

Green acts of love

In a bid to reduce food and garden waste from going into landfills, a community has started a successful composting project.

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EVERY Tuesday and Friday evening, Chamkaur Singh, 68, rides his *kapcai* to a few fruit stalls along Jalan Ipoh and at Bandar Baru Sentul in Sentul, Kuala Lumpur.

But the grandfather of two is not there to buy the freshest mangoes or sliced guava.

For the past one year, Chamkaur has been visiting fruit sellers around his neighbourhood to collect fruit waste, which is then channelled to Gurdwara Sahib Sentul (GSS) Sikh temple's organic compost project.

Collecting rotten items isn't a fancy job but Chamkaur is happy to do it because he knows that his actions have a positive impact on the community.

"Prior to this, the fruit sellers would throw the waste into the dustbin and it would end up in a landfill. But these items can instead be used to make organic compost and feed our gardens. On average, I collect between 10kg and 15kg of fruit wastes a week from the fruit sellers," says Chamkaur, who drops off the waste at a compost pile located in the temple grounds on Wednesday and Saturday mornings.

Chamkaur is part of over 10 volunteers who are involved in GSS's composting project, which started late last year. The sexagenarian is among a growing number of individuals who understand how composting can improve soil structure and provide many nutrients to keep plants happy.

Compost is disintegrated organic matter where microbes and fungi assist in the breaking-down process. It is a safer alternative to chemical fertilisers because it improves the overall condition of the soil after being used for several months. It has natural microbes which keep plants healthier. Composting is an environmentally friendly and sustainable activity.

Since joining the project, Chamkaur's knowledge on composting has grown by leaps and bounds.



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Photo: AZMAN GHANI/The Star

Waste not

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"Before this, I never knew of such a thing called composting. We never knew that fruit peel, egg shells and non-meat food residue can be composted and you can get organic fertilisers."

"The good thing is, composting is inexpensive. And the end results are amazing where kitchen waste can be transformed into nutrient-rich food for plants," explains Chamkaur, a manager at a music school in Sentul.

Reducing landfill waste

It was real estate negotiator and avid gardener Jespal Singh, 50, who initiated the project at GSS last November. Jespal, a GSS temple devotee, mooted the idea after becoming more conscious about food wastage at the temple.

"Sikh temples offer *langar* (communal meals) for lunch and functions each day. Before the conditional movement control order, the GSS would cook food to feed between 100 and 300 devotees. That's a lot of food with a fair share of food waste and vegetable scraps daily."

"Before the project, food waste from GSS would end up in garbage bags, and eventually in the landfill. That has added to the greenhouse effect. The temple community then decided to reduce our carbon footprint and start a sustainable project that could benefit everyone," says Jespal, who learnt about composting by attending a series of courses as well as doing online research.

At landfills, food scraps and food waste decompose and release methane, a greenhouse gas 28 times more potent than carbon dioxide. According to the United Nations Food and Agriculture Organisation, 30% of food is wasted globally across the supply chain, contributing 8% of total global greenhouse gas emissions.

Since the MCO and conditional MCO, there has been little or no cooking at the GSS temple. But Chamkaur continues to collect fruit scraps from fruit sellers while other volunteers bring their non-meat-based food waste from their homes for composting.

"These families have embarked on the journey of reducing the amount of organic waste that ends up at landfills. I hope more Sikh communities will collectively start composting projects at gurdwaras," says Chamkaur.

Universiti Putra Malaysia's Department of Plant Protection head Assoc Prof Dr Norida Mazlan says home composting is benefi-



Jespal mooted the composting project to manage food waste at the temple.

cial because it contains essential microbes, reduces the cost of buying fertilisers and retains soil moisture.

"Kitchen waste such as onion peel, unused vegetables, tea bags, coffee powders and eggshell can be reused for composting. But most often, these items end up in our landfill."

According to the Solid Waste and Public Cleansing Management Corporation, the household sector accounts for 44.5% of the food waste generated in Malaysia each day. That amounts to almost 16,690 tonnes per day.

Composting isn't difficult, and anyone can do it at home, explains Dr Norida.

