Enhancing value and marketing options for pawpaw by developing pulp separation and preservation techniques

Abstract: Project investigators tested the potential for production and utilization of the pawpaw as an alternative crop for Iowa fruit growers. Fruit from an ongoing trial was processed and preserved for future marketing.

What was done and why?

Pawpaw is the largest tree fruit native to the United States. Commonly known as the “poor man’s banana,” a pawpaw may reach up to 1 lb. in weight. Pawpaws grow wild in the rich hardwood forests of 25 states in the eastern United States. The plan for this project was to utilize the pawpaw fruits from an ongoing pawpaw cultivar trial orchard to test methods of pulp separation from skin and seed and then determine how best to preserve the resulting pulp.

Objectives of the project were to:
1. Grow and maintain existing 1-acre pawpaw patch in Louisa County, Iowa to provide fruit for experimentation. Provide at least 200 lbs. of fruit per year to ISU Food Science Laboratory.
2. Use harvested fruit to practice different techniques in pulp separation and preservation. Determine best method of removing skin and seed from pulp.
3. Provide results to current and potential pawpaw growers and also to general public. Develop and contribute educational information and presentations to the Leopold Center, ISU Extension, Practical Farmers of Iowa, Northern Nut Growers, Pomona (a quarterly journal from The North America Fruit Explorers), Iowa Fruit and Vegetable Growers (IFVGA) and others.

What did we learn?

The objectives were achieved for the most part. The project showed that skin and seed could be successfully separated from the pulp by a mechanical pulper. This process yielded pulp that exceeded 50 percent of the weight of the fruit. There was still some hand labor involved since the process seemed to work more efficiently when the fruits were sliced lengthwise. The resulting pulp could then be stored in the freezer until used in existing recipes for pawpaws. See: http://www.pawpaw.kysu.edu/pawpaw/recipes.htm

The mechanical pulper used in this project appeared to be effective. However, the cost of the system (estimated at over $7,000) may be well out of reach of the small grower. A modification of a Roma Food Strainer might be a cheaper alternative worth exploring.