Machinery management for small and medium-sized horticultural farms

Abstract: Machinery and equipment needs are far different for vegetable farms than for commodity production units. This project explored the unique machinery access options for small and mid-sized horticulture operations.

What was done and why?
Greater consumer awareness and increased interest in local foods have encouraged many small-scale fruit and vegetable growers to scale up to meet the demand. Specialized equipment for fruit and vegetable production saves labor but the purchase prices may be prohibitive for small-scale producers. Growers lack information about how to evaluate machinery adoption and planning for mechanization in the context of a Midwestern small-scale fruit and vegetable operation.

The specific objectives of this project were to:
1. Survey small and medium-sized fruit and vegetable growers about their current machinery ownership and use, labor requirements, interest in sharing machinery and expected machinery needs related to expansion;
2. Select a set of producers for four case study analyses to provide more in-depth information about the machinery-related challenges faced by growers;
3. Synthesize the information gained to develop machinery management educational materials that will help small- and medium-sized Iowa growers plan for expansion; and
4. Develop, market and conduct three outreach programs with targeted partners for small- and medium-sized Iowa fruit and vegetable growers.

What did we learn?
There is clearly no “one-size fits all” strategy for acquiring and incorporating equipment into fruit and vegetable operations. Some common themes from the study are:
• Farms producing large quantities of similar crops tended to use more and larger pieces of equipment.
• Farms that grew a more diverse set of crops tended to use more labor.
• Mechanization can help to offset labor costs, but it does not entirely eliminate the need for labor. Harvesting remains a particularly labor-intensive task.
• How farmers choose to sell and market their crops impacts the purchase of machinery.
• Each farm in the case study is multifaceted, and typically a variety of considerations came into play when a purchase was made.

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