Jespal adds that the best part is there's hardly any cost involved.

"Composting can easily be done, even for those living in condominiums. A simpler method is to have a bokashi (fermented organic matter) composting bin, where bokashi powder is sprinkled onto kitchen food waste, which can then be turned into a nutrient-rich soil conditioner."

"Organic compost has lower nitrogen, phosphorus and potassium (or NPK, the primary nutrients needed by plants) content. But in the long run, it's more of a soil conditioner, and over time, the condition of the soil improves. Organic compost helps lessen the pollution that goes into our water table, rivers and drains," he says.

A community effort

At a far corner on the temple grounds, there are several compost piles, all of which are at different phases of the composting process.

Twice a week, Jespal and the volunteers rake up dried leaves from the temple grounds and layer it with food waste.



Picking up fruit scraps isn't an easy job but Chamkaur (right) doesn't mind doing it as part of the Sikh temple's compost project.

"We add a starter as a catalyst to help with the decomposition."

What's important is the brown-leaves-to-food-waste ratio, moisture level and aeration. The compost needs to be turned on a regular basis, say twice to three times a week. That's when you aerate the compost because the process of composting is an aerobic process," explains Jespal, who has two children.

Chamkaur has also roped in his son and son-in-law to help with the project.

"It's a friendly project where over 10 volunteers come together to create compost for the community. A handful of us are retirees and this activity keeps us busy. We always look forward to meeting each other at the temple."

The average composting period is two to three months. When ready, the compost is given out to the community to use in their gardens.

Since the start of the project, the GSS temple has produced over two tonnes of mature compost from two tonnes of garden waste and approximately seven tonnes of food waste.

"So far, the response from our community has been positive. It's a long process but we have to take little steps to reach our goal of reducing carbon footprint and reducing waste that ends up in the landfill," says Jespal.

He is pleased the compost project has garnered some attention among children too.

One of his biggest supporters is Gurjot Singh Kang, nine, who col-

lects vegetable scraps from home for the project.

"I help Mummy cut the vegetable skin and put it in a separate recycle bag. My father comes to the temple regularly to dump it in the compost pile."

"Kids should take part in this environmentally friendly composting activity because they can learn more about it and start doing it at home as a little project."

Jespal chips in: "We have the next generation of leaders coming in. We have to teach and motivate them to show that this is the way to go. Our forefathers left the earth to us and we are leaving it to the next generation. Do we want to leave it with so much pollution or

do we want to take little steps where we can help reduce carbon footprint?"

Chamkaur plans to continue collecting the fruit waste for as long as he can.

"In the past, I never knew the fruit sellers. Now all of us are friends. They are happy to pass their scraps to me as they know it's for a good cause."

"When I go there, they say to me, 'Uncle you can eat free fruits'. I'm so happy to collect the fruit peels because it keeps me active and moving about," says Chamkaur.

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6 steps to making hot compost

Hot composting is a process of rapid decomposition that takes place at high temperatures. Follow these few simple steps to make your own mature organic compost.

- 1 In a large covered bin or a pile in the ground, put in carbon-rich items like dried leaves and twigs.
- 2 Pour about one litre of starter fluid or about half a litre of stale yoghurt onto the pile of leaves.
- 3 Place nitrogen-rich items like vegetable peel, egg shells, grass clippings or coffee grounds into the pile.
- 4 Add in a layer of carbon-rich items. Repeat Steps 3 and 4 a few times. Ideally, it should be 25 parts carbon to one part nitrogen.
- 5 After two or three days, use a spade to toss and mix the items. Aeration is necessary in high temperature aerobic composting for rapid odour-free decomposition.
- 6 Add in food waste. Repeat Steps 1 to 5. Regular turning over of the compost pile is recommended (two or three days once). The right amount of moisture is important to allow the decomposition process to take place.

The compost is ready when it turns dark brown to almost black in colour and has a rich, earthy smell. This takes about two to three months. Use the crumbly compost in your lawn or potted plants.

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Jespal (right) is pleased that the compost project has garnered interest among children like Gurjot. — Photos: AZMAN GHANI/The Star