



2023

State of Weather Challenges for Fruit Growers



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Purpose & Methodology

WHAT IS THIS DOCUMENT?

This is a special deep dive into AEM's 2023 State of Agricultural Weather Challenges Report with insights tailored to fruit growers.

WE'LL EXPLORE...

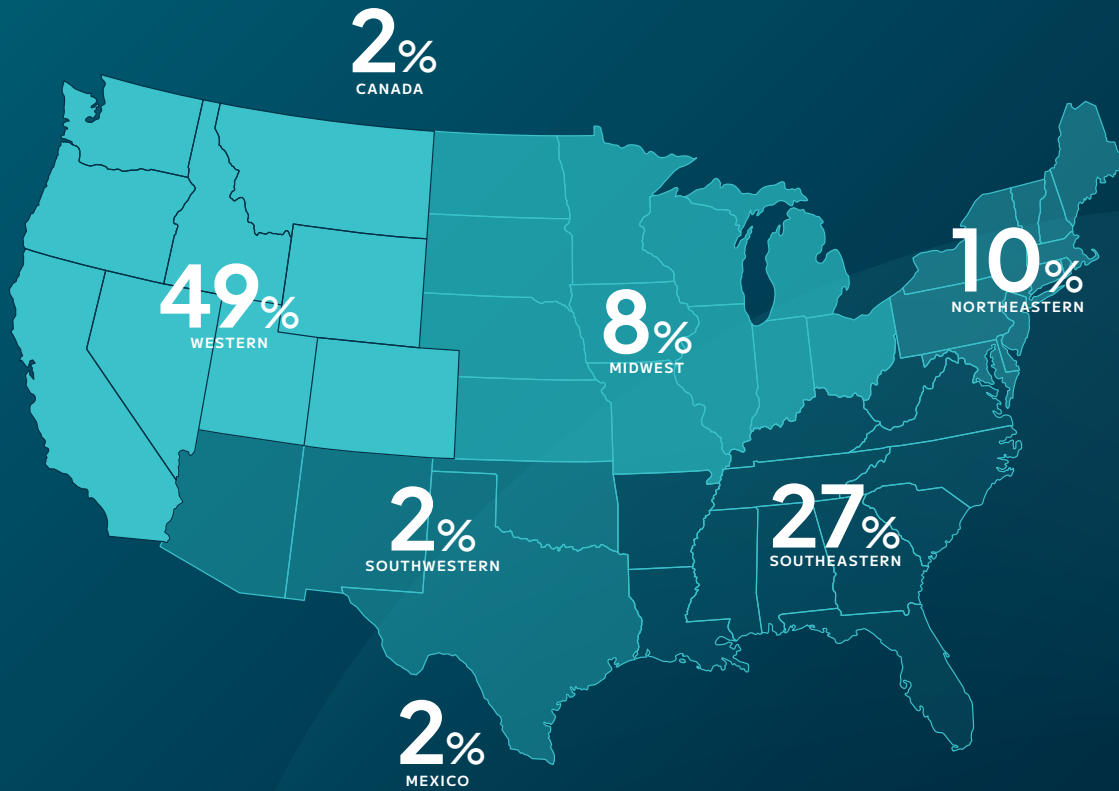
- How weather ranks among current agricultural challenges
- How weather is currently impacting business and operations for fruit growers across North America
- How growers currently access and use weather intelligence
- Opportunities for better weather technology utilization across agriculture

HOW WE CREATED OUR REPORT:

