



2014 Summer Preservation Summary and Lessons Learned

Summary

Fayetteville Public Schools (FPS) completed its second year of local produce freezing. Improvements to procedures were made based on lessons learned from the previous summer's preservation pilot project. Again, the preservation project was partially funded by a USDA Farm to School Implementation grant. Bell peppers, zucchini and yellow summer squash were processed because of their availability in NW Arkansas in the summers, success with these products during last year's pilot, and are currently used in school meal service. Local frozen products will be used for special events and winter menus when fresh local product is limited. The total amount of bell peppers and summer squashes processed was increased from last year.

Procedure

This year, FPS completed a bidding process to obtain reasonably priced seconds peppers and squashes. Primary and secondary growers were awarded the bid. The primary grower was able to provide all products for this project. Produce was purchased with FPS Child Nutrition Department funds.

All processing was completed in the Fayetteville High School cafeteria during the school's summer break by newly hired Nutrition Supervisor, one paid staff and several volunteers. Bell peppers were roughly chopped by hand and then put through a Sunkist slicer to create strips. The pepper strips were immediately placed into 2# bags. Sealed bags were stacked on baking racks before being placed in a single layer on wire racks in the freezer for quick freezing. Bags were sealed using a Cabela's Commercial Grade Vacuum Sealer. The bags were not vacuum sealed to allow space in the bag and maintain the integrity of the finished product. Once the product was frozen (overnight), the bags were packed into case units for easy distribution.

Zucchini and yellow squash was cut into 1/4in. rounds using a Hobart food processor, mixed to create a summer squash medley, blanched for 30 seconds in a tilt skillet, cooled in ice baths, put into 5# bags, sealed (not vacuum sealed) with a Cabela's vacuum sealer, and placed in a single layer on wire racks in the freezer. When frozen, they were packed into case units.

Lessons Learned

- Labor costs were greatly reduced by using two existing paid staff (Nutrition Supervisor and substitute staff) and several volunteers instead of paying a consultant to manage the project. Even though the work was not incorporated into the summer meal program work flow labor costs were still low. However, in the future the project may run more smoothly if it is not dependent on variable volunteer interest, availability, and efficiency. Using a crew of substitute staff may make the processes more sustainable and efficient as new workers would not need to be trained each time and would therefore work efficiently to complete the task within the timeframe allotted.
- We feel the local grower was paid a respectable price for the processing product because it was a price set and accepted during a bidding process. The prices per pound for all products were comparable to last year's prices.

- Product quantity per bag was adjusted based on last year's usage of preserved local product. Case units were decided based on usage and weight.
- Based on last year's products it was determined that vacuum sealing damaged the finished product and make a less appealing product once heated for meal service. This year bags were sealed, but not vacuum sealed.
- Last year's preserved local product was still in inventory at the end of the school year. This year, we will menu these items responsibly so that by next summer's preservation project this year's product has been completely used.
- Using perforated hotel pans to blanch the summer squash medley in the tilt skillet reduced the size of the batches and overcooking during blanching because the product could be quickly removed from the boiling water and transferred to the ice baths. This allowed for smaller amounts to be added to the ice bath and maintaining its cold temperature. Large basin sinks were used as ice baths and colanders were kept in the ice bath to allow hot product to be added, cooled and removed from the ice bath quickly while keeping ice out of the final product. Ice was added to the baths between small batches to keep the water at a freezing temperature.
- Cutting the squash into thicker 1/4in pieces and rounds instead of half-moons ensured the produce was not over cooked during blanching and would result in a firmer final product once heated up for the serving line.
- Using the Sunkist citrus slicer allowed for more uniform pepper strips and less physical stress from cutting the peppers into strips by hand. Strips are a nice shape for a variety of menu items and can be diced if desired.
- Additional products that are available in abundance in NW Arkansas during the summer and would be good candidates for our in-house freezing program include carrots, green beans, okra, peaches, nectarines, strawberries and tomatoes.

Project Numbers
800: Pounds of peppers purchased
1,566: Pounds of zucchini and yellow squashed purchased
250: 2# bags of frozen bell pepper strips
282: 5# bags of summer squash medley
\$2.56: per bag of frozen bell peppers strips (without paid sub labor)
\$3.04: per bag of frozen bell peppers strips (including paid sub labor)
\$4.99: per bag of frozen summer squash medley (without sub paid labor)
\$5.84: per bag of frozen summer squash medley (including sub paid labor)
\$0.90-\$1.20: the cost of one 2# bag of broad line distributor frozen vegetables
\$2,049.40: Paid to local growers
225: Volunteer hours
45: Paid sub staff hours

Staff and Equipment Needs	
Bell pepper strips (three cutting stations)	<i>Summer Squash Medley (one cutting station)</i>
5 staff or volunteers	4 staff or volunteers
hairnets	hairnets
hand washing station	hand washing station
double basin washing sink	2 double basin sinks for washing and ice baths
3 cutting board	1 chef's knives
3 chef's knives	1 large cutting board
3 Sunkist citrus slicers	1 small containers for food waste
3 small containers for food waste	Hobart food processor + 1/4in blade
large containers to hold washed peppers and strips	2 large colanders for ice bath
sealer bar (Commercial Grade Vacuum Sealer)	ice for ice bath
hot fill bags (3 Mil, 14inx16in)	large hotel pans or bowls for holding washed product
permanent marker for labeling finished product	perforated AND unperforated hotel pans for blanching
digital scale	tilt skillet (blancher)
baking rack full of baking pans	long rubber gauntlet gloves for transferring product
storage freezer boxes(cardboard)	large slotted spoon for blancher
packing tape	kitchen carts
walk-in cooler and freezer	digital scale
wire rack/ shelving for freezer	sealer bar (Cabela's Commercial Grade Vacuum Sealer)
	hot fill bags (3 Mil, 14inx16in)
	baking rack full of baking pans
	marker
	storage boxes (cardboard)
	packing tape
	walk-in cooler and freezer
	Wire rack/ shelving for freezer