

# MSU AGRICULTURE INNOVATION DAY

## FOCUS ON PRECISION


# TECHNOLOGY THAT PAYS

## There's an Ag App for That



Through recent years, there seems to be an app for everything on either a smartphone or tablet. The agriculture industry has also moved in that direction to help provide a service, education, or support on the various aspects of the profession. This summary provides a review on many of the basic agriculture apps that are available.

All apps included on this list are free to download. Before downloading any app, please check online reviews or consult with someone familiar with the product in order to understand its potential benefits and how it can assist you in your operation. Also keep in mind, that many of these apps utilize features on your phone or tablet, such as GPS, that can affect the battery life of your device.

### ID Apps: Weeds

	APP	Description	Format
	ID Weeds	From the University of Missouri, allows you to search for weeds by name, from a list or identify based on characteristics. - Can't submit a picture. + A good learning tool to match characteristics	Android iOS


### ID Apps: Insect

	Aphid Speed Scout	From the University of Nebraska-Lincoln, quick and easy approach to measure aphids on soybeans. - Only one crop + Speeds up the counting process	Android iOS
	IPM Toolkit	From the University of Wisconsin, allows user to read hot topic articles, view videos, download publications, and access pictures to aid in adapting IPM practices. + Can receive alerts for your area. - Not specific to ID, so can't submit pictures.	Android iOS




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## ID Apps: Diseases

	APP	Description	Format
	Sporecaster	From the University of Wisconsin, assists farmers in making management decisions for white mold in soybeans - Only one crop + Site specific information for best prediction	Android iOS



## ID Apps: Nutrient Deficiencies

	Crop Nutrient Deficiencies	From Ag PhD, helps growers determine fertility issues in their fields. + Users can search by nutrient or browse photos - Not interactive, user cannot send in photos.	Android iOS
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## Calculator Apps: Planting

	Planting Population Calculator	From Ag PhD, helps growers determine planting population and stand count. + Easy to use, regular updates cleared technical issues - Limited crops available for use	Android iOS
	Canopeo	From Oklahoma State University, utilizes your camera for a rapid and accurate green canopy cover measurement tool. + Calculates quickly - Best use is on wheat, which could limit wide usage.	Android iOS

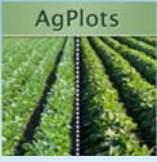







## Calculator Apps: Tank Mix

	Tank Mix	From DuPont, allows growers to quickly calculate how much product and water you need for effective applications, based on your acreage or spray tank size. + Easy to use and follow - Limited format availability	iOS
	Mix Tank	From Precision Laboratories, calculates the proper mixing order of a tank mix. Can also create field notes on rate, nozzle type, etc. + Can also keep accurate notes, including live weather - Has had past technical issues	Android iOS

## Soil Apps








	Soils	From Ag PhD, receive high quality lab results and personalized recommendations. You can also order soil testing supplies right from the app. + Growers can plot soil tests on interactive map - Not your local university lab	Android iOS
	SoilWeb	From UC Davis and CA Soil Resource Lab, retrieves official soil series descriptions and summaries of soil types associated with the current geographic location. + Mobile version of the old soil survey books - Uses a lot of space on the device when installed	Android iOS

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Research Plot Apps			
	APP	Description	Format
	Ag Plots	From August Knecht, offers a simple method of calculating and storing grain yields for corn, soybean, and wheat plots. + Can store adjusted yields, moistures, dates, locations, and other plot information. - Limited format availability	iOS
	Nebraska On-Farm Research Net	From the University of Nebraska, designed for growers to develop their own on-farm research trials. + Can create treatment strips and develop plot maps for research study, all while keeping notes on key observations.	Android iOS
	Ohio State Plots	From Ohio State University, users can create on-farm trials that compare hybrids, fertilizer rates, stand counts, and more. + Users have the ability to design basic plot layouts, which can be shared.	Android iOS
Economic Apps			
	Cash Grain Bids	From Farm Journal, Inc., users may search what the local grain elevators are paying by inputting the zip code. Can keep track of cash bids and basis levels. + Can compare the 5 closest elevators - Limited distance to elevators	Android iOS
	Farm Futures	From iNet Solutions Group, brings Farm Futures Magazine in an app. Provides market commentary, news, and audio updated every business day. + User customized markets - Has had some technical issues in the past	Android iOS
	DTN Instant Market	From DTN, LLC, brings users ag news, commodity market data, and weather. Also provides cash grain prices and videos. Another app covers weather + Lots of information in one location - Limited format availability	iOS
Multi-Use Field Guide Apps			
	Ag PhD Field Guide	From Ag PhD, allows users to browse weed and insects pests by name and view photos. + Provides control recommendations. - Limited in crops covered	Android iOS
	NDSU Pest Management	From North Dakota State University, offers information from NDSU Extension Weed, Disease, and Insect Management Guides, including best management options. + Easily access multiple sources of information - Limited to common crops in North Dakota	Android iOS