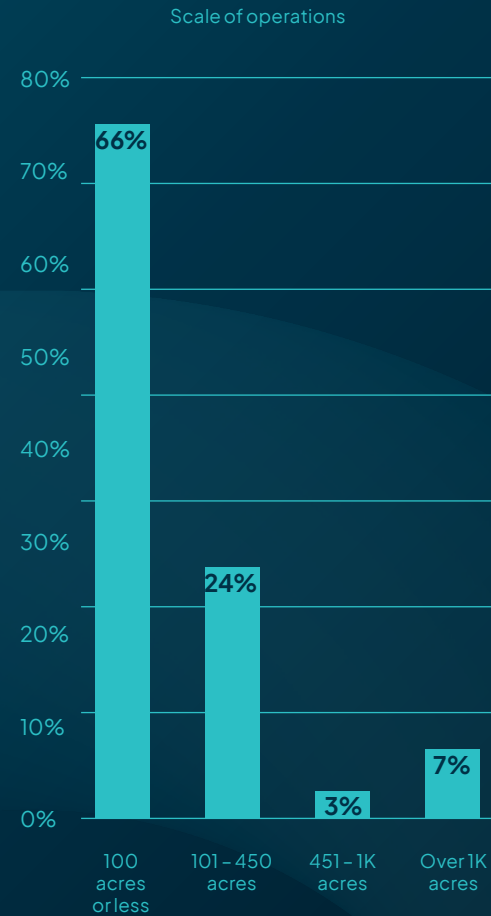
- Invited our friends, colleagues, customers, and contacts in the agriculture business to complete a fifteen-question survey
- Collected data from more than 120 individual respondents and winnowed that down to a core group of 105 active farmers and growers in North America
- Reviewed the data with our team of agriculture specialists and mined for deeper insights



Meet our fruit growers: Who are they?



Geographic location



Scale of operations

Weather as a Leading Agricultural Challenge

Top current challenges, as identified by fruit growers

	Weather & Climate Challenges	Labor Cost/ Availability	Fertilizer & Seed Cost/ Availability	Pest & Fungus Mitigation	Regulatory Compliance	Worker Safety
Biggest Challenge	32%	39%	5%	20%	2%	2%
#2 Challenge	41%	15%	12%	27%	5%	0%
#3 Challenge	15%	20%	24%	19%	12%	10%
#4 Challenge	0%	9%	27%	22%	15%	27%
#5 Challenge	12%	15%	10%	5%	24%	34%
#6 Challenge	0%	2%	22%	7%	42%	27%

88%

of growers now consider the weather a top 3 challenge

73% say top 2!

Labor costs and availability are hitting fruit growers disproportionately hard

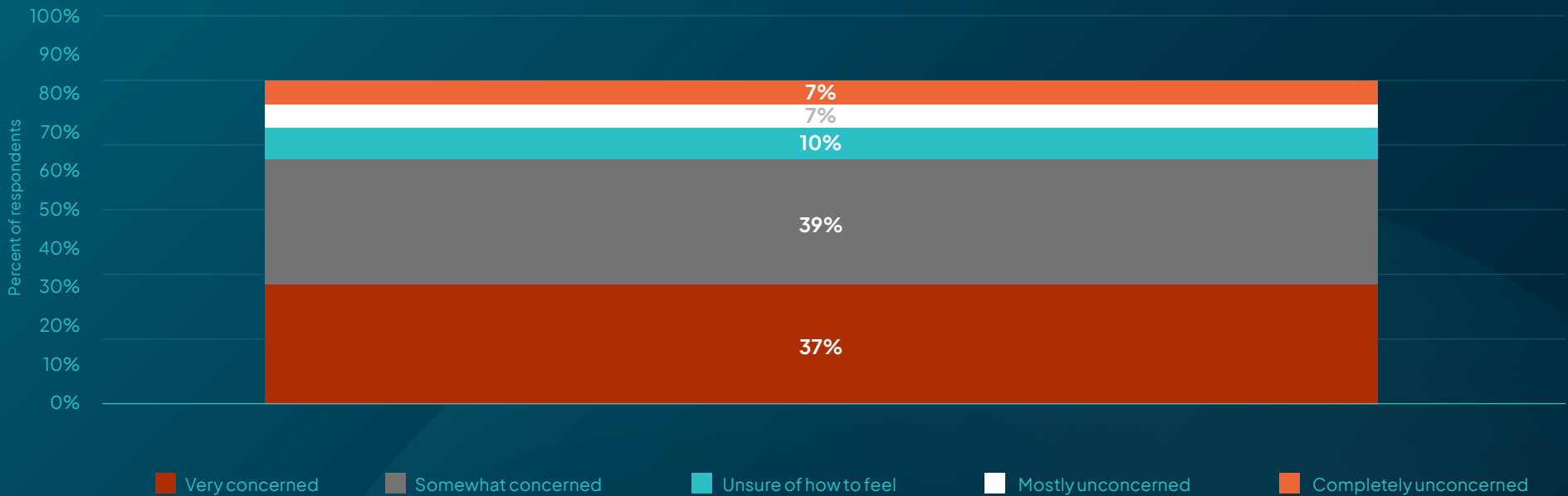
- 74% consider labor a top 3 challenge compared to 68% of all farmers nationally

