

Integrating Mobile Technology in Agriculture

Blake Bennett

Associate Professor & Extension Economist

TEXAS A&M
AGRILIFE
EXTENSION



Everyone is using tablets and their phones for reasons other than to make calls

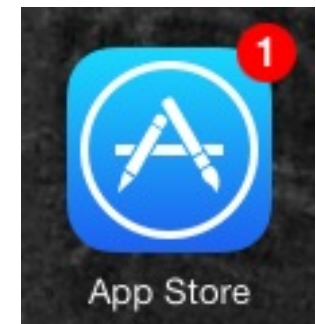
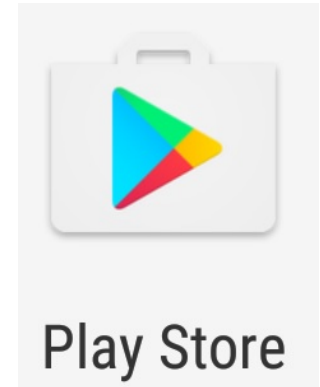


Think of a Problem

- ⦿ There is probably an App for that
 - ⦿ Want “the brightest” flashlight on your phone...there’s an app for that
 - ⦿ Need a compass...there’s an app for that
 - ⦿ Need to calibrate a spray nozzle...there’s an app for that
 - ⦿ Want to see if there are supernatural spirits in the room...there’s even an app for that

Searching for and getting apps

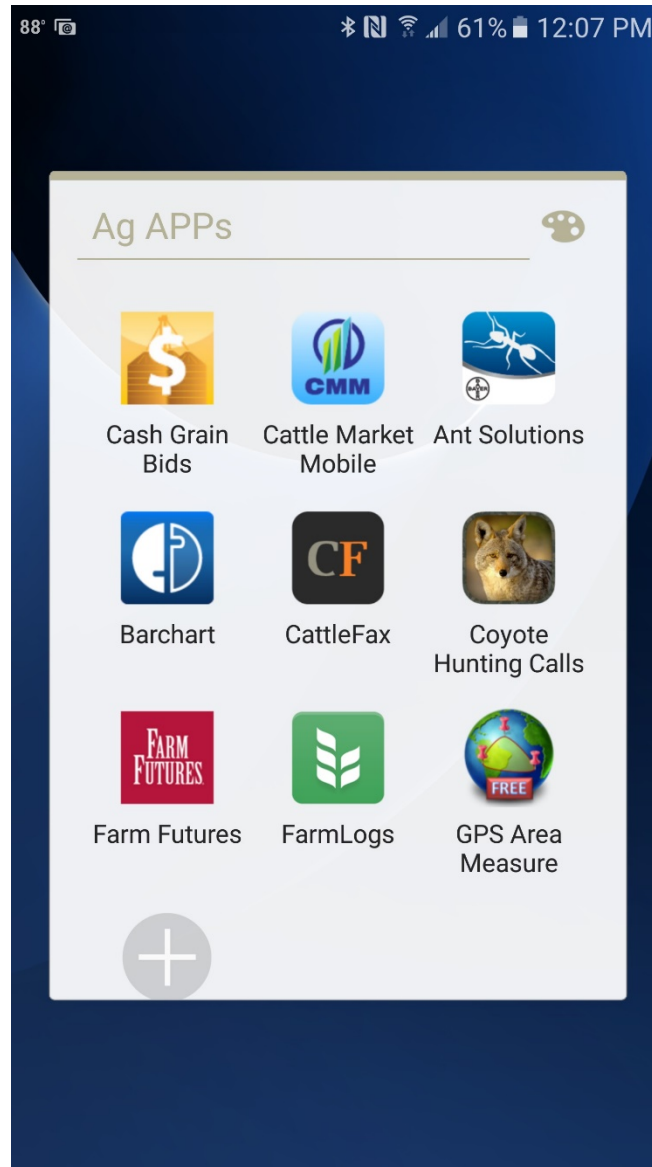
- ⦿ Friends
- ⦿ Workshops
- ⦿ Magazines
- ⦿ TV Shows
- ⦿ Google
- ⦿ App Store
- ⦿ **ASK ANYONE UNDER THE AGE OF 12!!!**



