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# Updates from PFI's Horticulture Program

Liz Kolbe

2019 Annual Conference

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# A Taste of My Own Medicine

Liz Kolbe

2019 Annual Conference

- Programming Overview
- Cooperators' Program
- Whole Farm Financial Project
- Yield Data Website
- Pesticide Drift
- The Future
- Questions and Discussion

# PROGRAM AREAS


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# HORTICULTURE

## CROPS

Vegetables
Orchard and Tree Crops
Berries and Brambles
Cut Flowers
Culinary and Medicinal Herbs
Seedlings and Plants
Mushrooms
Other crops that don’t fit anywhere else

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# HORTICULTURE

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Vegetables
Orchard and Tree Crops
Berries and Brambles
Cut Flowers
Culinary and Medicinal Herbs
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Other crops that don’t fit anywhere else

## TOPICS

In-Field Practices
Tools, Tractors, Implements
Packing House, Cold Storage
High Tunnel, Greenhouse
Pricing, Marketing
Farm Financials
Business Management
Labor Management
Life Balance and Wellness

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# HORTICULTURE

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## ALSO

On-Farm Research
Pesticide Drift
Pollinator and Beneficial Insect Habitat ★

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# Farmer-led HORTICULTURE event totals, 2017 & 2018

31 Annual Conference Sessions
21 Field Days
12 Farminars
\+ 20 Workshop Days, Meet-Ups

83 Horticulture Events

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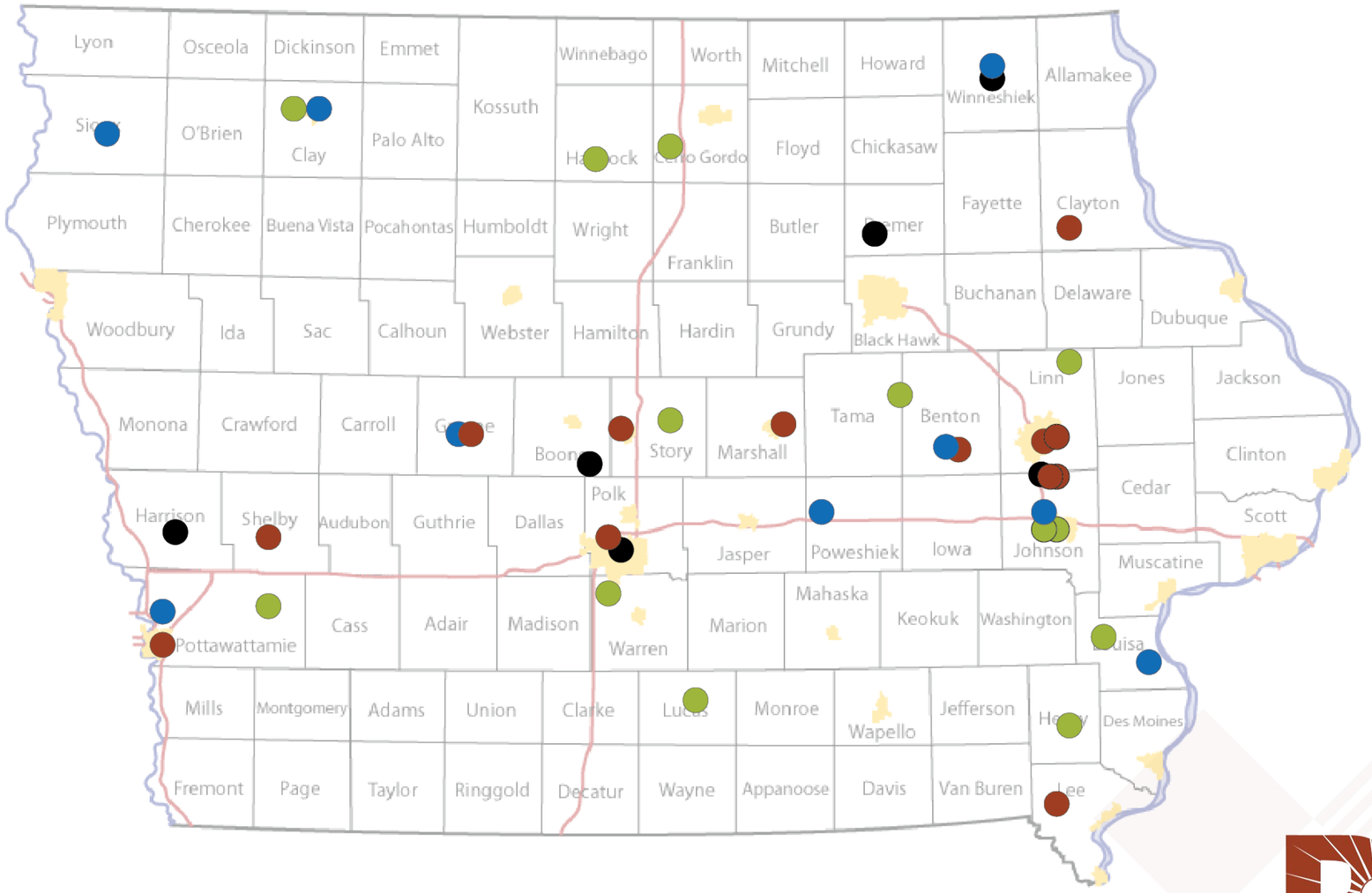
# HORTICULTURE events, 2017 & 2018 (and a few 2019)

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# HORTICULTURE – 2017 Field Days

Weed-Slayers: Two-Wheel Tractors – Jill Beebout and Jeff Lauber
Tools and Tractors with T.D. – T.D. Holub
Grafting, Summer Pruning, New Fruit at Berry Patch – Dean and Judy Henry
Earning a Living on an Urban Farm – Jon Yagla and Wren Almitra
Growing Giants for the Fair – Marty and Mary Schnicker
Oyster Mushroom Production – Tyson Allchin
Farmer-Led Aggregation – Jan Libbey
A Little Bit of Everything in Everly – Mike and Darla Eeten
Dried Flower Production – Fred Howell
Looking Back at the First Year of Farming – Jayme Fowler and Susan Jutz
Hand Tools and Implements for Small Vegetable Farms – Jason Grimm (Partner: Grow Johnson County)

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Resources

Search all resources...

BLOGS EVENT RECAPS FARMER-LED RESEARCH FARMINARS NEWS PODCASTS PUBLICATIONS VIDEOS

Steve Carlson

*Next Generation Coordinator*

VIEW BIO →

CATEGORY

Event Recaps

TOPICS

Field Day, Fruit, Orchard

PUBLISHED SEP 27, 2018

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## Field Day Recap: Fruits and Nuts at Red Fern Farm

By Steve Carlson

On a damp afternoon in early September, 50 people gathered at the agroforestry site Red Fern Farm in southeast Iowa to learn about a variety of fruit and nut crops. Tom Wahl and Kathy Dice started the farm and nursery more than 30 years ago and now grow over 75 tree and shrub species that produce a range of common and not-so-common fruits and nuts. For a wide variety of information about the crops they grow and sell at Red Fern Farm, visit their website.

Tom and Kathy split the group in two and each took their group on a tour of a portion of the farm. Kathy's group learned all about chestnut production and marketing, and Tom's tour covered heartnuts, pawpaws, Asian pears, honeyberries, and American persimmons. The groups reconvened for a break, then switched tour guides.

Resources

Search all resources...

BLOGS EVENT RECAPS FARMER-LED RESEARCH FARMINARS NEWS PODCASTS

Steve Carlson

*Next Generation Coordinator*

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CATEGORY

Event Recaps

TOPICS

Field Day, Fruit, Orchard, Vegetables

PUBLISHED OCT 1, 2018

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## Field Day Recap: Cider and Pumpkins at Deal's Orchard

By Steve Carlson

Three generations of the Deal family were on-site to lead nearly 50 field day attendees on a tour of their apple house and farm on a recent September morning. While Tracy Deal orchestrated the field day logistics behind-the-scenes (and managed the youngest generation still-in-training) and Cindy Deal managed the on-farm store, brothers Chris and Benji helped their father, Jerald, run the field day.


Resources

Search all resources...

BLOGS EVENT RECAPS FARMER-LED RESEARCH FARMINARS NEWS PODCASTS PUBLICATIONS VIDEOS

Liz Kolbe

*Horticulture and Habitat Programs Manager*

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CATEGORY

Event Recaps

TOPICS

Field Day, Vegetables

PUBLISHED AUG 30, 2018

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## Field Day Recap: Seed Saving and Weed Management at Iowana Farm

By Liz Kolbe

Terry first learned to s
pulp, put the seeds in
would pour off. The go
started farming, that's
Nathan and Beth Kory
Nathan visited and ins
it possible for Terry to

Tom Stearns, the foun
"You want to make mo
plants. Do not trellis th
seeds she starts and th
weeds down, and "her

"I had the most confid
pound; certified organ
Every 5% of additiona
90s, that can be $450,
go – they don't have th

Resources

Search all resources...

BLOGS EVENT RECAPS FARMER-LED RESEARCH FARMINARS NEWS PODCASTS PUBLICATIONS VIDEOS

Liz Kolbe

*Horticulture and Habitat Programs Manager*

VIEW BIO →

CATEGORY

Event Recaps

TOPICS

Conservation, Habitat, Horticulture, Pest Management, Pollinator, Vegetables

PUBLISHED OCT 26, 2018

SHARE THIS POST

## Field Day Recap: Beneficial Insect Habitat at Grinnell Heritage Farm

By Liz Kolbe

**Have you ever seen a farmer so excited to find a thistle? When they're looking for pollinator-friendly plants, the bigger the field thistle, the better.**

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# Tools and Tractors with T.D.