Fertilizer and seed costs are currently challenging fruit growers less than other farmers

- Only 41% of fruit growers consider this a top 3 challenge compared to 58% of all farmers nationally

Weather Challenges

How concerned are fruit growers about the effects of climate change?



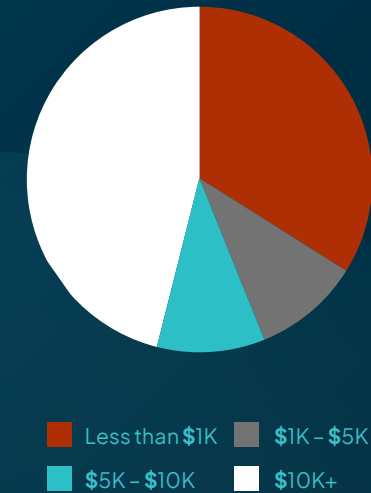
76% of fruit growers are concerned about the possible impacts of climate change, compared to just 63% of their vegetable-growing peers.

Weather Challenges

How does severe weather translate to financial loss?

Here's our fruit growers' scorecard:

	Reduced Yields/Crop Loss	Damage to Equipment or Facilities	Lost Workdays	Worker Safety	Increased Pests or Fungi
Biggest/Worst financial impact	76%	5%	2%	0%	17%
Second biggest financial impact	17%	17%	10%	12%	44%
Third biggest financial impact	5%	27%	17%	34%	17%
Fourth biggest financial impact	2%	10%	39%	34%	15%
Fifth biggest financial impact	0%	41%	32%	20%	7%



Remember, only 12% of fruit growers said worker safety was a top 3 challenge, but here we see 36% identify it as a top three source of weather-related financial loss. Everybody understands the weather is getting more challenging, but is the growing safety challenge underappreciated?

Weather Challenges

What's affecting North American fruit growers?



78%

are affected by drought



76%

are impacted by increasing high temperatures



56%

are impacted by frost and freezing



44%

are impacted by wildfire smoke

What's your single biggest weather challenge?