The Nice Thing About Apps

- ⦿ You can download one and try it out
 - ⦿ There are a lot of apps that are free
 - ⦿ If you find that you don't really use the app much, you can just delete it and nothing is lost
 - ⦿ There may be more than one that does the “same thing”
 - ⦿ You can try out several to see which one you like the best

Some of My Favorite Apps for Work



Barchart

- ⦿ Features real-time futures and options prices
- ⦿ Provides technical charts and fundamentals
- ⦿ Can customize a Watchlist
 - ⦿ Access to prices, technicals, and fundamentals
 - ⦿ Can customize charts



Barchart

88° 60% 12:17 PM

☰ Ag ⚙ Edit


Mobile Strike INSTALL
Control the Action

Remove Ads

🔍 Enter Symbol or Description

ZWZ16 Wheat	402-0 -4-0	- 0.99%
CZ16 Corn (P)	338-4s +5-2	+ 1.58%
CTZ16 Cotton #2	68.98 -0.31	- 0.45%
LCZ16 Live Cattle (P)	102.600s -1.600	- 1.54%
FCV16 Feeder Cattle (P)	128.500s -2.250	- 1.72%

🔍 📈 🌾 🇪🇺 📄
Watchlist Stocks Futures Forex My Barchart

Samsung Pay 

SAMSUNG pay Google Play

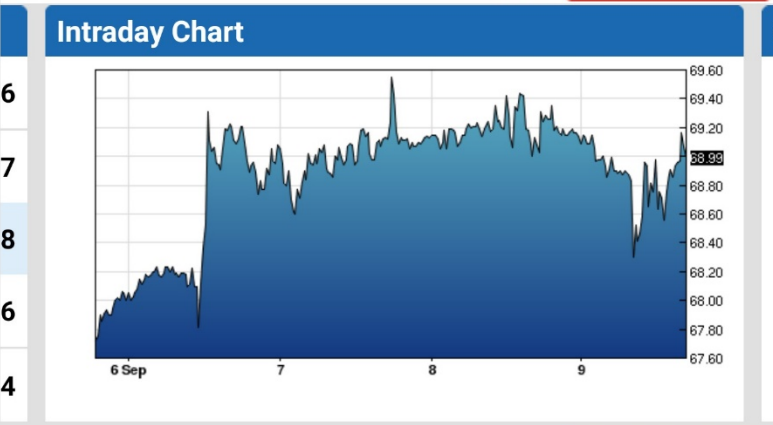
Remove Ads

Enter Symbol or Description

ZWZ16 401-2 - 1.17%
Wheat -4-6


CZ16 338-4s + 1.58%
Corn (P) +5-2

CTZ16 68.99 - 0.43%
Cotton #2 -0.30



LCZ16 102.600s - 1.54%
Live Cattle (P) -1.600

FCV16 128.500s - 1.70%

Samsung Pay 

SAMSUNG pay FREE ★★★★★ (170,632) Google Play

Remove Ads


Enter Symbol or Description

ZWZ16 401-2 - 1.17%
Wheat -4-6

CZ16 338-4s + 1.58%
Corn (P) +5-2

CTZ16 68.99 - 0.43%
Cotton #2 -0.30

Overview

Open	69.35	Prev Close	69.29
High	69.38	Low	68.25
Volume	9,332		
Open Interest	155,518		
52W Range			

LCZ16 102.600s - 1.54%
Live Cattle (P) -1.600

FCV16 128.500s - 1.70%

SAMSUNG pay Now You Can Add More Of Your Wallet To Your Phone. Learn More.