## Garden Oasis Farm, T.D. Holub

# Dried Flower Production

## Howell's Floral and Greenhouse, Fred Howell

# HORTICULTURE – 2018 Field Days

Growing Garlic and Marketing the Farm – Jordan Clasen and Whitney Brewer
Teaming Up and Starting a Vegetable Farm – Hannah Breckbill and Emily Fagan
Landing a Farm: Long-Term Leases – Kate Edwards
Terry's Techniques: Seed-Saving and Weed Control – Terry Troxel
Raising Prairie: Seeds, Plants and Restoration – Dwight and Bev Rutter
Planning and Installing Beneficial Insect Habitat – Andrew and Melissa Dunham (Partner: Xerces Society)
Tree Crop Field Class – Tom Wahl and Kathy Dice
Cider and Pumpkins at Historic Deal's Orchard – Chris and Tracy, Benji, Jerald and Cindy Deal
Production to Market at Pheasant Run Farm – Ann and Eric, Calvin Franzenburg
Root and Tuber Crop Production – John and Janna Wesselius

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# Growing Garlic and Marketing the Farm

## Grade A Gardens, Jordan Clausen & Whitney Brewer


# Raising Prairie: Seeds, Plants and Restoration

## The Prairie Flower, Dwight & Bev Rutter

# HORTICULTURE – 2018 Annual Conference

- Managing a Young and Growing Orchard
- Using Habitat to Increase Beneficial Insects on Fruit and Vegetable Farms
- Ecology and Management of Iowa's Common Vegetable Insect Pests
- Alternative Models & the Future of CSA
- Field Preparation, Cultivation & Fertility
- Physical Strengthening, Recovery & Injury Prevention for Vegetable Farmers
- Hiring Migrant and Seasonal Workers and Year-Round Employees
- Learning from On-Farm Research: Horticulture
- Winter Vegetable Production
- Indoor Mushroom Production and Marketing
- GAP, FSMA and Post-Harvest Handling for Food Safety
- Foraging for Market: Morels and Greens
- Pack Shed and Post-Harvest Efficiency
- Growing Better Brussels Sprouts

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# Conference Recordings on PFI's Youtube Channel


Tony Gallo - Physical Strengthening, Recovery and Injury Prevention - PFI 2018 Annual Conference

Michael Kilpatrick - Winter Vegetable Production - PFI 2018 Annual Conference


Dr. Ajay Nair & Andy Dunham - Growing Better Brussells Sprouts - PFI 2018 Annual Conference

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# HORTICULTURE – 2017-18 Workshops and Meet-Ups

Alternative Berry Short Course (2 days)
Advanced Financial Planning for Fruit & Vegetable Farms with Holistic Management International (2 days)
High Tunnel Build (2 days) x 2
Welding Workshops x 3
Tractor Operation, Safety and Maintenance for Fruit and Vegetable Farmers (2 days) x 2
Orchardist Gathering
Fruit and Vegetable Farmer Meet-Ups x4

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# Tractor Operation, Safety and Maintenance (2-day x 2)

## Shane LaBrake



# HORTICULTURE – 17-18 Farminars
# Watch in the Farminar Archive!


## 2017

Risk Management for a Diversified Farm – Andrew Dunham
Variety Selection for Vegetable Production – Rob Faux
Organic Apple Production – Maury Wills
Effective Mentor Relationships - Denise O'Brien, Scott Yahnke, Ali Clark
Achieving Profitability with Fruits and Vegetables – Natasha Hegmann, Ryan Pesch (MN)
Grow Flowers That Sell: Top 10 Sellers at Brightflower Farm -Jeanie McKewan (IL)

## 2018

Using Permaculture Design and Farming Solo – Clare Hintz (WI)
Dive Into Growing Woodies as Cut Flowers – Rachael Ackerman (MN)
Pollinator Habitat: A Guide to Native Restoration - Jessi Strinmoen (MN), Dennis Pederson
Managing Disease in Organic Vegetable Crops – Beth Kazmar (WI)
Organic Seedling Production – Paul Betz (VT)
Getting Started Growing and Marketing Unusual Fruits – Tim Clymer (PA)

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# HORTICULTURE – 2019 Farminars
# New Platform! (mobile-friendly)
# Tues. 7 p.m.

**Feb. 5 – "No-Till Vegetable Production"**
Elizabeth and Paul Kaiser, Singing Frogs Farm (CA)

**Feb. 12 – "Ridge-Till Vegetable Production"**
Brian Caldwell, Cornell University (NY); Jordan Scheibel, Middle Way Farm

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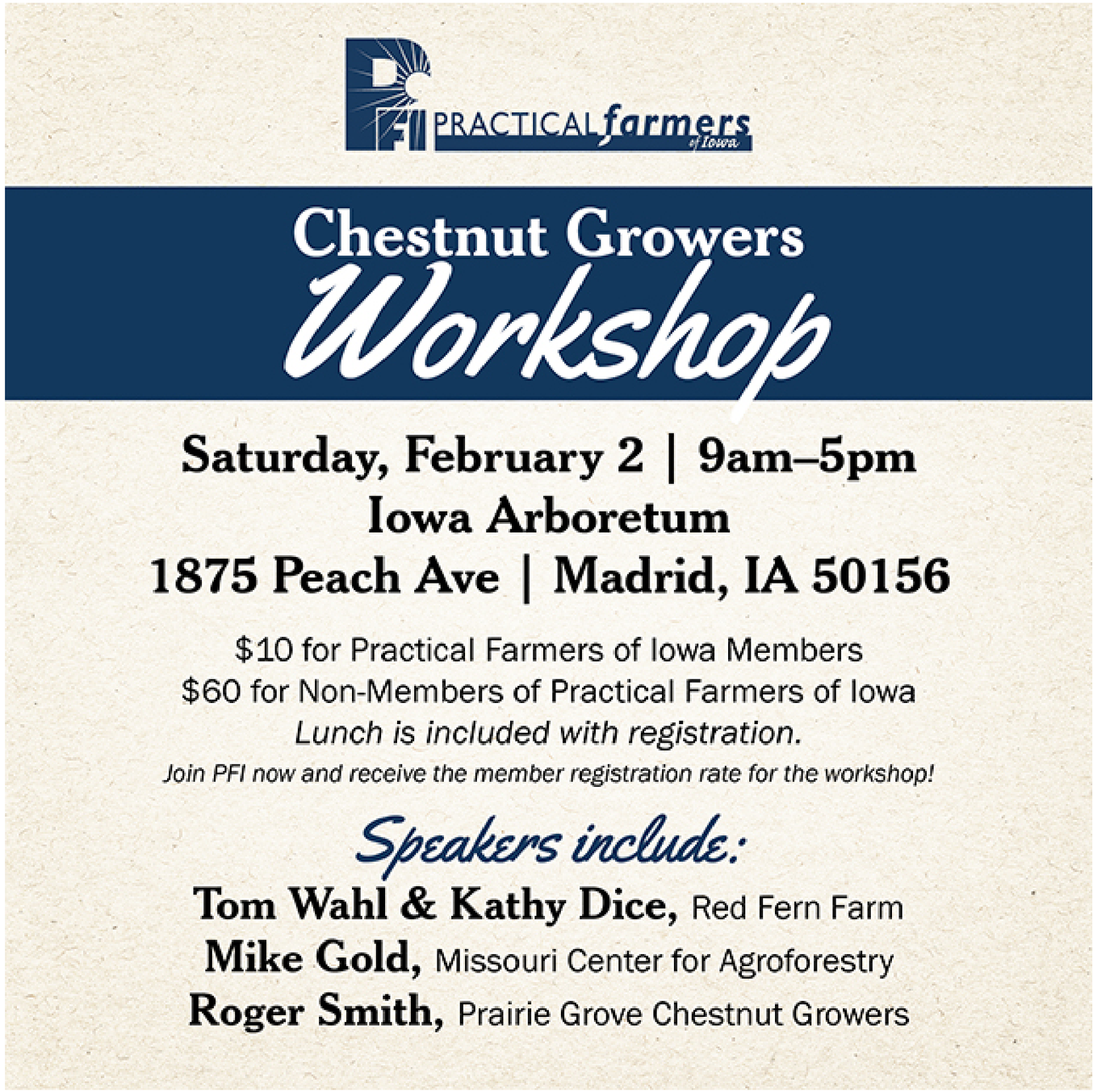


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# Meet-Ups – Breakfast with farming friends and PFI!
# 9:30 - 11:30 a.m.

Feb 5: Waverly, Wild Carrot
Feb. 7: Logan, Logan Flours
Feb. 26: Solon, Salt Fork Kitchen
Feb. 28: Decorah, Potluck!
Date TBD: Des Moines, HoQ
Date TBD: Northwest Iowa?

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# How does PFI decide which programs and events to do?

Do we have evidence that farmers want it?
Does it fit with our strategic plan?
Does it fit with our mission and vision?
Does it foster our key niche (farmer-to-farmer)?
Does it have board support?
Is it non-duplicative of our current programming or our partners' programming?

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Is it funded?
Is it fundable?
Is it likely to bring in members and/or funding?
As staff, do we have the interest and capacity to take it on?
Do we have the partnerships to take it on?
Has it been done before? Should it be done again?
Are we the only group that can take this on?

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# How do we get ideas for events?

