



Kevin Utuje, a Senior Three student of St Kizito High School Namugongo, displays dried tomato products. PHOTO/DAPHINE NAKABIRI

How teens are harnessing food preservation to add value

Creative teens are turning food waste into useful products like animal feed, juices, and powders, proving that food preservation can protect the environment.

BY DAPHINE NAKABIRI

Food preservation is the practice of keeping food safe and fresh for longer periods. As millions of tonnes of wasted food continue to pile in cities, this is leading to global climate problems such as pollution that further results into drought.

At St Kizito High School Namugongo, a team of sustainability-focused teens is harnessing the growing problem of food waste to not only promote food safety and environmental conservation, but also generate income through value addition projects.

According to Travis Owor, a Senior Three student, after observing the large amounts of food waste dumped in trenches around markets, hotels, kiosks and school kitchens, as well as the environmental effects of rotting food such as foul smells, pollution, and land degradation, he was inspired with his team to start using different preservation methods to transform leftover food into animal feed.

This process often begins with collecting leftover food after meal sessions such as lunch and dinner. The collected food is then dried for about five days to remove moisture, which helps prevent spoilage and makes it easier to process.

After drying, the food is crushed into powder form. This powder is then processed further into pellets that can be used as animal feed.

Preservation

When food is well preserved, its nutritional value is better maintained. This ensures that essential nutrients such as proteins, vitamins, and minerals are still available when the food is consumed. Over time, this promotes balanced diets and reduces the temptation to rely on unhealthy alternatives, ultimately supporting better overall health and well-being.

For a teen out there, especially those trying to manage their finances, living independently or rather helping your parents in home management, food preservation is a practical skill that highlights the importance of reducing waste.

He says, "Depending on the animal type, we also formulate different types of feeds. For poultry, we incorporate ingredients such as egg shells, bones, and protein-rich sources such as beans and black soldier fly larvae to be able to provide calcium and protein necessary for growth and egg production."

However for cattle, the teens include banana peels in the feed to enhance palatability, while with pigs, these are fed on carbohydrate-rich mixtures such as posho and rice, combined with egg shells and bones to support energy, fat accumulation, and bone development.

Owor explains that the project not only reduces the amount of waste that would otherwise pollute the environment, but also ensures that the animals are fed on safer and more controlled diets. This helps prevent diseases that may arise from contaminated leftovers, such as those affected by mould or un-

clean storage conditions, thereby improving overall farm health and productivity.

Economic impact

Owor says, "We are able to generate income from selling the processed feed, as a kilogram goes for Shs5,000. This has boosted our entrepreneurship skills and increased sustainability for our project."

Additionally, he says that the initiative helps the school cut down on the cost of feeding animals on its farm.

For Kevin Utuje, also a Senior Three learner, in a bid to reduce on food spoilage, he decided to embark on food preservation for fresh foods sources including fruits and vegetables such as mangoes, apples, pumpkin, and tomatoes drying and crushing them into powder to make juices, porridge, pastes and ingredients for sauces.



Travis Owor showcases animal pellets made from leftover food.

According to Utuje, processing the food sources into powder form, retains their nutritional value while making them easier to store and use in different recipes.

Utuje adds: "Food preserved in this way can last for more than a year, significantly increasing the shelf life of perishable products."

He further notes that this not only reduces waste, but also creates income-generating opportunities for teens, as a tin of the processed products costs Shs10,000.

Other preservation methods

Besides drying, there are several other effective preservation methods that teens can adopt. These include salting and pickling. Salting involves the use of salt to draw out moisture from food. This, thus slows down the growth of bacteria and prevents spoilage. It is commonly used in preserving foods such as fish and meat.

Pickling, on the other hand, involves preserving food in an acidic solution, like vinegar or brine.

When you add this to food, it inhibits the growth of microorganisms, keeping food longer. This method is used for fruits and vegetables, giving them a longer shelf life while also enhancing their flavour.

Understanding food preservation

For many teens, especially those in boarding schools, hostels, or for some who are managing packed meals at home, it is important to understand food preservation in the sense of value addition, to maximise the usefulness of food.

For instance, in urban areas, where many young people rely on purchased or prepared meals, proper food storage for any leftovers or fresh foods should be embraced.

This is because, when food is left for too long without proper sealing, it often accelerates spoilage.

This growing waste not only leads to financial losses for households and schools, but also contributes to environmental challenges. For instance, decomposing food in landfills produces methane, a greenhouse gas that is more harmful than carbon dioxide. As a result, this accelerates climate change.

Besides avoiding spoiled meals, food preservation offers several benefits. It acts as a cost-saving practice helping stretch limited resources. This means that when food is properly preserved, it lasts longer and can be consumed over several days instead of going bad quickly and being thrown away. For teens managing tight budgets with pocket money, this is important because every meal that is saved is money that does not have to be spent again on buying the same items.

Food preservation also teaches young entrepreneurs practical skills in value addition, resource management, and small-scale food processing. This not only encourages creativity, but also opens up opportunities for income generation, as preserved foods can be packaged and sold, turning what would have been waste into a source of profit.

It also encourages healthier eating habits by ensuring that meals remain safe and nutritious over time. Proper preservation methods such as refrigeration, drying, and storing food in airtight containers help slow down the growth of harmful bacteria and prevent exposure to air, moisture, and heat, which are the main factors that cause food to go bad.

As a result, meals remain safer to eat even after some time has passed since preparation.