Remove Ads

Enter Symbol or Description

ZWZ16 Wheat	401-2 -4-6	- 1.17%
CZ16 Corn (P)	338-4s +5-2	+ 1.58%
CTZ16 Cotton #2	68.99 -0.30	- 0.43%

Recent Headlines

- Grains Futures Pitchfork Charts (CORN - BEANS - WH...
IF - 2 hrs 8 mins ago
- Morning Softs. 09/09/16
The PRICE Futures Group - 2 hrs 29 mins ago
- Wheat Prices Stabilize But For How Long?
Ag Risk Consultants, LLC - Fri Sep 09, 8:06AM CDT
- Playing Devil's Advocate with Corn's Yield
Zaner Group, Ag Hedging - Thu Sep 08, 10:10AM CDT

LCZ16 Live Cattle (P)	102.600s -1.600	- 1.54%
FCV16	128.500s	1.70%

SAMSUNG pay Samsung Pay FREE ★★★★★ (170,632)

Remove Ads

Enter Symbol or Description

ZWZ16 Wheat	401-2 -4-6	- 1.17%
CZ16 Corn (P)	338-4s +5-2	+ 1.58%
CTZ16 Cotton #2	68.99 -0.30	- 0.43%

Options Exp: 11 Nov 16

	Calls		Puts	
	Last	Strike	Last	
	3.74	67.00	1.66	
	3.11	68.00	2.19	
	2.73	69.00	2.90	
	2.21	70.00	3.15s	

LCZ16 Live Cattle (P)	102.600s -1.600	- 1.54%
FCV16	128.500s	1.70%

Now You Can Add More Of Your Wallet To Your Phone. Learn More.

Remove Ads

Enter Symbol or Description

ZWZ16 Wheat	401-2 -4-6	- 1.17%
CZ16 Corn (P)	338-4s +5-2	+ 1.58%
CTZ16 Cotton #2	68.99 -0.30	- 0.43%

Detailed Quote

Date	Close	Change	%Chg
09/09	69.35	-0.30	-0.43%
09/08	69.40	-0.25	-0.36%
09/07	69.08	+0.30	+0.43%
09/06	67.80	+1.45	+2.14%
09/02	68.17	-0.39	-0.57%

LCZ16 Live Cattle (P)	102.600s -1.600	- 1.54%
FCV16	128.500s	1.70%

Samsung Pay
FREE ★★★★★ (170,632)

Remove Ads

Enter Symbol or Description

ZWZ16 Wheat	401-2 -4-6	- 1.17%
CZ16 Corn (P)	338-4s +5-2	+ 1.58%
CTZ16 Cotton #2	68.99 -0.30	- 0.43%

Barchart Opinion

Overall Average Opinion **16% Buy**

Short Term Indicators	Medium Term Indicators	Long Term Indicators
0% Hold	25% Buy	67% Buy

[View All](#)

LCZ16 Live Cattle (P)	102.600s -1.600	- 1.54%
FCV16	128.500s	1.70%

Farm Futures


- ⦿ Provides Ag news
- ⦿ Futures/options quotes
- ⦿ Blogs





Farm Futures


91° 57% 12:29 PM


FARM FUTURES.


 Corn, soybeans higher as week winds down >


 USDA exports - Corn, soybean, wheat sales have strong ... >


 Dow-Dupont merger risks delay as EU seeks information >

 Record crops should strain grain storage this fall >

 ARS honors researchers >

 Is your combine ready to roll? >

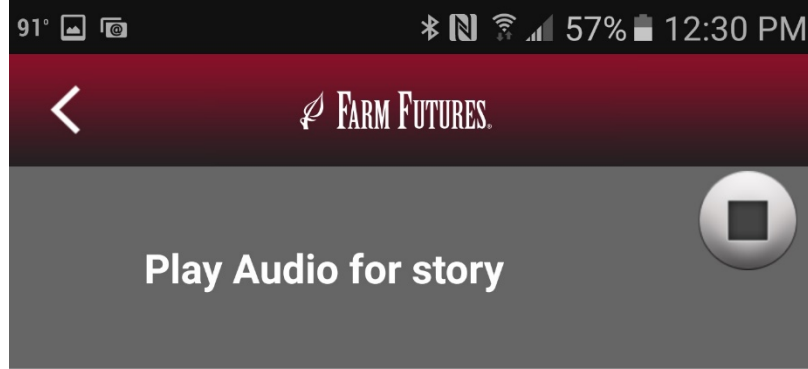
 ARS honors scientists

 CHECK OUT THE MASSEY FERGLUSON 8700 SERIES [LEARN MORE »](#)