Evaluations
Conversations
Emails
Phone Calls
Facebook Groups
Word-of-Mouth
Watching at Events
**Networking**

**HORTICULTURE STEERING COMMITTEE**

Jill Beebout
Jordan Clausen & Whitney Brewer
Rob Faux
Emma & Marcus Johnson
Laura Krouse
Jan Libbey
Danelle Myer
Jordan Scheibel
John Wesselius

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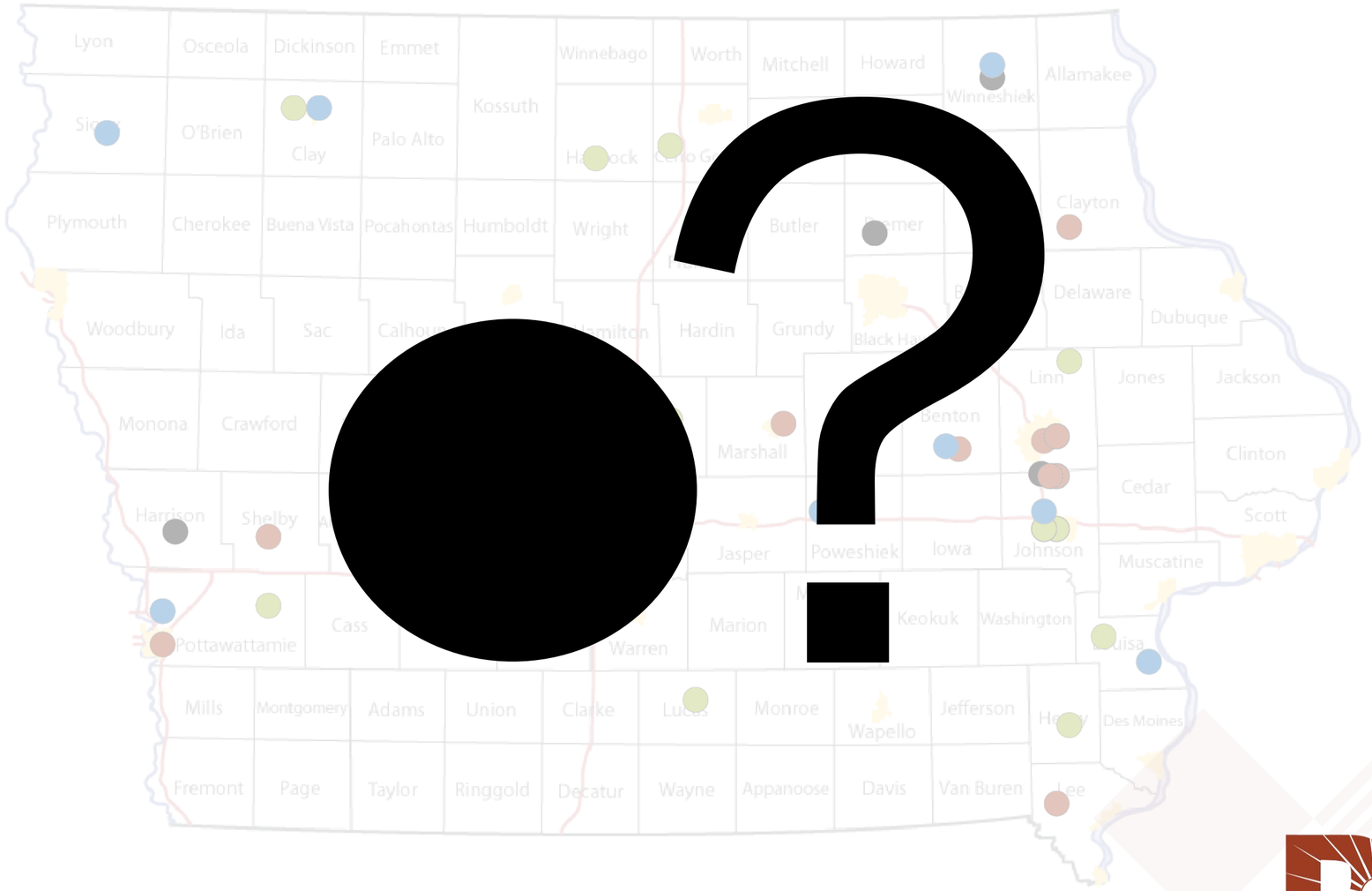
# Where, who, what next? Ideas welcome!

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# COOPERATORS' PROGRAM

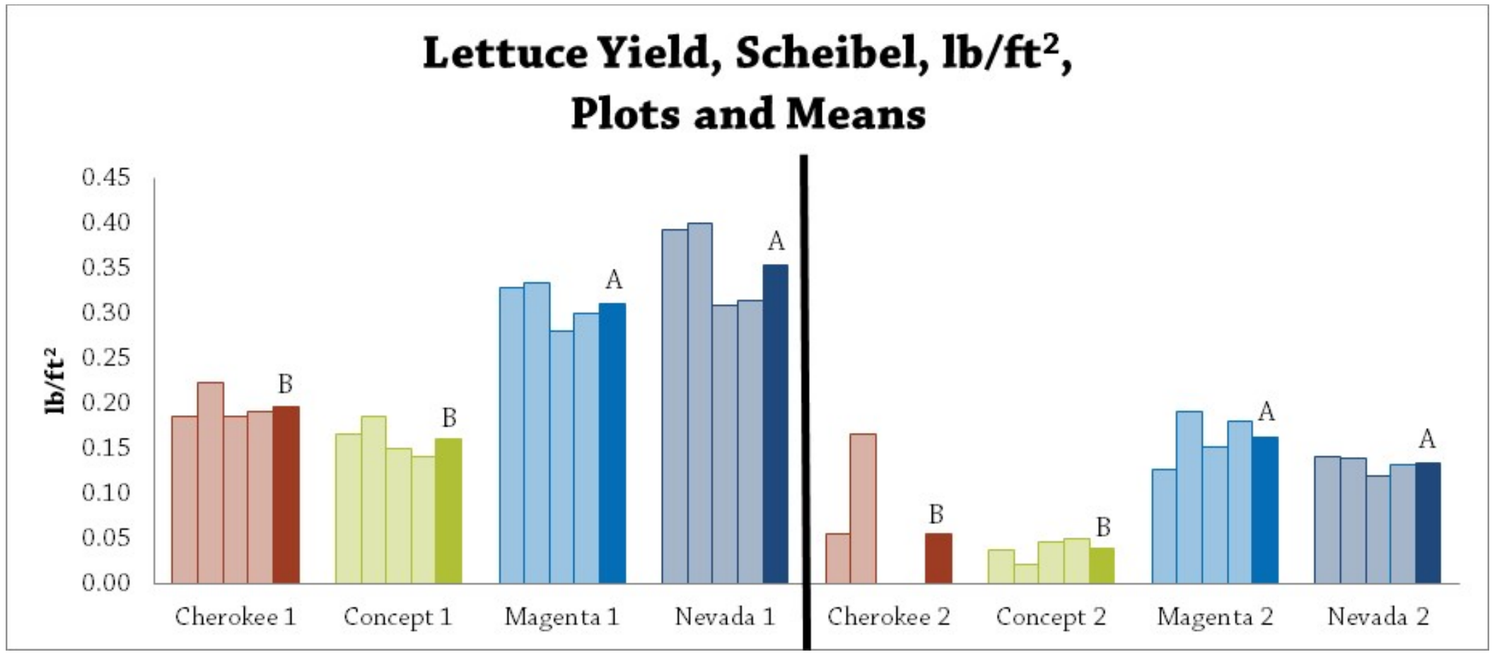
## FARMER-LED RESEARCH

# 2018 Horticulture Projects

Summer Lettuce Variety Trial
Cauliflower Variety Trial
High Tunnel Tomato Variety Trial
Summer Broccoli Variety Trial
Summer Lettuce Germination Trial
Enterprise Budget Comparison for Strawberry
Enterprise Budget for Cherry Tomatoes
Brassica Production Following Grazed and Ungrazed Cover Crop
Smother Crops for Organic Control of Canada Thistle

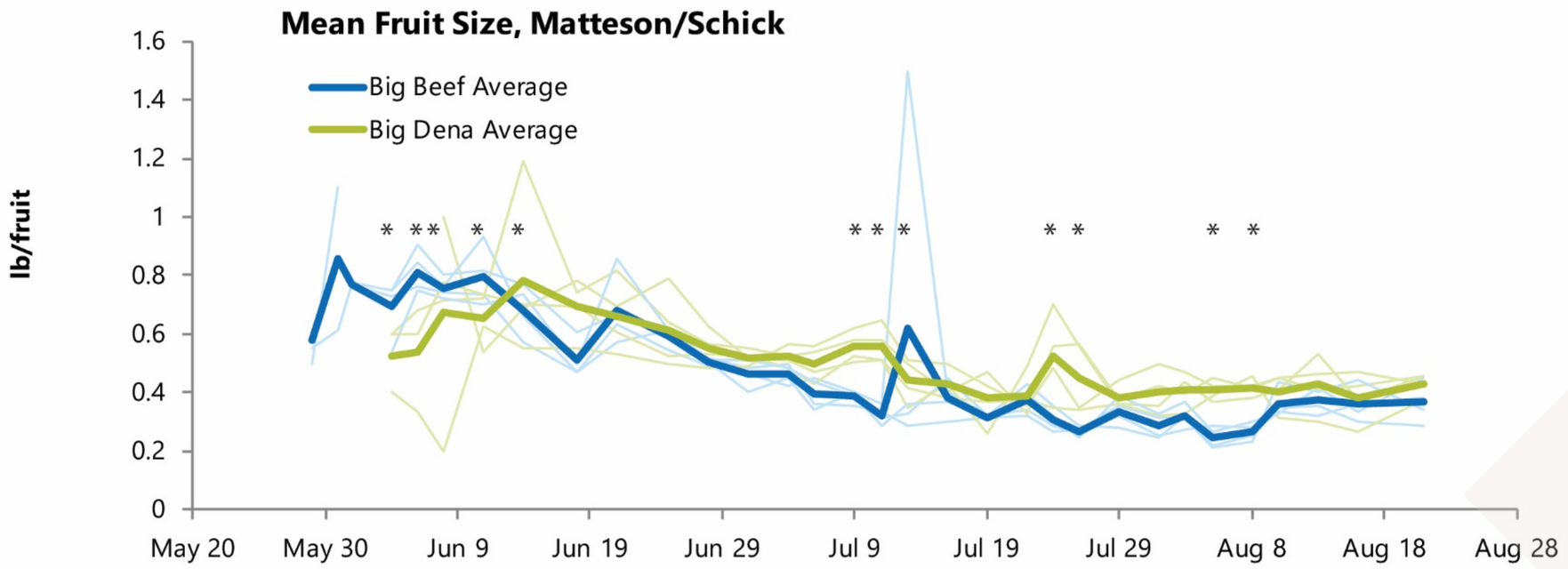
# 2018 Summer Lettuce Variety Trial

| Rep 1 | Rep 2 | Rep 3 | Rep 4 |
|---|---|---|---|
| Concept | Nevada | Cherokee | Magenta |
| Magenta | Concept | Nevada | Cherokee |
| Cherokee | Magenta | Concept | Nevada |
| Nevada | Cherokee | Magenta | Concept |