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Irrigation Apps			
	APP	Description	Format
	Crop Water	From the University of Nebraska-Lincoln, provides an estimation on water status based on Watermark sensors installed at different soil depths. + Estimates water used and water still available - Is based on Nebraska soil types	Android iOS
	FieldNet Mobile	From Lindsay Sales & Service LLC, can be used to remotely manage pivots, laterals, drip/micro irrigation systems, and pumps. + Can quickly monitor irrigation equipment - Requires account and wireless equipment	Android iOS
Machinery Apps: Sprayer			
	Calibrate My Sprayer	From Clemson University, aids in the proper calibration of spraying equipment. + Easy to plug and play to calibrate volume/area or catch/nozzle - How accurate is it?	Android iOS
Machinery Apps: Set Up			
	JD App Center	From John Deere, gives the user one location for multiple apps. GoHarvest, PlanterPlus, GoBale, etc. + Helps guide for set up of newer John Deere equipment - Most apps only apply to newer equipment	Android iOS
Machinery Apps: Repair			
	New Holland Agriculture MyShed	From New Holland Agriculture, provides parts manuals, assembly diagrams, and part number lists. + Can connect to your local dealer to send parts list and photos - Has had recent update issues	Android iOS
	Case IH MyShed	From Case IH, provides parts manuals, assembly diagrams, and part number lists. + Can connect to your local dealer to send parts list and photos - Has had navigation issues	Android iOS
Machinery Apps: Purchasing			
	Tractor House	From Sandhills Publishing, features thousands of listings from hundreds of dealers through North America. + Easy to use, by narrowing down categories - How up to date is it kept from dealer to dealer	Android iOS

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Machinery Apps: Fleet Monitoring			
	APP	Description	Format
	JD Link	From John Deere, designed for Deere specific equipment. Maps multiple machines, as well as directions to where they are located. + Can view live alerts - Only for newer John Deere equipment	Android iOS
	Connected Farm Fleet	From Trimble Navigation Limited, this tool is used for viewing live equipment GPS locations and current status. + Can map multiple machines and their use - Like many GPS tools, it can drain the battery of device	Android iOS

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When determining what Apps would be best for your operation, consider this...

What **management goal** do you want the App to support?

Is an App the **right tool for the job** or do you really need a data logger?

Is there an App to **support software you already own**?

Are **free Apps available** that will do the job?

What are people saying – **read the review!**

Check to see that you have space and the **correct platform**.

**Download it, try it, you can always delete it!**



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## What's Worth Your Time?

### Research Comparison for Free Weed Identification Apps

**Xarvio** can identify weeds, disease and leaf damage by picture. Xarvio also has a sister app call xarvio field manager, which helps you locate your field based on your location and enter data specific to the field. The manager app will indicated the stage of crop and send notifications ensure timely spray application.

- Users indicated that Xarvio identified 3/4 weeds correctly with only a picture.
- Accuracy of identification increased if the user entered what crop the in which the weed was found

**ID Weeds and Weed ID** can identify weeds using a series of questions about the look of the weed by the user.

- Both apps were 0/4 identification of weeds by answering prepared questions.
- Weed ID would provide inaccurate answers but ID Weeds didn't provide any information

**Xarvio is your best choice for weed identification and has additional complementary apps to make field management easier.**

### Results from three ag apps identification of four common Michigan weeds

	Xarvio	ID Weeds	Weed ID
Dandelion	YES	NO	NO
Lambsquarter	YES	NO	NO
Orchard Grass	NO	NO	NO
Pig Weed	YES	NO	NO

### How to Download Xarvio:

1. Go to your app store on your phone
2. Type in "**Xarvio**" in the search function of your app store
3. Press the button that says "GET",
4. Hit "**INSTALL**", then it will ask you to enter your apple ID password or Droid Password
5. Finally, you will see a circle that has "**DONE**" in it and it will start to download

**YOU CAN ALWAYS DELETE IF YOU DON'T LIKE IT**



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