

FIELD
TESTED



Salad Greens Harvester & Dryer

Field Tested is a series of reports about farm tools that have been tested by Montana farmers to enhance their specialty crop production. The reports describe these farmers' findings to help others make informed decisions about their specialty crop businesses. Visit FarmLinkMontana.org to read more Field Tested reports. This project is administered by the Community Food & Agriculture Coalition with funding from the Montana Department of Agriculture Specialty Crop Block Grant Program.

CLOUD NINE FARM | WILLSALL



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CLOUD NINE FARM SNAPSHOT

Location: Wilsall, MT

Acres in Production: 8.25

Operator(s): Allison & Seann
Rooney

Crops: Microgreens, baby leafy
salad & braising mixes, lettuces, high-tunnel tomatoes &
cucumbers, broccoli, organic pasture, mixed fruit orchard



INTRODUCTION

Greens, including leafy greens and microgreens, are grown on a half acre at Cloud Nine Farm and are currently the farm's primary products. Originally, farm operators Allison and Seann Rooney would manually harvest and process their greens for sale; however, they needed to upgrade these systems in order to keep up with increasing sales, particularly in their primary market of Bozeman grocery stores.

During the 2017 growing season Allison purchased a mechanized bulk salad greens harvester and a commercial salad greens spin dryer. These mechanical upgrades allow for more efficient and sanitary harvesting and processing of larger batches of leafy greens. Allison hopes this report will help other producers learn about tools such as the ones she purchased that will help increase their efficiency in greens production.

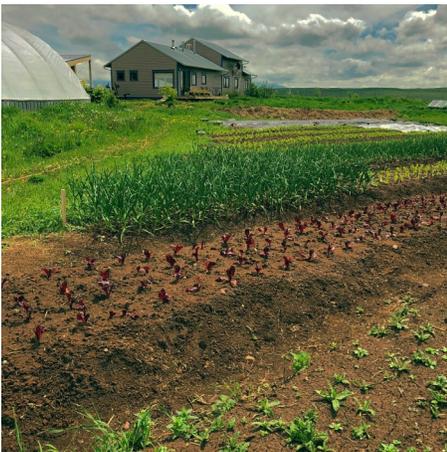
GREENS PROCESSING AT CLOUD NINE FARM

Over the years Allison and Seann sold their produce through a CSA and at farmers markets, as well as selling wholesale and through distributors. More recently, Allison has focused on “leaning up” the farm business—moving the business forward while taking less financial risks and working a more reasonable schedule for better work/life balance. Until recently, Allison and partner processed their leafy green and microgreens crops by hand-cutting and drying with a small commercial hand-operated salad spinner. These manual processes took much longer than necessary.

Upgrading to a mechanized bulk salad greens harvesting tool and a commercial salad greens spin drying machine was the next step in “leaning up” the farm business by increasing their efficiency in greens production, thereby opening more time to complete other work and life tasks and maintain a viable farming business.

EQUIPMENT PURCHASED

- Stainless steel model HOB-SDPS-11 20 Gallon Hobart Salad Dryer: \$2,949
- Quick-Cut Greens Harvester (plus repair kit): \$669



EFFICIENCY IMPROVEMENTS

The Quick-Cut Greens Harvester

This harvester is powered with a drill, which runs pulleys that move a wide serrated blade quickly back and forth as you pull the harvester and basket through a planting of greens (see video in Additional Resources). This method cuts the greens quickly and cleanly, then drops them in a harvest basket for easy transfer to food-safe bins prior to washing and sorting. In addition to benefits in terms of efficiency, Allison found the Harvester to be more ergonomic than hand-cutting since you can harvest while walking as you move along a planting. It is also very easy to clean and repair. All together, Allison estimates this mechanized process increased the farm’s efficiency in harvesting greens by about 90%.



The 20-gallon Salad Dryer

The Hobart is electrically operated with a five-minute timer. This “hands-free” operation allowed Allison to move things along in the wash-pack system and do other tasks while the greens were drying—an impossible task with the small-batch hand-operated spinner they used before buying the Hobart. Allison found the simple, stainless steel design to be easier to clean and sanitize than a modified washing machine, a popular alternative for spin-drying greens. Now, Allison and Seann can dry more greens in less time—an increase in efficiency and volume that Allison estimates at 75%!



OTHER CONSIDERATIONS

Both tools worked well for a variety of green crops:



The Greens Harvester was primarily designed to harvest thick plantings of baby leafy greens, such as lettuce, arugula, spinach, mustards and other densely grown leafy greens; however, the Harvester also worked well for microgreens.

In addition to baby greens, the Hobart Salad Dryer successfully dried microgreens and larger-cut greens such as head lettuces and romaine hearts.

The versatility and efficiency of these tools helped increase Cloud Nine’s production and sales for four different product lines of leafy greens and helped develop a new value-added product of packaged romaine lettuce hearts.

Allison and Seann used the time savings from this improved efficiency to work on other aspects of their production system. They recommend this approach for other growers, rather than scaling up production right away, as it is important to identify a larger market before increasing production of a highly perishable product.

ADDITIONAL RESOURCES

Montana Department of Agriculture Specialty Crop Block Mini-Grants: The purpose of this program is solely to enhance the competitiveness of specialty crops in Montana. Visit their website to find funding opportunities and more information: agr.mt.gov/SpecialtyCropBlockGrants

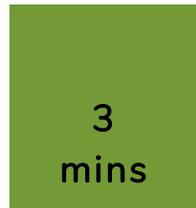
Video—Quick-Cut Salad Greens Harvester in Action: www.youtube.com/watch?v=fzJcHWyNQWg

Farm Link Montana: A project of the Community Food and Agriculture Coalition to connect Montana’s beginning farmers and ranchers with the tools they need to succeed: farmlinkmontana.org

EFFICIENCY IMPROVEMENTS BY THE NUMBERS

Time to Harvest One Microgreen Tray

BEFORE: Using
Manual Harvesting

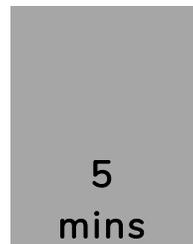


AFTER: Using
Quick-Cut Harvester



Time to Harvest 1LB* of Baby Greens

BEFORE: Using
Manual Harvesting



AFTER: Using
Quick-Cut Harvester



*Allison and Seann typically plant in 30" wide beds and can harvest an average of 1lb of leafy greens per 1' of bed length

Pounds of Baby Leafy Greens Dried in 3 Mins

BEFORE: Using
5-gallon hand-
operated spinner

2.5 lbs

AFTER: Using electric
20-gallon salad
spinner



Since the Hobart Salad Dryer is hands-free and operates on a timer, Allison was better able to move things along in the wash-pack system and do other tasks in addition to drying more greens in less time