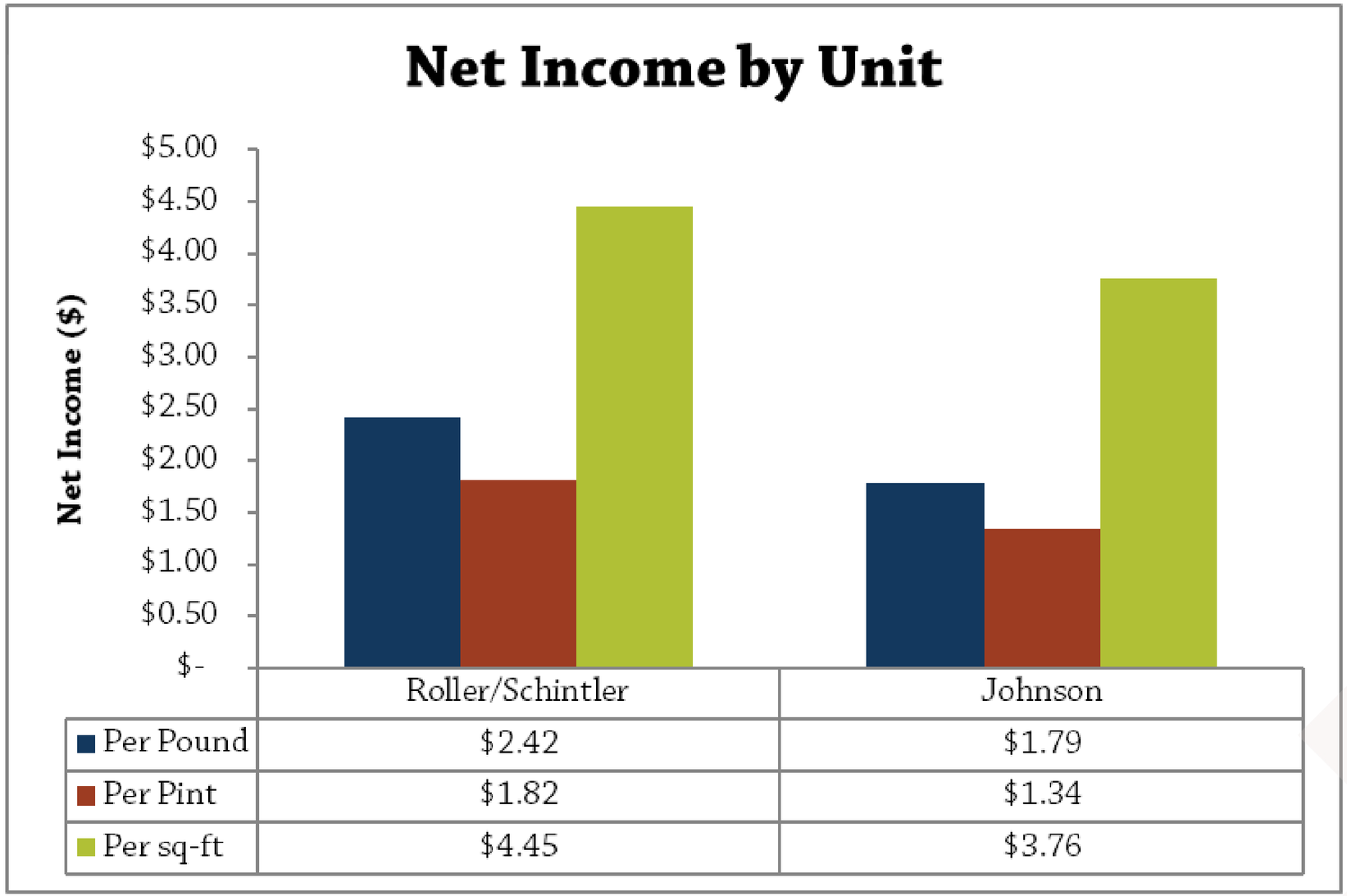



# 2018 Greenhouse Tomato Variety Trial

| Rep 1 | Rep 2 | Rep 3 | Rep 4 |
|---|---|---|---|
| Beef | Dena | Dena | Beef |
| Dena | Beef | Beef | Dena |

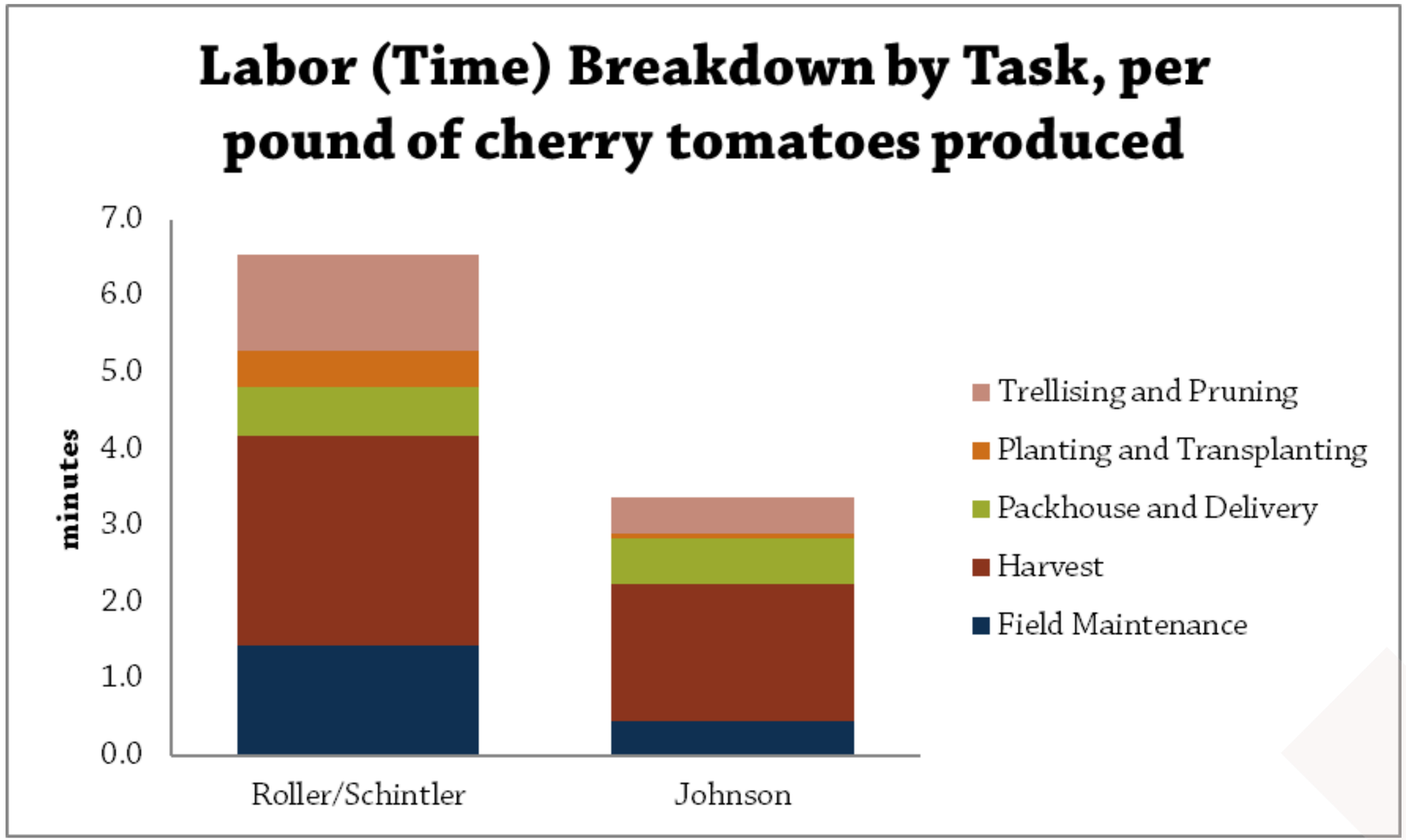



# 2018 Cherry Tomato Enterprise Budget




| | Roller/Schintler | Johnson |
|---|---|---|
| Per Pound | $2.42 | $1.79 |
| Per Pint | $1.82 | $1.34 |
| Per sq-ft | $4.45 | $3.76 |

