



# If Not the Food Bank, How 'bout the Feedbunk?



Leftover produce and bakery items find a welcome home on a cow's dinner plate.

by Paige Nelson, field editor

**W**e hate waste," says Wal-Mart Stores Inc., the world's largest retailer and grocery store chain in its 2016 *Global Responsibility Report*. In 2009, the company got ambitious and set a goal toward a zero-waste future. By 2015, Wal-Mart U.S. was able to divert 82% of its materials away from landfills.

As a crucial piece in Wal-Mart's sustainability puzzle, cattle have proven themselves once again. Leftover, damaged or undesirable fruit, vegetables and bakery items that can't be donated to food banks are being delivered to feedbunks every day.

### It's people food

A retired professor from the University of Georgia—Athens (UGA), Mark Froetschel, now a consulting nutritionist, first studied the use of recovered retail food as feed for Holstein steers at UGA. He fed the product at zero, 20%, 40% and 60% of a total mixed ration (TMR). The study proved the food — originally intended for humans — to be highly nutritious [80% total digestible nutrients (TDN) on a dry-matter (DM) basis] and a cost-effective way to put gain on cattle.

He describes it as "people food in a semi-fresh state," but more specifically as "fruit and vegetable items from large retail grocery stores with some bakery items."

As a partner in Collins Farms and consultant to Organix Recycling LLC, one of the





PHOTO COURTESY, YON FAMILY FARMS

► **Left:** Recovered retail food is composed of fruits, vegetables and bakery items sourced from grocery stores. The product averages 80% total digestible nutrients on a dry-matter basis.

► **Above & below:** Yon Family Farms uses retail food in developing the operation's 900 registered bulls and heifers. Typically, the farm will mix the product with other ingredients, like forage, and feed it using a bunk system.



PHOTO COURTESY, YON FAMILY FARMS

country's largest collectors of food residuals, Jim Collins says while he thinks recycled food is a wholesome product for cattle, it is a good idea to work with your recycling service provider to determine your state's policy regarding how it should be handled and fed.

As a company, Organix has gone to great lengths to create systems to coordinate the logistics necessary to make timely, cost-effective delivery of these products possible. Additionally, Organix works to evaluate and review how well its grocer partners are following quality-assurance guidelines. Based in Mokena, Ill., they collect from more than 7,000 grocers in 35 states.

### From aisle to feed pile

After Wal-Mart announced its zero-food-waste initiative, recycling companies jumped on board. Animal feed quickly became the best option behind donating the food before it expires to hungry people, says Froetschel.

"It's one of the more promising ways to recover value from food waste that was going into the landfill," he states.

Collins, a registered- and commercial-Angus producer and industry consultant based in Cusseta, Ala., says, "For producers who are using any kind of a total mixed ration or doing things where they have a need to feed cattle year-round, it has a lot of opportunities."

Today, the recycling process is simplified into a few steps.

Store employees sort all the material. To comply with bovine spongiform encephalopathy (BSE) regulations, the material contains no meat or meat products and has no contact with either. The product is also free of packaging materials.

Once sorted, the product is stored in a locked bin behind the store. Specialized collection vehicles then pick up the material on a routine basis for delivery to the farm. The truck driver inspects the material before it is loaded on the truck and again at the farm to ensure it is not contaminated with meat or packaging materials.

"The logistics of delivery are probably one of the lowest of concerns that producers will have once they discuss delivery options with their service provider," assures Collins.

"The strength of it, as well, is that it's not reliant on what the weather's going to do. That's a product that will be produced every week."

### Farm use

When Froetschel used recovered retail

food in his feeding trial at UGA, he first ensiled it to get the most uniform batch possible, because each load varies slightly in its nutritional content. He found the feed's high sugar content ensiles the material quickly and well. However, in later application he learned he could save time and money by feeding it fresh as an energy source and build the rest of the ration around it, thereby accounting for nutrient variability.