News Commentary Quotes Blogs Podcasts

Powered by iNet Solutions Group

Farm Futures



Corn, soybeans higher as week winds down

Compiled by staff

Corn and soybeans are higher near midday and are on track to finish higher for the week as traders focus on Monday's crop report. Weekly export sales on Friday were up from a week ago. A nuclear test by North Korea created a bearish

A promotional banner for Massey Ferguson. On the left is the Massey Ferguson logo (three red triangles). To the right, the text reads 'CHECK OUT THE MASSEY FERGUSON 8700 SERIES' in white on a dark background. A red button with white text says 'LEARN MORE »'. Below the banner is a navigation bar with five icons: 'News' (document), 'Commentary' (speech bubble), 'Quotes' (line graph), 'Blogs' (three people), and 'Podcasts' (speaker).

Farm Futures

91° 57% 12:30 PM

Contract	Last	Change
Sep 16 Rough Rice (E)	930.5s	
Oct 16 Cotton #2	68.92	-0.33 ↓
Dec 16 Cotton #2	68.98	-0.31 ↓
Oct 16 Live Cattle (E)	104.300	+2.900 ↑
Feb 17 Live Cattle (E)	105.300	+2.075 ↑
Sep 16 Feeder Cattle (E)	134.050	+2.450 ↑
Jan 17 Feeder Cattle (E)	124.850	+1.475 ↑
Oct 16 Lean Hogs (E)	59.875	-1.125 ↓
Dec 16 Lean Hogs (E)	54.400	-1.075 ↓

As of: 09/09/2016 12:19 PM

CHECK OUT THE MASSEY FERGUSON 8700 SERIES [LEARN MORE »](#)

All prices delayed 10 minutes

News Commentary Quotes Blogs Podcasts

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Farm Futures

Oct 16 Cotton #2 (CTV16)

Trading

68.92

Change

-0.33

Watch

Last Trade

09/09/2016 12:35 PM

Day Low
68.0200

Day High
68.9900

Current: 68.9900

30 Day Low
65.2200

30 Day High
71.8900

Current: 68.9900

Contract Low
57.2500

Contract High
77.8000

Current: 68.9900

Volume 19

Open Interest 171

FAST HOW DOES EXTRA INCOME OF \$63.62/ACRE SOUND?