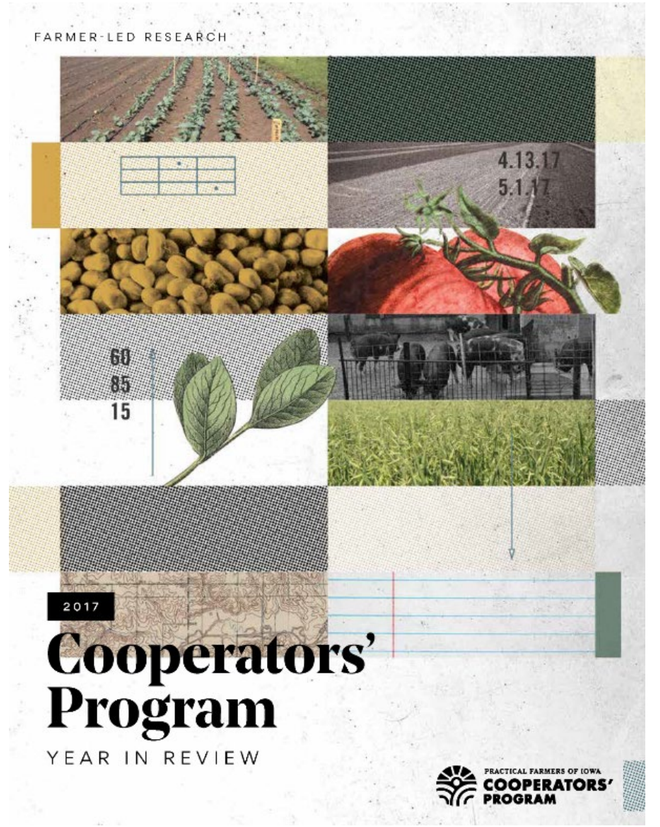
# 2018 Cherry Tomato Enterprise Budget




# The Latest Research from PFI

FILTER RESEARCH

| Title | Year | Category |
|---|---|---|
| Winter Cereal Rye Cover Crop Effect of Cash Crop Yield – Year 10 | 2018 | |
| Whole Farm Financial Project: Analysis of 2013 – 2016 Financials | 2018 | |
| Annual Wildflower and Herb Mix for Pollinators | 2018 | |
| Underseeded vs. Mid-Summer-Seeded Green Manures for Corn | 2018 | |
| Spring-Seeded Cover Crops Ahead of Soybeans | 2018 | |
| Corn Leaf Architecture for Interseeded Cover Crop | 2018 | |

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# 2019 Horticulture Projects

- One-Cut Lettuce Variety Trial
- Romaine Variety Trial
- Summer Cabbage Variety Trial
- Cauliflower Variety Trial
- High Tunnel and Field Heirloom Tomato Variety Trial
- Mustard Variety Trial
- Dahlia Enterprise Budget
- Sweet Potato Enterprise Budget
- Summer Lettuce Germination Trial
- Squash Vine Borer Control
- Tea Bag Index in Agroforestry Trial
- Fertility Trial in Brassica
- Buckwheat as a Living Mulch in Sweet Potatoes
- Demonstration Trial: Mushroom as Understory Crop in Eggplant

# Whole Farm Financial Project, 2013-2016

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working together, always learning

## Horticulture Research

### Whole Farm Financial Project: Analysis of 2013 - 2016 Financials


**Staff Contact:**
**Liz Kolbe –** (515) 232-5661
liz@practicalfarmers.org


**Cooperators:**
- 8 PFI Fruit and Vegetable Producers


**Funding By:**
CERES Trust
USDA Risk Management Agency


**Web Link:**
http://bit.ly/pfi_horticulture

#### In a Nutshell

- Eight fruit and vegetable farms provided a profit-loss statement and simple balance sheet for four years (2013 - 2016).
- Five of the farms averaged more than $24,000/ac in gross revenue for the 4-year period.
- Four of the farms had a "favorable" four-year average net income ratio, ranging from 0.23 - 0.43.
- Number of years farming as a business ranged from 2 – 14 years.
- No two farm financial strategies or situations are the same. This report serves as a starting point for profitability conversations, and for farmers to compare their own numbers with their peers.

#### Introduction

In 2014 vegetable farmers asked Practical Farmers to collect and anonymously report whole farm financial data from themselves and their peers. Participating farms had a shared concern that attention to the bottom line of the local food movement was not receiving enough attention – that too many aspiring farmers had unrealistic or naïve expectations for profitability and a farming lifestyle. The results from the four years of this study are intended to be a resource for aspiring and beginning farmers, to provide a snapshot of what financials look like for real farms and how they can vary from year to year.

Though many new farmers start because of a love of growing vegetables and feeding communities, without a basic understanding of financials their farm businesses will not be sustainable. If a person is ready to start a farm, they need to be ready to do the books.

**This report cannot be used as a blueprint for farm financial success. This report will be immediately useful to farmers with a few years of financial numbers of their own to compare. For beginning and aspiring farmers, this report can show them which ratios to begin tracking, and what level of revenue, and costs, may be reasonable to expect.**

When deciding the methods for this project, several previous reports were used, and may be of interest to other farmers and researchers. Farmer members have found Hendrickson (2005) particularly informative for farm business comparison. Several reports from Iowa State University were employed to evaluate farm business health (Chase, 2012; Plastina et al., 2014; Edwards, 2014), as well as reports from other universities (Blonde, 2009), Practical Farmers of Iowa (1999) and "Fearless Farm Finances" by Padgham et al. (2012).

#### Data Collection and Reporting

This report provides a 4-year look at financials from eight farms from 2013 – 2016. Though more farmers participated through 2013 and 2014, only farms that provided at least three years of data are included in the 4-year report. Detailed Whole Farm Financial Reports for 2013 and 2014 are available on the Practical Farmers of Iowa website, practicalfarmers.org (Kolbe, 2015; Kolbe, 2016).

For this report, farmers were asked to complete a Schedule F tax form that was modified to include a more detailed breakdown of revenue, a simple balance sheet of equity and liabilities, and a 13-question survey (**Appendix 1**). To preserve anonymity of the farms, the data is primarily reported by transforming data into common financial ratios and per acre values.

#### Overview of participating farms

Farmers were asked to participate not based on their perceived profitability, but by their willingness to share data for the benefit of others. The farms all raise a diverse set of fruits and vegetables. Beyond that, they differ in many ways: some also raise livestock or field crops. Some farm on their own, while others farm with a spouse or family. Some have been farming only a few years, others are seasoned veterans. On the financial side, four are sole proprietorships, four are LLCs. Three farms' financials are organized so their house is included in the farm assets. Some started their farms slowly, easing in after prior careers or during existing careers; some others are all-in, living on the farm's income while building the farm for their first career.

Three farms earned 100% of their household income from the farm during 2015 and 2016; one additional farm in the study has a goal of earning 100% of household income from farming, but is a beginning farmer and is meeting their current expectations for profitability.

#### Farm Ratios

No single financial ratio explains the overall financial health of a business, but tracking a group of ratios can help expose weaknesses and strengths in a farm business. Over time, ratios and benchmarks can be used to set goals that drive short-term



Table 2

**Selected Farm Financials and Demographics, 2013-2016**

| Year | Demographics: Number of Years Farming | Demographics: Acres in fruit and vegetables | Demographics: Number of produce market types used | Demographics: % of produce sales in top 2 markets | Revenue: produce % of total farm revenue | Revenue: Gross Revenue Per Acre ($) | Expenses: Labor expense % of total | Expenses: Supplies expense % of total | Expenses: Depreciation expense % of total | Returns: Net Farm Profit per acre ($) | Returns: Rate of Return on Farm Assets [b] | Returns: Net Income Ratio [a] | Goals: Goal % household income from farming | Goals: Current % household income from farming | Goals: Are you meeting your expectations for farm profitability? |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| **Farm A** | | | | | | | | | | | | | | | |
| Average | | 2.93 | 4.5 | 91 | 92 | 24,689 | 31 | 11 | 5 | 12,619 | 0.28 | 0.43 | 71 | 66 | |
| 2013 | 9 | 2.7 | 4 | 87 | 94 | 24,205 | 33 | 11 | 6 | 12,240 | 0.17 | 0.51 | 80 | 82 | Yes |
| 2014 | 10 | 3.0 | 4 | 90 | 90 | 22,876 | 30 | 12 | 5 | 11,248 | 0.49 | 0.16 | 80 | 55 | Yes |
| 2015 | 11 | 3.0 | 5 | 94 | 90 | 26,402 | 29 | 11 | 4 | 14,679 | 0.26 | 0.56 | 75 | 82 | Yes |
| 2016 | 12 | 3.0 | 5 | 96 | 91 | 25,272 | 30 | 11 | 4 | 12,309 | 0.19 | 0.49 | 50 | 47 | Yes |
| **Farm B** | | | | | | | | | | | | | | | |
| Average | | 3.75 | 3.75 | 87 | 91 | 32,081 | 34 | 9 | 17 | 7,496 | 0.16 | 0.23 | 75 | 72 | |
| 2013 | 9 | 3.0 | 3 | 87 | 88 | 23,466 | 20 | 9 | 35 | 3,314 | 0.13 | 0.14 | 50 | 41 | No |
| 2014 | 10 | 4.0 | 3 | 88 | 87 | 30,191 | 22 | 11 | 18 | 7,055 | 0.23 | 0.26 | 50 | 45 | No |
| 2015 | 11 | 4.0 | 4 | 88 | 96 | 35,297 | 42 | 8 | 13 | 7,573 | 0.13 | 0.21 | 100 | 100 | No |
| 2016 | 12 | 4.0 | 5 | 85 | 95 | 39,369 | 51 | 6 | 4 | 12,041 | 0.15 | 0.31 | 100 | 100 | Yes |
| **Farm C [c]** | | | | | | | | | | | | | | | |
| Average | | 17.38 | 3.5 | 95 | 79 | 3,047 | 30 | 4 | 9 | 237 | 0.07 | 0.07 | 100 | 100 | |
| 2013 | 3 | 17.0 | 2 | 100 | 69 | 2,805 | 22 | 7 | 7 | 372 | 0.11 | 0.13 | 100 | 100 | Yes |
| 2014 | 4 | 16.5 | 3 | 98 | 74 | 3,020 | 27 | 3 | 9 | 255 | 0.08 | 0.06 | 100 | 100 | Yes |
| 2015 | 5 | 18.0 | 4 | 89 | 85 | 3,081 | 36 | 3 | 11 | 321 | 0.06 | 0.10 | 100 | 100 | Yes |
| 2016 | 6 | 18.0 | 5 | 93 | 87 | 3,284 | 35 | 2 | 10 | (3) | 0.01 | 0.00 | 100 | 100 | Yes |
| **FARM D** | | | | | | | | | | | | | | | |
| Average | | 4.73 | 4 | 85 | 96 | 4,577 | 30 | 13 | 22 | (82) | 0.03 | (0.07) | 75 | 48 | |
| 2013 | 11 | 6.0 | 3 | 86 | 92 | 8,299 | 30 | 11 | 32 | 925 | 0.02 | 0.11 | 75 | 40 | No |
| 2014 | 12 | 6.5 | 3 | 89 | 92 | 3,282 | 25 | 15 | 18 | 371 | 0.11 | 0.01 | 75 | 45 | No |
| 2015 | 13 | 3.2 | 5 | 79 | 100 | 3,433 | 37 | 13 | 14 | (274) | -0.01 | (0.08) | 75 | 55 | No |
| 2016 | 14 | 3.2 | 5 | 85 | 100 | 3,295 | 28 | 11 | 24 | (1,349) | -0.02 | (0.30) | 75 | 50 | No |
| **FARM E** | | | | | | | | | | | | | | | |
| Average | | 0.53 | 3.33 | 90 | 35 | 729 | 0 | 4 | 12 | (87) | 0.01 | (0.12) | (5) | (7) | |
| 2013 | 9 | 1.0 | 3 | 85 | 41 | 804 | 0 | 3 | 14 | (60) | 0.02 | (0.07) | 0 | 0 | Yes |
| 2014 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 2015 | 11 | 0.3 | 3 | 92 | 29 | 704 | 0 | 5 | 12 | (107) | 0.00 | (0.15) | 0 | 0 | Yes |
| 2016 | 12 | 0.3 | 4 | 92 | 35 | 677 | 0 | 3 | 11 | (94) | 0.00 | (0.14) | (15) | (21) | No |
| **FARM F** | | | | | | | | | | | | | | | |
| Average | | 0.94 | 3.75 | 80 | 88 | 31,700 | 19 | 20 | 9 | 6,787 | 0.47 | 0.26 | 91 | 18 | |
| 2013 | 3 | 0.75 | 3 | 90 | 76 | 25,421 | 0 | 18 | 38 | 1,327 | 0.05 | 0.05 | 100 | 0 | No |
| 2014 | 4 | 1.00 | 4 | 79 | 93 | 19,760 | 19 | 25 | 0 | 2,310 | 0.12 | 0.07 | 65 | 9 | No |
| 2015 | 5 | 0.75 | 4 | 75 | 85 | 51,827 | 23 | 12 | 0 | 23,400 | 0.92 | 0.45 | 100 | 35 | Yes |
| 2016 | 6 | 1.25 | 4 | 78 | 100 | 29,790 | 32 | 25 | 0 | 13,444 | 0.80 | 0.45 | 100 | 27 | Yes |