"On a DM basis the most consistent nutrient in this product is energy," he explains. "The protein, the fiber, fat, these ingredients will go up and down a little bit, but when it is fed in a controlled manner, as an energy supplement, the nutrient variation that we do get is not really a problem."

On average, the product is approximately 15% DM, though this can vary on a regional and seasonal basis.

As a fresh product, Froetschel recommends feeding it within two to three days. He says it works best when it is stored in a sloped concrete bin or pit, much like one would store wet brewers' grains.

In Collins' opinion, "It has probably as much nutritional strength in a coproduct as

anything that's out there."

Kevin Yon, registered-Angus breeder and owner of Yon Family Farms in Ridge Spring, S.C., has been using recovered retail food for the past five years.

"We get about seven tractor-trailer loads per week. It's delivered five to six days a week year-round," says Yon.

While he likes the product thanks to its nutrition, cost and sustainability factors, he chooses to use it sparingly. Ideally, he would take it on a seasonal basis when he had the most need, "but this is a product that keeps right on coming," he jokes.

Yon has gotten creative in finding uses for the seemingly endless supply of produce.

"With lots of cows, we can blend it with something like wheat straw or cotton gin waste and make a nice ration for a dry cow pretty easy, or we can mix it with other products like corn silage, soy hulls, or dried distillers' grains or corn gluten pellets and have a feed that will grow young livestock."

Specifically, Yon uses the product for developing his 900 registered bulls and heifers.

Like most byproducts, there are certain drawbacks. While the material has a shorter shelf life, lower pH, and potential for smell and fly attraction that traditional feeds do

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**— Mark Froetschel**

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not have, for Yon, the recovered retail feed is a tolerable alternative.

### Cattle reaction

While blending the byproduct helps bind some of the free water, in Froetschel's, Collins' and Yon's experience, it does nothing to hide the high palatability of the fruits and vegetables.

During his feeding trial, Froetschel tried what he calls a crossover design. Steers were switched from diets high in recovered retail food to diets low in the feed.

"Some of the animals would look for this material in their TMR," he recounts. "The thing the cattle really love is fruit."

Yon says his cattle go through a learning curve when first introduced, but once they figure out how to eat it, they love it.

"To our knowledge there's no real sorting. They like it all. Basically, all they are leaving in the bunk would be a peach pit or an apricot shell."

While it may be tasty, whole fruits and vegetables present a choking hazard for animals designed to eat grass.

"We recommend farms have vertical mixer capabilities and they blend it with a forage and they process it well enough that most of the fruit and vegetables cannot be distinguished in the TMR," advises Froetschel.

While he says 90% or more of the material is processed in the mixer, some whole potatoes, apples or oranges do slip by.

Start them up slow and never introduce a new feed to hungry cattle, Froetschel adds, offering another piece of sage advice.

To further reduce the choking risk on his farm, Yon processes his material before it's dumped into his storage bin, which allows for further breakdown before feeding.

### Cost

Luckily for cattle producers, Froetschel says the value drop is steep when food is transferred from

human consumption to animal consumption. He likes to think of the average price of fruits and vegetables in the store as around \$2,000 per ton. At 15% DM, recovered retail food is around \$25 per ton based on corn or soybean meal prices, he says.

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**— Jim Collins**

Froetschel adds that retail food could easily substitute for 20% of a concentrate feed, but has been used in rations at rates as high as 60%.

One caveat is the cost of the feed is relative to the location of the cattle. Some farms or ranches are just too far from urban centers for the feed cost to be competitive.

Collins Farms falls into that category.

"We're kind of on the edge geographically of where it makes sense to be delivered to, so we've used it off and on as we've had access," says Collins.

Yet for those located close enough to several large grocery stores, there is plenty more recycled food on its way — all the time.

"The scale of our grocery stores really lends itself to this type of recycling," Froetschel says.

### Feeding the future

Froetschel sees immense potential for recovered retail food to expand from store to store and regionally, and to become friendlier. He compares this product to that of the early days of citrus pulp.

"We used to feed citrus pulp in Florida fresh. It became a much more valuable feedstuff as dried citrus pulp, and it could be transported, and I think the same will happen with this."