39%

Drought



32%

High Temperatures



20%

Frost & Freezing



2%

Flood



2%

Wildfire Smoke

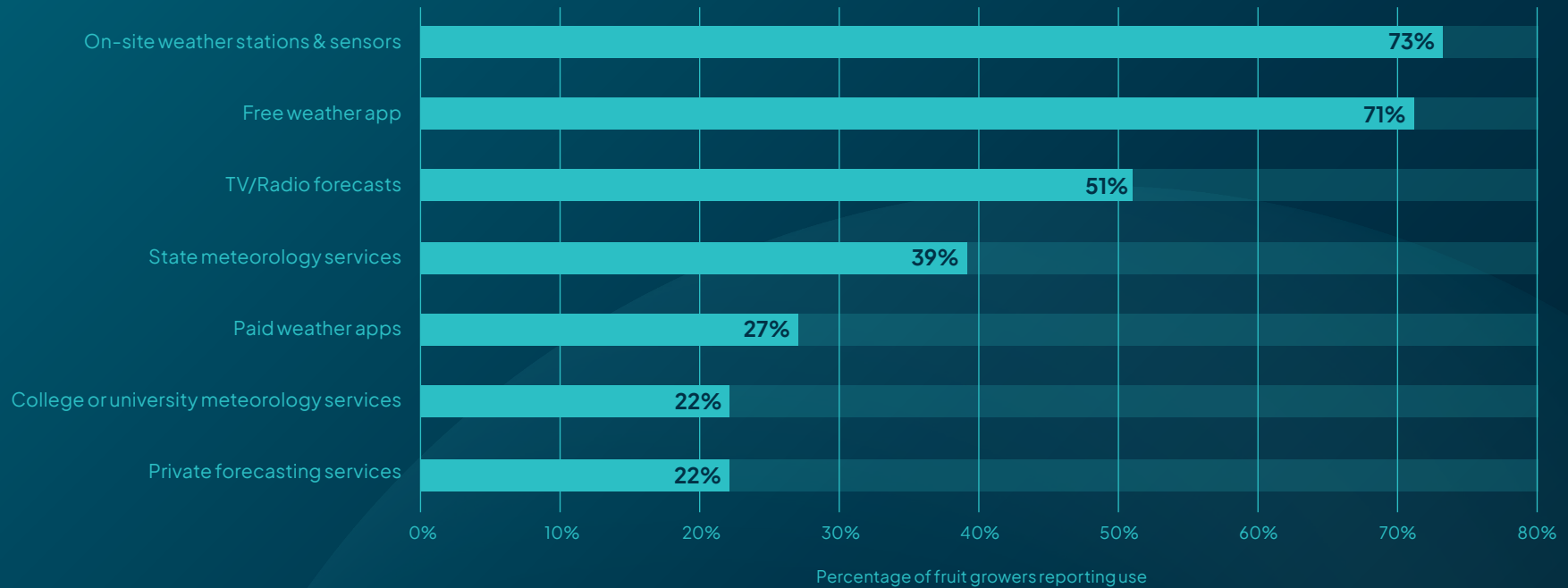


5%

Increased Winds

Current State of Weather Monitoring & Forecasting in Agriculture

How are farmers monitoring and forecasting weather?



Free services are great for general information, but almost 75% of the data pool agrees on-site devices are essential to get a more specific picture!

Current State

How are fruit growers getting their hyperlocal environmental data?

71%

own and manage their own weather stations & monitoring sensors

34%

leverage data from a public mesonet

7%

lease their stations and sensors from a service provider

17%

do not use environmental monitoring data at all

If you're part of the nearly one-in-five growers without a local monitoring strategy, could purchasing a weather station or contacting your local mesonet provider be an inexpensive path toward a better way?

Current State

What are fruit growers doing with weather data?

What percentage of survey respondents use weather data from local stations and sensors to...



78%

Monitor real-time conditions



51%

Optimize irrigation



44%

Forecast frost or calculate chill



44%

Protect workers in the field



27%

Inform pest management



21%

Calculate growing degree days



13%

Optimize fertilization

Generally speaking, our research indicates that fruit growers are getting more use out of their weather stations and sensors than the average North American farmer, especially when it comes to optimizing use of water resources. With that said, station data still packs tons of untapped potential when it comes to maximizing fertilization efforts as well.



Findings, Recommendations, & the Path Forward

High-level summary



CORE FINDINGS & INSIGHTS:

73% of surveyed fruit growers report weather as either their #1 or #2 overall challenge

- Labor costs/availability is an equally crucial challenge within the space

Approximately **73%** of fruit growers currently have an on-site weather/environmental monitoring solution in place. That's consistent with usage among all growers nationally.

- Fruit growers are ahead of the curve in terms of getting value out of their stations and sensors compared with other farmers, specifically in the area of managing water resources

About **17%** of growers are not utilizing environmental monitoring data at all, even in the face of increasing weather challenges



LEARN MORE:

To see how fruit growers stack up against their colleagues in the worlds of vegetables, nuts, grapes, and the wonderful world of row crops, download the full [2023 State of Agricultural Weather Challenges](#) from AEM.

If you'd like to speak to an agriculture specialist who knows how to scale weather networks to farmers' growing challenges, contact us for a [free consultation](#), and we'll set you up with a true weather expert.

Davis Instruments, an AEM brand, manufactures weather stations and EnviroMonitor®, a farm sensor platform. Use your weather data and third-party sensors to measure soil moisture, track chill hours/GDDs, create frost alarms, and more.

[Click here](#) for a free consultation.



For more information, let's talk at:
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