[a] Net Income Ratio = net income ÷ gross revenue
[b] Rate of Return on Farm Assets = (net farm income + other interest expense + mortgage interest expense) ÷ total farm assets
[c] Farm N did not provide financials in 2013; Farm E did not provide financials in 2014.

Average values for Net Income Ratio and Rate of Return on Farm Assets are shown in green, blue or red. These values indicate "favorable" (green), "moderate (blue), or unfavorable (red), based on Blonde (2009).



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# Whole Farm Financial Project, 2013-2016

Local Food success?
Romanticized lifestyle?
Why does it work for them? (Does it??)
Evolving market – relevance of "old" models?

## Turn Dirt Into Dollars With a Microfarm

By Craig Wallin

...e number of traditional farms in the ... has dropped by half or more, but a new ...ster than a prairie weed.

...h smaller than traditional farms. Instead ... may be only an acre or two – even as ... some specialty crops. Many of these ...pringing up in and around the fringes of ...where customers for the specialty crops ...e new growers choose to grow plants not ...r the satisfaction of tending a crop and ...ides.

...dy told me about ...ning: I can't make a

..."rich in other ways," but that ...ly fact that most farms are

...15 06:00 PM CST
...FARMING

## How to Make a Living From a 1.5 Acre Market Garden

March 22, 2015 by papprentice / 82 Comments

Picture the scene, you're awoken by the morning sun, grab yourself a coffee and step outside. As you take your first sip you watch the sun rising and enjoy the serene sound of birdsong. Everything's tranquil as you take a leisurely stroll around your market garden, making a list of today's tasks. There is a lot to do but you enjoy every tiny piece of it and can't wait to begin.

Can you imagine this life for yourself? Do you think it's possible for you to enjoy this kind of lifestyle and actually make a decent living from it?

I'll let you in on a secret. The biggest challenge in life is YOU and your beliefs. When it comes to commercial vegetable growing, the idea of a profitable micro-farm is frequently met with scepticism. Some cynics will try to discourage you from starting a market garden, declaring that production simply won't be enough to make your family's ends meet.

## J.M. Fortier and the Rise of the High-Profit Micro Farm

Jesse Frost

One man is on a mission to prove that it's possible to make (good) living farming.

PRACTICAL farmers of Iowa

# Whole Farm Financial Project, 2013-2016
# What we asked:

Schedule F (income category modification)
Itemized Depreciation
Total Equity and Liabilities
10 Demographic Questions:

1. Acres in vegetable production
2. Total acres earning income
3. Number of years farming as a business
4. Goal percent of household income from farming
5. Current percent of household income from farming
6. Type of farm business (LLC, C-corporation, etc)
7. Estimated hours each owner worked on farm
8. Estimated owners draw
9. Are you meeting your expectations for farm profitability?
10. If you are not meeting your expectations for farm profitability, are you planning to make changes?

PRACTICAL farmers of Iowa

**Table 1**

## Comparison of Financials by Farm, 2013-2016

| Farm | Revenue | | | | Expenses | | | Returns | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Number of produce market types used | % produce sales in top 2 markets | produce % of total farm revenue | Gross Revenue Per Acre ($) | Labor expense % of total | Supplies expense % of total | Depreciation ex-pense % of total | Net Farm Profit per acre ($) | Net Income Ratio [a] | Rate of Return on Farm Assets [b] |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| **2013-2016 Average** | | | | | | | | | | |
| **A** | 5 | 91 | 92 | 24,689 | 31 | 11 | 5 | 12,619 | 0.43 | 0.28 |
| **B** | 4 | 87 | 91 | 32,081 | 34 | 9 | 17 | 7,496 | 0.23 | 0.16 |
| **C** | 4 | 95 | 79 | 3,047 | 30 | 4 | 9 | 237 | 0.07 | 0.07 |
| **D** | 4 | 85 | 96 | 4,577 | 30 | 13 | 22 | (82) | (0.07) | 0.03 |
| **E** [c] | 3 | 90 | 35 | 729 | 0 | 4 | 12 | (87) | (0.12) | 0.01 |
| **F** | 4 | 80 | 88 | 31,700 | 19 | 20 | 9 | 6,787 | 0.26 | 0.47 |
| **M** | 3 | 94 | 100 | 26,166 | 32 | 14 | 7 | 7,472 | 0.33 | 0.35 |
| **N** [c] | 6 | 71 | 98 | 24,152 | 3 | 16 | 22 | 199 | 0.05 | 0.05 |

PRACTICAL farmers of Iowa

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PRACTICAL farmers of Iowa

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PRACTICAL farmers of Iowa

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| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| **2013-2016 Range** | | | | | | | | | | |
| **A** | 1 | 9 | 4 | 3,526 | 4 | 1 | 1 | 3,431 | **0.40** | **0.32** |
| **B** | 2 | 4 | 9 | 15,903 | 31 | 5 | 32 | 8,727 | **0.16** | **0.11** |
| **C** | 3 | 11 | 17 | 479 | 14 | 4 | 4 | 375 | **0.13** | **0.10** |
| **D** | 2 | 9 | 8 | 5,017 | 12 | 4 | 18 | 2,274 | **0.41** | **0.13** |
| **E** | 1 | 7 | 12 | 127 | 0 | 2 | 2 | 47 | **0.08** | **0.02** |
| **F** | 1 | 15 | 24 | 32,067 | 32 | 13 | 38 | 12,117 | **0.40** | **0.87** |
| **M** | 1 | 12 | 0 | 18,805 | 7 | 15 | 12 | 10,663 | **0.50** | **0.67** |
| **N** | 2 | 16 | 5 | 6,838 | 4 | 4 | 7 | 5,339 | **0.12** | **0.29** |

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# Take-aways

- No single, correct business model. Success looks different to everyone.
- Expect and plan for year-to-year variation in financials.
- Be prepared to weather a lean year (or several).
- Define realistic expectations.
- Set financial goals and create a manageable process to track them.
- Track labor; know what you are paying yourself.
- Excellent teaching / comparison / conversation tool
- You need your own data.