Recycled food has a place on Yon's farm as long as it continues to be cost-competitive with other feeds. However, maybe what he



PHOTO BY JIM COLLINS

► Because of the farm's distance from metropolitan areas, Collins Farms has used the product when they could get access to it. Thanks to the product's palatability, it can be fed in conjunction with grazing.

likes best about the product is the way it shows off the versatility of beef cattle.

“This is a product that was going to the landfill, and now we can use cattle to turn it into something very tasty, which is beef.

“I’m told there’s greater than 20% of our food supply that is wasted. Cattle have such an opportunity to utilize this wasted food in many instances. We hear a lot about sustainability in the beef cattle business or all of animal agriculture. This is a tremendous way a beef cow and cattle operations can show how sustainable we are,” he concludes.

In addressing Yon’s cost concerns, Collins sees recovered retail food as a valuable alternative feed for years to come thanks to the great amount of growth left in the field.

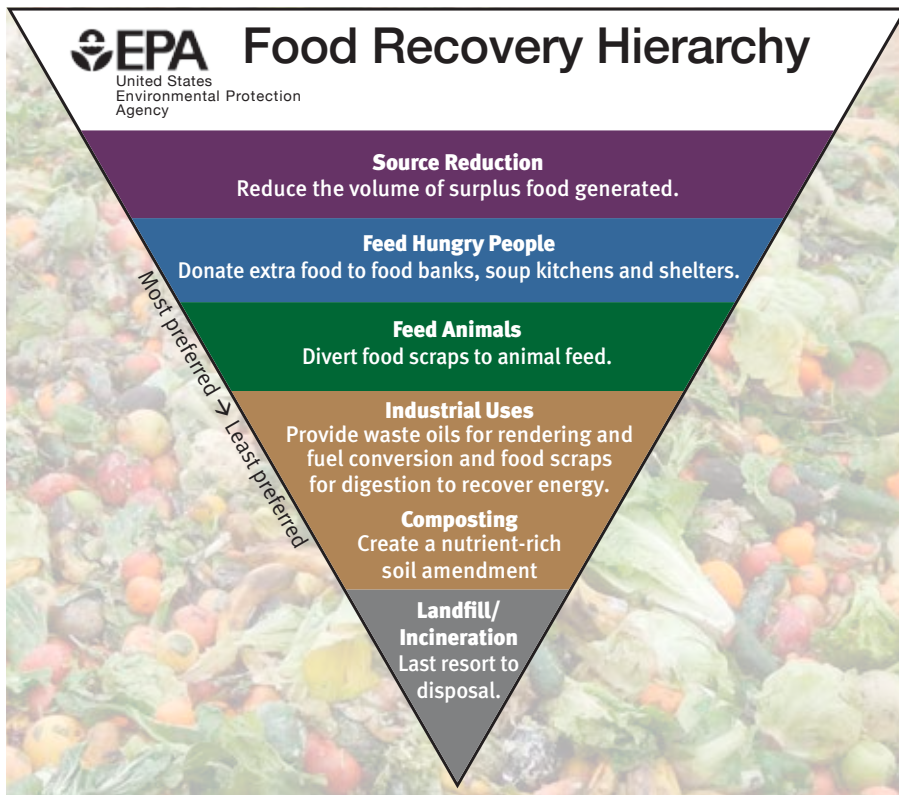
“One thing about this program is it’s still got a good bit of potential to grow in terms of volume. Right now there’s only a certain percentage of the stores out there who are participating in a program like this,” he says.

American society will continue to push for more sustainable agriculture, and the world’s growing population will demand more food. It seems that recovered retail food may be a nice part of the solution for both objectives.



**Editor’s Note:** Paige Nelson is a freelance ag journalist and cattlemoan from Rigby, Idaho.

**Fig. 1: Food recovery hierarchy, sustainable management of Food, U.S. Environmental Protection Agency**



**Table source:** [www.EPA.gov](http://www.EPA.gov).