CME Group

All prices delayed 10 minutes



News



Commentary



Quotes

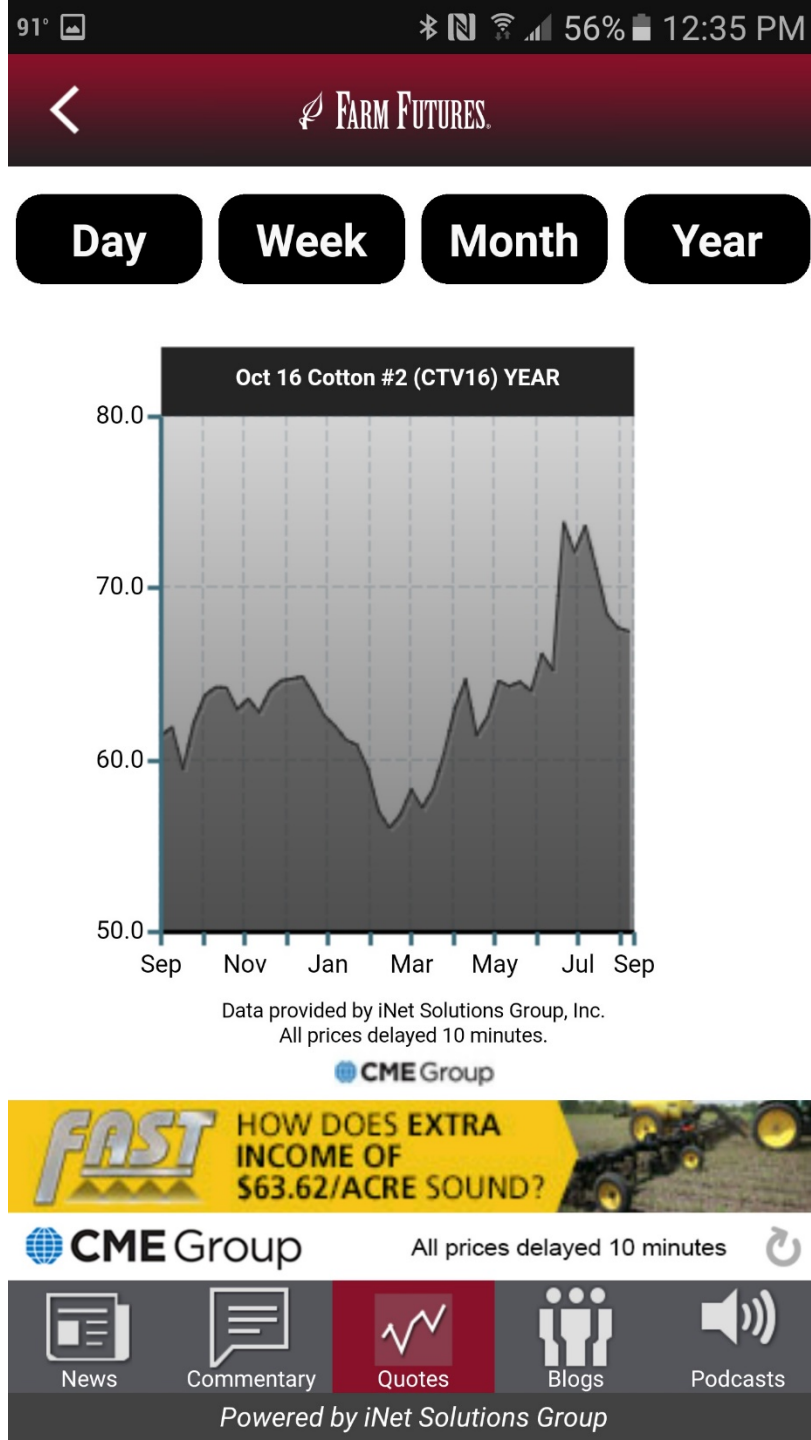


Blogs

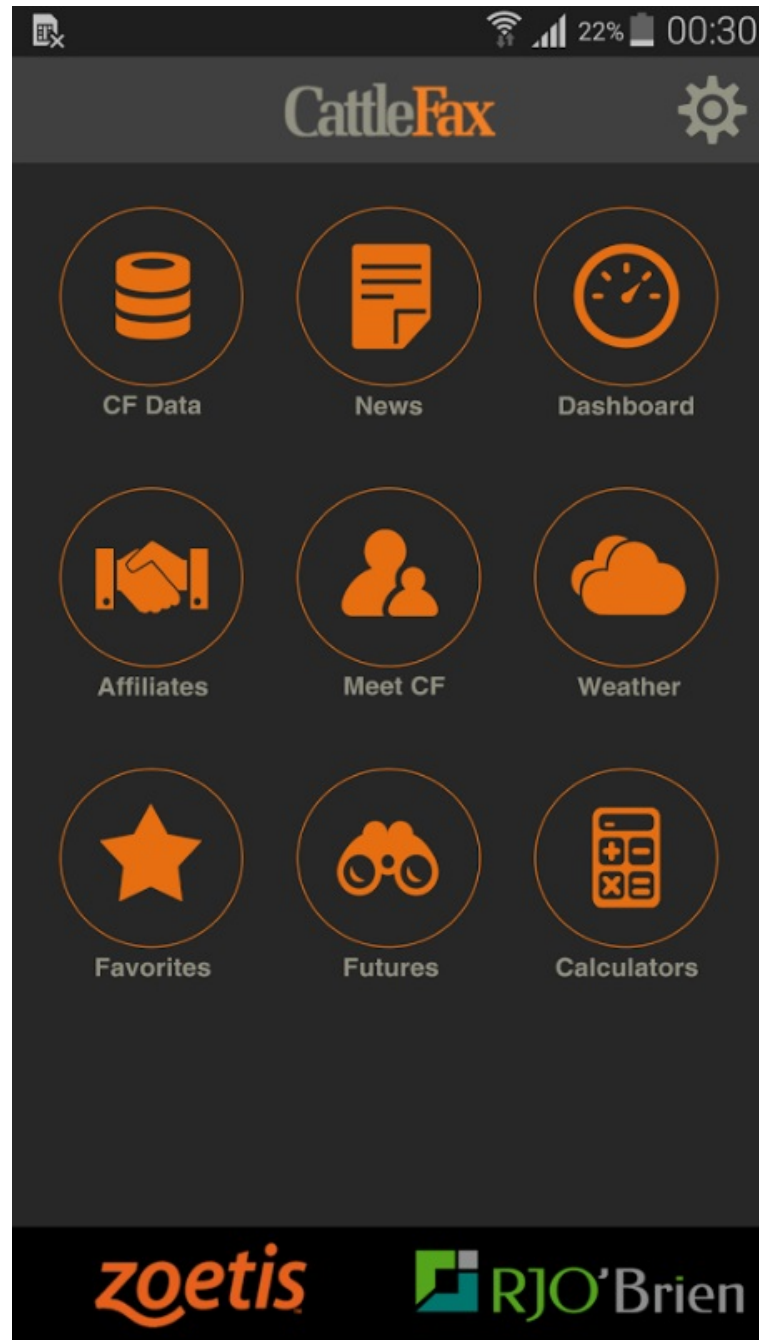


Podcasts

Farm Futures



CattleFax



WEATHER

Plano, TX

12:39 PM CDT



91° 95
75

Feels Like : 95°



No Alert(s)

Wind: 4.7mph WSW
Humidity: 47%
Dew Point: 68°
Precipit : 0% Chance

Rec High: 99°
