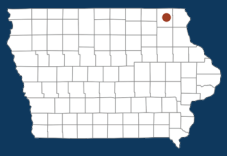
PRACTICAL FARMERS OF IOWA
COOPERATORS' PROGRAM Farmer-Led Research

EXPERIMENT



2024

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Growing Tomatoes for Sale vs. Seed

In a Nutshell:

- Horticulture farmers sometimes grow seed for seed contracts to diversify their enterprises or just to try something new.
- Seed contracts usually offer a set price for a set weight of seed. For those who have not grown seed before, it can be hard to tell if the payment is worth the labor and time required, especially for a seed like tomato that needs post-harvest processing.
- Hannah Breckbill and Emily Fagan decided to compare the enterprise budgets of growing tomatoes for sale vs. growing tomatoes to fill a seed contract.

Key Findings:

- After accounting for all supplies, labor and infrastructure use, tomatoes for sale had a net income of $1,263 while tomatoes for seed had a net income of -$59.
- If Breckbill and Fagan get another tomato seed contract, they will make the enterprise more profitable by planting fewer tomato plants overall and selling some of the excess fruit from the seed tomatoes.

Cooperators

Hannah Breckbill and Emily Fagan, Humble Hands Harvest — Decorah, IA

Funding

Stranahan Foundation

BACKGROUND

Growing seeds can be a small but easy way for many vegetable farmers to diversify their enterprise because it fits easily within existing growing activities. Many smaller, regional seed companies offer set seed contracts for an amount of seed that is attainable for smaller-scale growers. While the guaranteed sale of seed is attractive, farmers should always read contracts carefully and consider all of the risks and benefits before signing [1]. It can be difficult to tell if the relatively small payment is worth the space and labor required, especially for those who are new to growing seed and do not know exactly how many plants they will need.

Hannah Breckbill and Emily Fagan have found that competition at their farmers market increases in the summer and that they are often unable to sell all the tomatoes that they grow. In 2024, they decided to sign a seed contract to grow 0.5 lb of KC 146 tomato seed for $225. They tracked the labor, time, and other factors contributing to the economics of their seed production enterprise, as well as time, labor, and sales contributing to their usual tomato for sale enterprise. Fagan hoped that "this trial will give us some insight into how to make growing tomatoes more profitable."

Hannah Breckbill and Emily Fagan's tomatoes packaged for the farmers market. Photo taken Summer 2024.

METHODS

Design

For this enterprise budget, Breckbill and Fagan did not replicate their treatments. They seeded equal numbers of tomatoes in their two treatments and otherwise managed the treatments as they desired for the different end uses. Tomatoes for seed were grown outdoors without staking or irrigation and with straw mulch,

while tomatoes for sale were grown in a high tunnel, staked and irrigated (**Table 1**).

Measurements

Breckbill & Fagan tracked all costs and labor time related to seeding, bed preparation, transplanting, plant care, harvest and post-processing for seed or time spent on sale of tomatoes. The farmers included the cost of their own labor.

RESULTS AND DISCUSSION

Breckbill and Fagan found that their tomato for sale enterprise had a net profit of $1,263 while the tomato seed enterprise had a net profit of -$59 (**Table 2**). Costs, including labor and income associated with the tomato sale enterprise, were also more than double those associated with the seed sale enterprise.

Within both tomato enterprises, Breckbill and Fagan could likely have reduced the number of plants they grew and/or their harvest labor in order to improve profit margins. In the sale enterprise, they harvested 749 lb of tomatoes for sale but only sold 677 lb of them and could have left some tomatoes unharvested to improve profitability. On the seed enterprise side, they harvested and processed only 283 lb of tomatoes. However, even that limited amount produced 0.94 lb of seed, more than enough to fulfill their 0.5 lb contract. If they had halved the supply and labor costs, the seed contract enterprise would have been net profitable.

Fagan said "this budget shows that selling tomatoes for eating is more profitable than growing tomatoes for seed. However, every year is different and there were enough variables this time around that I don't feel ready to stop growing tomatoes for seed yet."

Breckbill and Fagan did not harvest all of the tomatoes that they grew for seed this year because they had processed enough to fulfill the contract and did not need any more to sell. When they try growing tomatoes for seed in the future, they will pick a variety that they think their customers will like, plant fewer tomatoes for sale and plan to sell any excess fruit from the seed plants at market.

CONCLUSIONS AND NEXT STEPS

Fagan noted that participating in this trial was key for their farm in figuring out the financials of growing tomato seed for contract. "The accountability to keep all the data [was the most useful aspect]! It's so useful to keep good track of all the details, but if I wasn't doing this for a PFI trial I would be less organized and not keep good enough track of things to come to a real conclusion."

Emily Fagan holds a few of the KC 146 tomatoes that she grew for a seed contract in 2024. These tomatoes were not staked, and you can see the sprawled vines on the ground in the background. Photo taken late Summer, 2024.

TABLE 1: Management details of tomatoes grown for seed and for sale by Breckbill and Fagan in 2024.

	SEED	SALE
Variety	KC 146	Cosmonaut Volkov, Golden Jubilee, German Pink, Red Zebra, Green Zebra
Number of plants	50	48
In-row spacing	24 in.	24 in.
Between row spacing	50 in.	56 in.
Seeding date	Mar. 11, 2024	Mar. 11, 2024
Transplanting date	May 27, 2024 In field	May 20, 2024 In high tunnel
Pruning/Staking	None	Florida weave
Harvest dates	Aug. 17, Aug. 26, Aug. 31, Sept. 17	Jul. 16 – Oct. 10
Mulch	Straw	None
Irrigation	None	Drip

TABLE 2: Enterprise budgets of tomatoes grown for seed and for sale by Breckbill and Fagan in 2024.

