 catties a day. Taken into account the Food Consumption Survey 2005-2007 conducted by the Centre for Food Safety, daily consumption rate of vegetables of an adult is on average 176.9g per day, and 51g per day for kids. As such, the health risk caused by consuming even the most contaminated local self-claimed choi sum still remains low.

In this survey, higher percentages of conventional and self-claimed organic vegetables were found containing pesticide residues, but still, the health risk is still very limited following normal consumption pattern. That said, vegan may be more prone to adverse impact. It is suggested that consumer should stay alert when buying vegetables, especially self-claimed organic ones, and avoid sticking to a single type of farm produce in case an excessive amount of pesticides will be consumed.

No pesticide residues had been found in the local certified organic vegetable samples in this survey, suggesting that certified farm produce may be more reliable and safer for health.

[“Study on the Labelling of Organic Vegetables in Local Wet Markets”](#)

HKORC conducts survey on the labelling of organic produce in wet markets every year since 2008. At the end of last year, HKORC survey helpers impersonated customers and chatted with vendors in their visits to 149 wet markets and shops across 18 districts, conducting random investigation to one in every three stalls. A total of 502 vegetable stalls had therefore been surveyed.

Among the 502 surveyed vegetable stalls, 52 sold self-claimed organic and/or certified organic produce. Among them, 19 sold certified organic vegetables, 36 sold self-claimed organic vegetables, and 3 sold both certified and self-claimed organic vegetables (so these 3 vendors were separately calculated in both self-claimed and certified organic categories).

Sai Kung had the highest percentage of retail stalls selling self-claimed organic produce, followed by Wan Chai, Tsuen Wan, Kwai Tsing and Southern District. For Sai Kung the blockspot, its number of stalls selling self-claimed organic vegetables accounted for 33.3% of the total number of vegetable stalls in that district. Among the 19 stalls selling certified organic produce, 14 (73.7%) sold produce certified by HKORC, showing a slight drop of 6.3% compared to the previous survey. Nonetheless, HKORC was still the certification organisation with the highest wet market penetration rate for the 10th consecutive year. Also, an increasing number of produce certified by Chinese certification organisations are available in the market, for instance, vegetables certified by Organic Food Development and Certification Center of China (OFDC) recorded a 16% increase, showing a wider distribution of Mainland certified produce.

In terms of pricing, among the 19 stalls selling certified organic vegetables, the highest price of choy sum was set at \$67/catty. 18 of these stalls (94.7%) fetched \$25/catty or more, and 1 stall fetched \$20-24/catty. On the other hand, among the 36 stalls selling self-claimed organic produce, the highest price of choy sum was \$80/catty - even 19.4% higher than the most expensive certified organic choy sum. Only 14 of these stalls (38.9%) fetched \$25/catty or more, and 8 (22.2%) set the price at \$10-14/catty for their self-claimed organic produce. The above data show that the majority of certified organic produce fetch higher price than self-claimed or conventional produce, but still there is 1 stall setting a way higher price for self-claimed organic produce. Consumers must be cautious when choosing real organic produce to avoid loss. As for certified organic choy sum, the average price was \$39.9/catty, up 2% compared to \$39.1/catty last year. The average price of self-claimed organic choy sum was \$24.2/catty. In other words, the price of certified ones almost doubled that of self-claimed ones.

During the survey, the most common way of labelling organic produce was still “displaying organic certification at the stall” (94.7%). The proportion of stalls selling certified organic produce by “indicating ‘organic’ on the price tags” increased from last year’s 20.0% to this year’s 26.3%. More than half (66.7%) of self-claimed organic vegetable stalls used this method, up 4.2% as compared with last year (62.5%). Therefore, “indicating ‘organic’ on the price tags” is never a reliable proof. In addition, 2 surveyed vendors displayed organic certificates at their stalls, but in reality they did not sell anything supplied by the named organic farms. Whether the vegetables they sold were organic or not remained questionable. According to the prevailing practice, stalls selling certified organic produce should display valid certificate or approved copy of the certificate, or show the certification label on the packaging. They must sell organic produce supplied by the organic farms as printed on the certificate they display.

Since there were still stalls at wet markets that sold counterfeit organic goods, HKORC urged the Government to make laws to regulate the organic products industry, their sales practice, the use of organic certificate and labels, and set up a licensing regime to protect the certification organisations, the reputation of organic producers and consumer rights. At the same time, HKORC advised the organic industry to discipline themselves by using proper certificate and label and sell genuine organic products. HKORC also reminded consumers to be more alert when choosing organic products. If any counterfeit was noticed, they should contact HKORC or the Customs and Excise Department.

**Sixth-time ambassador Sammy Leung and HKORC form dream team
Edwin Tsui on anti-pandemic recipes**

Organic Star Ambassador Sammy Leung was also presented at the press conference, sharing his happiness of being appointed the ambassador for the sixth time, and offering tips of healthy lifestyle. Renowned chef Edwin Tsui also introduced the anti-pandemic recipes he designed for HKORC. Following the advice given by registered Chinese medicine practitioner Yeung Ming Ha, Jenny on the combination of cooking ingredients and body types, hongkongers can now learn how to make healthy organic food by themselves at home. The anti-pandemic recipes would cover soup, snacks and drinks. The demonstration videos would be broadcast from: 28 April (Tues) Organic Soup; 5 May (Tues) Organic Snacks and 12 May (Tues) Organic Drinks.

Hong Kong Organic Resource Centre

HKORC is supported by the Sustainable Agricultural Development Fund to facilitate the development of organic farming in Hong Kong. It is an independent organic certification agent with the devotion in increasing the awareness of farmers, consumers and the general public about the role of certification in the production and marketing of organic products and promoting the sustainable development of organic farming in Hong Kong so as to ensure a safe and quality food supply and an ecologically balanced living environment for our future generations.

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