The UN estimates [about 17% of food](http://www.wri.org/sites/default/files/uploads/food_waste.jpg) grown in North America is lost or wasted on the farm

Once harvested, strawberries must be cooled within two hours to 0C (32F), with equipment pulling cool, dry air towards the boxes in the centre of the pallet. If the air is too dry, the strawberries may shrivel. Too humid, they may rot.

Even so, the US retail association estimates about 12% of fresh strawberries are [eventually discarded without being sold](http://www.ers.usda.gov/media/183501/eib44.pdf).

 transportation is a tricky part of the process. A typical food item in the US travels nearly 1,500 miles (2,400km) from field to processing plant to retail outlet to restaurant.

<https://www.theguardian.com/environment/2016/jul/14/from-field-to-fork-the-six-stages-of-wasting-food>

Much occurs when supermarkets and fast-food restaurants reject delivery.

Had Slye not turned up with two volunteers and a truck, the food – rejected by supermarkets and fast-food chains before delivery – would have ended up in a dumpster or landfill site.

Landfill sites are the third largest source of methane, a greenhouse gas that is 80 times more powerful than carbon dioxide

Instead, it was donated to a network run by community groups and college students that aims to solve two problems: how to feed the rising number of Americans who go hungry or do not have access to nutritious food, and reduce the environmental toll of food waste.

He estimated his efforts saved at least 340 tons of food a year – much of it pricey salad greens at peak freshness. “People are not only getting the food that people were going to throw away but they are getting the quality food,” he said.

About [16% of food in North America](http://www.wri.org/sites/default/files/uploads/food_waste.jpg) is lost during processing and distribution, according to UN estimates. Much occurs when supermarkets and fast-food restaurants reject delivery.

Pacakging and storage

Most of our food travels a long journey before it gets to our plate. Truck experience vibration ,making the contents harder to sale.In fact,These unsaleable food will ultimately be thrown into the landfill.Landfill sites are the third largest source of methane, a greenhouse gas that is 80 times more powerful than carbon dioxide over a 20-year timeframe.

Innovative Technologies: Explore emerging packaging technologies, such as smart packaging with sensors that monitor freshness, temperature,,,humidity,ventilation. and other factors

.

Modified Atmosphere Packaging (MAP): Consider MAP techniques that control the gases within the packaging to extend the shelf life of products. This is especially beneficial for fresh produce and meat.

So this kind of way is very economical and social sustainability , we can sharply reduce the damage to the food,making most of products saleable ,not only reduce the methane,but also causes profits to the farmers.

e. It was reported that about one-third of the produced food has been abandoned or wasted yearly (approximately 1.3 billion tons) ([Manning et al., 2006](https://www.emerald.com/insight/content/doi/10.1108/IMDS-09-2016-0391/full/html" \l "ref107" \o ")). Two-third of the wasted food (about 1 billion tons) is occurred in supply chain like harvesting, shipping and storage ([Fritz and Schiefer, 2008](https://www.emerald.com/insight/content/doi/10.1108/IMDS-09-2016-0391/full/html" \l "ref057" \o ")).

Take fruit and vegetables for example, such perishable food was wasted by 500 million tons worldwide every year due to the inefficient and ineffective food supply chain management (FSCM) (Gustavsson et al., 2011).

Way 1

Traceability systems in supply chain refer to the ability to track and trace the movement of food products, ingredients, and raw materials from their origin to their final destination. These systems are designed to ensure transparency, safety, within the food industry.

traceability systems enable swift identification of affected products. This allows for the removal of only the contaminated or potentially unsafe items from the supply chain, reducing overall food waste.It demonstrate the social and economic sustainability

The food supply chain, also known as the food distribution chain, refers to the complex network of activities and processes from farms and production facilities to the dining table. The food supply chain typically includes the following key components:

Production,processing ,distribution,storage,wholesale and Retail，consumption,recycling and waste management .