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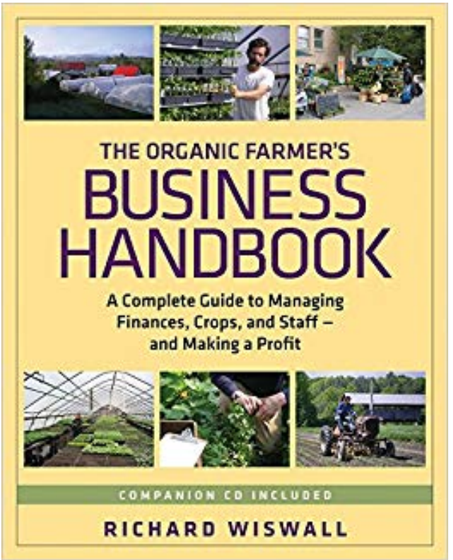
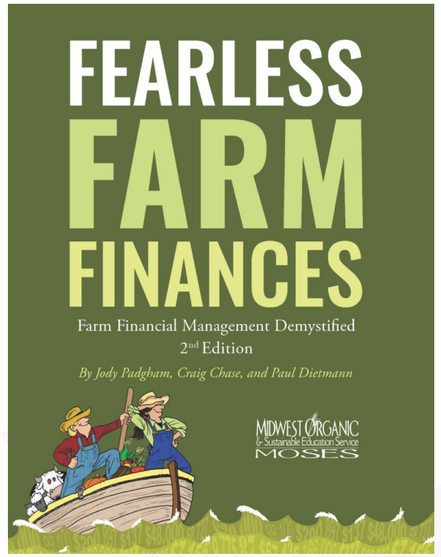
# Next Steps

- Talk to other farmers about what has helped them.
- Get Quickbooks, learn to use it.
- Educate yourself about farm finances.
  - *The Organic Farmers' Business Handbook,* Richard Wiswall
  - *Fearless Farm Finances*, Padgham, Chase, Dietmann
  - PFI farminar recordings, past annual conference sessions
- Set financial goals for your farm, and create a plan to track them.




PRACTICAL farmers of Iowa

# data.practicalfarmers.org


## Farmer to Farmer Vegetable Yield and Production Data.

Founded in 1985, our mission is to equip farmers to build resilient farms and communities.

Submit Data

EXPLORE

# All Crops

## Browse all crop data

492 Crops

Filter Crop Data | Export to csv

← Previous 1 2 3 4 5 6 7 8 9 … 16 17 Next →

| Crop name | Variety | Area Planted (ft2) | Total Yield (lbs) | Transplanted | Seeded Date (Transplanted Date) | Spacing within rows (in.) | Spacing between rows (in.) | Infrastructure | Irrigation | Harvest Window | Mulch | State | Zip |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Edit Crop Delete Crop | Jersey King | 38086 | 877 | Transplanted | (05/03/2011) | 15 | 48 | | | - 05/20/2015 | None | Iowa | 50049 |
| Asparagus Edit Crop Delete Crop | Jersey Supreme | 9147 | 426 | Transplanted | 04/20/2008 (04/20/2008) | 12 | 48 | | | 04/16/2015 - 06/16/2015 | Other | Iowa | 50167 |
| Beans, Fresh Edit Crop Delete Crop | Carson | 1500 | 162 | | 07/14/2013 | 1 | 60 | | Yes | 09/08/2013 - 10/19/2013 | None | Iowa | 50167 |
| Beans, Fresh Edit Crop Delete Crop | Jade (Gb45 1 3 1) | 360 | 314 | | 05/22/2014 | 2 | 10 | | Yes | 07/09/2014 - 10/26/2014 | None | Iowa | 50676 |
| Beans, Fresh Edit Crop Delete Crop | Jade (Gb45 1 3 1) | 540 | 135 | | 06/08/2015 | 2 | 10 | | Yes | 07/31/2015 - 08/26/2015 | None | Iowa | 50676 |
| Beans, Fresh Edit Crop Delete Crop | Jade (Gb45 1 3 1) | 130 | 210 | | 06/07/2013 | 2 | 10 | | Yes | 07/25/2013 - 10/11/2013 | None | Iowa | 50676 |

# Search Crops

## Filter and export crop data

All Crops | New Search

Crop Name: - Any -

Variety: - Any -

Harvest Date(s): Select An Option

Advanced Search -

Structure: Select some options or leave blank for all

State: Select Some Options

Zone: Select Some Options

Search

# data.practicalfarmers.org


## Farmer to Farmer Vegetable Yield and Production Data.

Founded in 1985, our mission is to equip farmers to build resilient farms and communities.

Submit Data

EXPLORE

# Welcome, PFI Research!

Here is your farm and associated crops

Edit My Account

PRACTICAL FARMERS OF IOWA COOPERATORS' PROGRAM FARMER-LED RESEARCH

PFI Research

info@practicalfarmers.org

50010

Public Profile

Farmer

1985

Crops: Asparagus, Beans, Fresh, Broccoli, Cabbage, Carrot, Cauliflower, Corn, Sweet, Cucumber, Eggplant, Garlic, Greens, Kale, Kohlrabi, Leek, Lettuce, Melon, Okra, Onion, Peas, Green, Peppers, Potato, Pumpkin, Radish, Shallot, Squash, Sweet Potato, Swiss Chard, Tomato, Turnip, Watermelon

Edit Farm

## Crops (492)

Crop Name:

- Any -

Harvest Year:

2017 2016 2015 2014 2013 2012 All

EXPORT ALL TO CSV ADD CROP

LAST UPDATED ON DECEMBER 07, 2018 (ABOUT 1 MONTH AGO)
Beans, Fresh - Carson
Sep 08, 2013 - Oct 19, 2013
EDIT EXPORT CLONE DELETE

LAST UPDATED ON DECEMBER 05, 2018 (ABOUT 1 MONTH AGO)
Beans, Fresh - Jade (Gb45-1-3-1)
Jul 09, 2014 - Oct 26, 2014
EDIT EXPORT CLONE DELETE

LAST UPDATED ON NOVEMBER 18, 2018 (ABOUT 2 MONTHS AGO)
Beans, Fresh - Jade (Gb45-1-3-1)
Jul 31, 2015 - Aug 26, 2015
EDIT EXPORT CLONE DELETE

LAST UPDATED ON DECEMBER 07, 2018 (ABOUT 1 MONTH AGO)
Beans, Fresh - Jade (Gb45-1-3-1)
Jul 25, 2013 - Oct 11, 2013
EDIT EXPORT CLONE DELETE

LAST UPDATED ON OCTOBER 24, 2018 (2 MONTHS AGO)
Beans, Fresh - Jade (Gb45-1-3-1)
Jul 11, 2015 - Oct 16, 2015
EDIT EXPORT CLONE DELETE

LAST UPDATED ON DECEMBER 07, 2018 (ABOUT 1 MONTH AGO)
Beans, Fresh - Jade (Gb45-1-3-1)
Aug 21, 2013 - Oct 17, 2013
EDIT EXPORT CLONE DELETE

LAST UPDATED ON DECEMBER 07, 2018 (ABOUT 1 MONTH AGO)
Beans, Fresh - Provider
Aug 29, 2013 - Oct 19, 2013
EDIT EXPORT CLONE DELETE

# Add Crop!

## Required Information

Crop Select An Option

Variety Select An Option

Area Planted $Ft^2$

Harvest Window

Calculate by dimensions

Calculate acres to $Ft^2$

Total Yield lbs

# Additional Information

State Iowa

Zone - Select -

Zip

Direct Seeded Transplanted

Seeded Date

Spacing Within Rows inches

Spacing Between Rows inches

## Infrastructure Used (Choose all that apply)

- [ ] Greenhouse
- [ ] Low Tunnel / Row Cover
- [ ] High Tunnel
- [ ] Trellis / Cage

Irrigation ( ) Yes ( ) No

Mulch None

Notes

Add Another Crop

Clone Crop

Save Finish

# data.practicalfarmers.org


## Farmer to Farmer Vegetable Yield and Production Data.

Founded in 1985, our mission is to equip farmers to build resilient farms and communities.

Submit Data

EXPLORE

# Pesticide Drift

## Important Contacts

**IDALS Pesticide Bureau**
(515) 281-8591
pesticides@iowaAgriculture.gov
iowaagriculture.gov/pesticides.asp

**DriftWatch / BeeCheck**
driftwatch.org
beecheck.org

**Poison Control Center**
(800) 222-1222

**National Pesticide Information Center**
(800) 858-7378
npic.orst.edu

**Federal Aviation Association**
**National:** 1 (866) TELL-FAA
faa.gov/contact

**Look Up the N-Number:**
*(The N number is the registration number on the plane)*
registry.faa.gov/aircraftinquiry/NNum_ Inquiry.aspx

**Central Region Regional Operations Center**
(816) 329-3000 – (Incident Response)

**Pesticide Action Network**
(612) 284-5023
info@panna.org
panna.org

**Pesticide Information Online**
pesticideinfo.org

**In Case of Drift - Toolkit**
panna.c

**Practica**
(515) 2
info@pra
practica

**PFI Res**
- Pestici
- Templa
- Templa
- List of
- Record

## What to Expect from the IDALS Pesticide Bureau

- The Pesticide Bureau at the Iowa Department of Agriculture and Land Stewardship (IDALS) regulates pesticide registration and applicator licensing, and investigates pesticide misuse complaints (like pesticide drift).
- When you report a pesticide misuse complaint (drift event) to the Pesticide Bureau, detailed information is critical to its investigation. Use the form in this brochure as a guide.
- The Pesticide Bureau will send a field investigator to your farm within five working days:
  - **For food crops and cases related to human health:** The bureau will try to expedite chemical analysis of samples to provide results within two weeks.
  - **However, some chemical results may take 60 days or more.** If you need more immediate results, you will need to use a private lab (a list is available on PFI's website).

## After the IDALS Pesticide Bureau Investigation

The Pesticide Bureau may levy fines (up to $500 per violation, payable to the state general fund) against applicators for violations of Iowa Code Section 206, but they cannot advise or help you seek compensation for damages from applicators. **To be compensated, you (or a legal representative) must contact the applicator directly.** The Pesticide Bureau can provide you with the applicator's contact information.

When you contact the applicator, ask for its insurance contact.

*Protect Your Right to Farm*

## Pesticide Drift Response Guide for Iowa's Farmers and Rural Residents

ated May 2018

Pesticide Action Network

## What is Pesticide Drift?

Pesticide drift is the physical movement of a pesticide through air at the time of application or soon thereafter, to any site other than that intended for application. Avoiding ALL off-site movement is the responsibility of the applicator.