	SEED	SALE
Transplant starting supply costs	$16	$16
In-field supply costs	$0	$6.80
Irrigation system costs	$0	$5.42
Machinery cost	$0	$83
Building/structure supply costs	$79	$223
Land cost	$36	$36
Labor cost (owner and hired labor combined)	$153	$338
Total costs	$284	$709
Gross income (seed contract amount and market sales)	$225	$1,972
Net income	-$59	$1,263
Per lb harvested tomatoes net income	-$0.21	$1.87

APPENDIX — WEATHER CONDITIONS

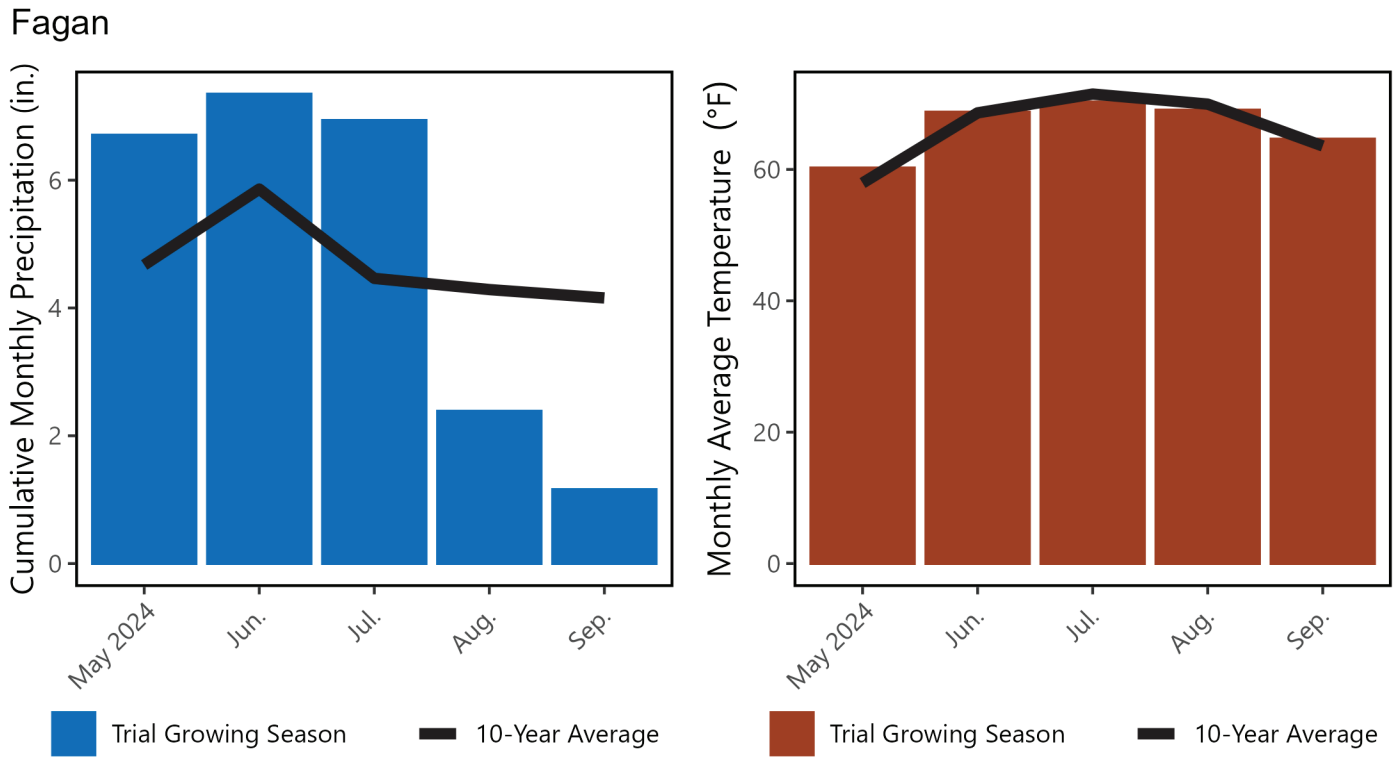

FIGURE A1. Modeled mean monthly temperature and rainfall in Decorah, IA during the study period and the ten-year historic averages. Data is from the NasaPOWER climate dataset [2, 3].

REFERENCES

[1] "Contracting in Agriculture: Making the Right Decision. Information For Farmers from USDA." 2016. [Online]. Available: https://www.fsa.usda.gov/sites/default/files/documents/2016%20Drake%20FSA%20NSAC%20Production%20Contracts%20Guide.pdf

[2] A. H. Sparks, "nasapower: A NASA POWER Global Meteorology, Surface Solar Energy and Climatology Data Client for R," J. Open Source Softw., vol. 3, no. 30, p. 1035, Oct. 2018, doi: 10.21105/joss.01035.

[3] A. H. Sparks et al., nasapower: NASA POWER API Client. (May 18, 2024). Accessed: Sep. 11, 2024. [Online]. Available: https://cran.r-project.org/web/packages/nasapower/index.html

PRACTICAL FARMERS of Iowa

PFI COOPERATORS' PROGRAM

PFI's Cooperators' Program helps farmers find practical answers and make informed decisions through on-farm research projects. The Cooperators' Program began in 1987 with farmers looking to save money through more judicious use of inputs. If you are interested in conducting an on-farm trial contact Stefan Gailans @ 515-232-5661 or stefan.gailans@practicalfarmers.org.