

## **Picking Pickles Made Easier**

### **Issue (Who Cares and why)**

Current pickle harvesting methods cause about 11 percent in crop loss. In addition, current methods fail to remove some dirt and damage occurs in about 8 percent of the harvested product. Header loss results in significant yield/profit reduction, and excess dirt raises pickle hauling and processing expenses. Also, damaged pickles reduce grower profits and increase processor labor costs.

### **What has been done?**

A tractor-mounted pickling cucumber harvester was built as a testing platform for harvesting concepts. An improved rod chain over fingered chain pickup attachment was developed to improve product recovery and overall harvest speed. A rodDED chain conveyance system also was developed to reduce dirt and damage. Several cleaning system modifications to minimize vine/leaf content with minimal product damage were also created. Studies were conducted to determine the optimal separation roll lagging and speed configuration.

### **Impact**

The new rod-chain-over-fingered-chain-pickup attachment recovered approximately 8.5 percent more product than traditional pickup designs at 0.2 mph faster speed. This 17 bu./acre increase in recovery has a value of approximately \$60 per acre. With 6,000 acres of pickles grown on Delmarva the potential value of this improved header design exceeds \$360,000 per season. The cleaning, conveyance, and separation system has enabled Delmarva pickle growers to maintain their reputation for providing the best machine-harvested pickles in the country. The overall value of these modifications is in the form of reduced operator fatigue, reduced harvester maintenance, improved product quality and a reduction of grower and processor labor costs. Local growers have begun implementing the new designs as have a number of growers in Michigan, Wisconsin, North Carolina, and Missouri.

### **Primary Impact Areas**

Extension

### **Funding Sources**

State Cooperative Extension

### **Contacts**

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