## How Can You Tell if You Have Experienced Drift?

Pesticide drift can be recognized as a cloud of pesticide spray or dust, or an unpleasant odor. Pesticide application can be done by plane, helicopter or tractor. Other times you may not see or smell the pesticides when spray drift occurs. If the drifting pesticide is an h
notice plant damage. If the dr
insecticide or fungicide, you w
damage but the plants could

**We are at home in our fields.**
**Please don't let pesticides drift.**


## Video Series: Don't Let Pesticides Drift








PRACTICAL farmers working together, always learning

## Legal Resources for Pesticide Drift

The purpose of this document is to provide farmers and their lawyers with basic resources for pesticide drift-related legal issues. This page was created for educational purposes only, and in no way constitutes legal advice.

***REGULATIONS***
Federal and state laws regulate the use of pesticides. Some of the main laws include the following:

***FEDERAL LAW:***
**Pesticides are regulated under Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA).** Under FIFRA, the state has primary enforcement responsibility.

**7 U.S. Code §136w–1 State primary enforcement responsibility:**
**(a) In general**
For the purposes of this subchapter, a State shall have primary enforcement responsibility for pesticide use violations during any period for which the Administrator determines that such State—
(1) has adopted adequate pesticide use laws and regulations, except that the Administrator may not require a State to have pesticide use laws that are more stringent than this subchapter;
(2) has adopted and is implementing adequate procedures for the enforcement of such State laws and regulations; and
(3) will keep such records and make such reports showing compliance with paragraphs (1) and (2) of this subsection as the Administrator may require by regulation.

**States report to the Environmental Protection Agency[7]**

***PESTICIDE LABELS***
**Each pesticide has a unique label with directions for use and a list of appropriate crops. Allowable residue levels are also listed. If a crop is not listed on the label, the pesticide is not approved for use on that crop and the allowable residue level is 0.**

**Search for pesticide labels:**
**EPA:** Pesticide Product and Label System[8]
**Purdue University:** National Pesticide Information Retrieval System (NPIRS)[9]

**What is pesticide drift?**
**Pesticide spray drift is the movement of pesticide dust or droplets through the air at the time of application or soon after, to any site other than the area intended. (EPA definition, 2017). "Pesticides" include herbicides, insecticides and fungicides.**

**For Farmers:**
**Pesticide Drift Response Guides**
Practical Farmers of Iowa Response Guide[1]
IDALS Pesticide Bureau Reponse Guide[2]

IDALS Pesticide Bureau[3]

Iowa State Bar Association
Glossary of Legal Terms[4]
"Find-A-Lawyer"[5]

Basic Overview of Tort Law[6]

***IOWA LAW:***
***Pesticide Act of Iowa***
**Iowa Code §206**[10]

Note: Restricted use pesticides must be applied in accordance with their label. PESTICIDES §206.11, subsection 3, paragraph "b" states: "It shall be unlawful... For any person to use or cause to be used any pesticide contrary to its labeling or to rules of the state of Iowa if those rules differ from or further restrict the usage."

Note: Incidence of pesticide drift should be investigated by the IDALS Pesticide Bureau. PESTICIDES §206.14, subsection 2 states: "Any person claiming damages from a pesticide application shall have filed with the secretary on a form prescribed by the secretary a written statement claiming that the person has been damaged." PESTICIDES §206.14, subsection 3 states: "The filing of such a report or failure to give notice shall not preclude recovery in an action for damages and shall not affect the limitations of actions set forth in chapter 614. Nothing herein shall pro-



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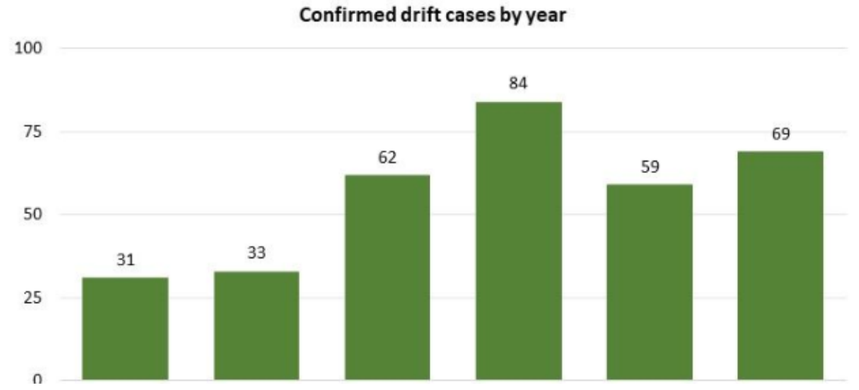
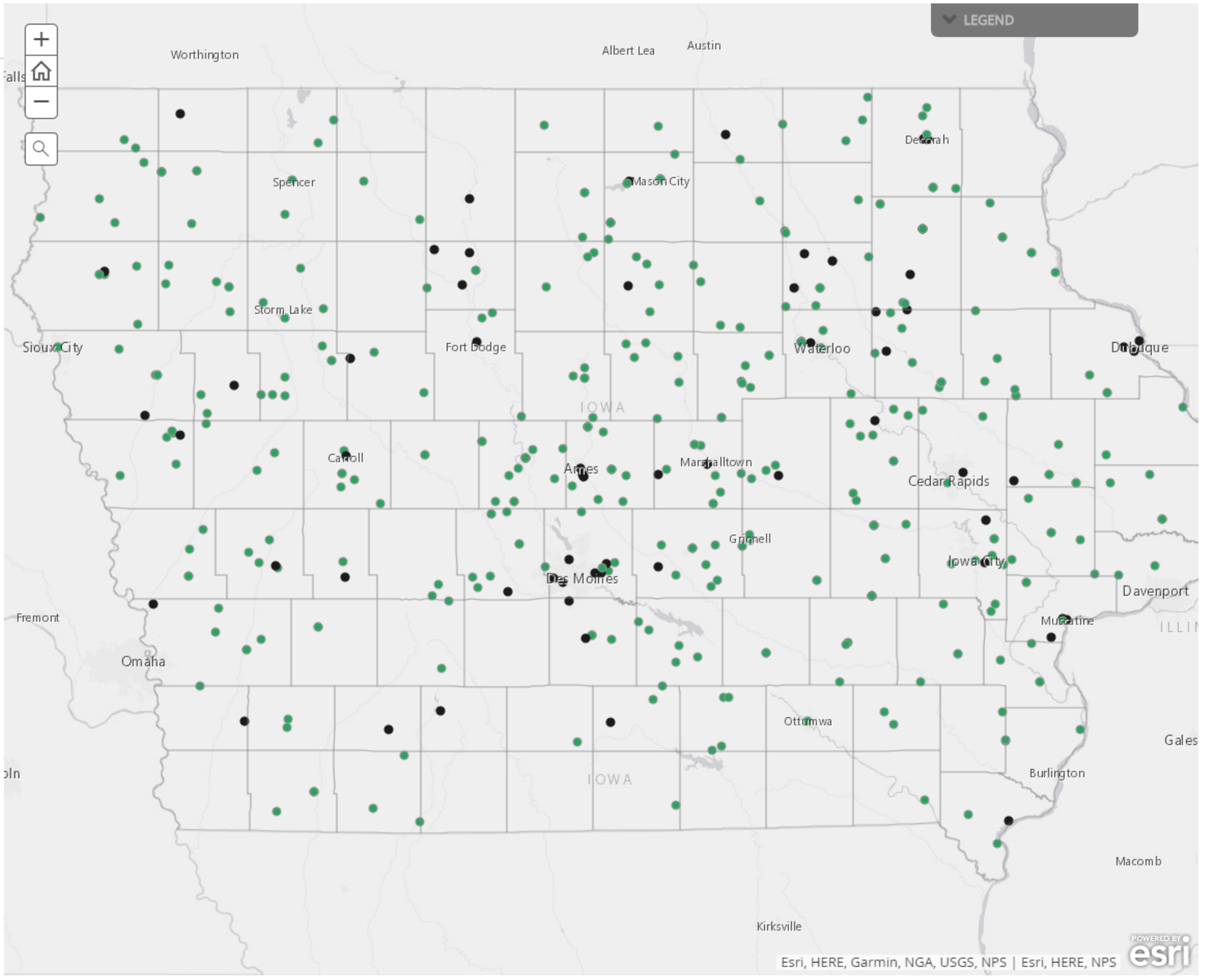
# Pesticide Drift Cases in Iowa

More than 90% of land in the state of Iowa is dedicated to agriculture. Nearly 77% of this land was treated with pesticides in 2012 (USDA). In Iowa, the pesticides that are most commonly involved in drift events include the herbicides 2,4-D, acetochlor, atrazine, glyphosate, and dicamba; the insecticides chlorpyrifos, pyrethroids (lambda cyhalothrin and bifenthrin); and the fungicides pyraclostrobin and propiconazole.

This map depicts all pesticide drift cases reported to the Pesticide Bureau of the Iowa Department of Agricultural and Land Stewardship for enforcement purposes. Data were extracted from narrative case reports from 2010-2015 for generating maps. In these six years, the Pesticide Bureau received 471 reported drift cases.

**Note:** Not all reported drift cases were confirmed by investigators. Twenty-eight percent of cases did not have enough evidence to confirm that drift had occurred.



# Opportunities for Growth?

- Community and “go-to” organization for vegetable farmers
- Diversity farmer experience and enterprise
- Nuance of farmer knowledge
- Commercial apple orchards
- Larger-scale vegetable growers
- Next generation of field crop farmers
- Cut flowers
- Profitable, integrated, perennial systems and businesses

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# Questions?

- PFI's farmer-led model
- Horticulture events / programming
- Cooperators' Program / on-farm research
- Whole Farm Financial Project
- Farmer to Farmer Vegetable Yield and Production Data (data.practicalfarmers.org)
- Pesticide drift
- Opportunities for growth and engagement
- Anything else?

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