Rec Low: 33°
Avg High: 88°
Avg Low: 70°

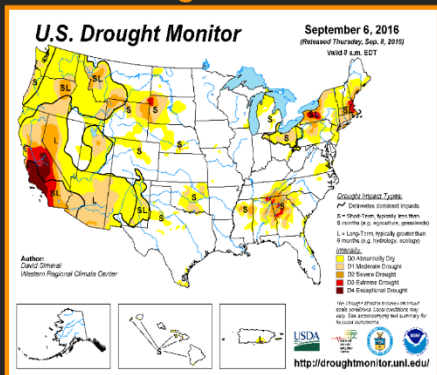
Sunrise: 7:07 AM

Sunset : 7:40 PM



Vegetation

Snowfall



WEATHER

Plano, TX

12:39 PM CDT



91° 95
75

Feels Like : 95°



No Alert(s)

Wind: 4.7mph WSW
Humidity: 47%
Dew Point: 68°
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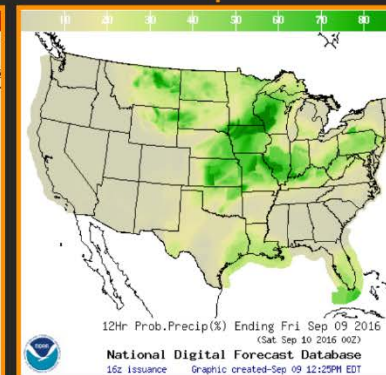
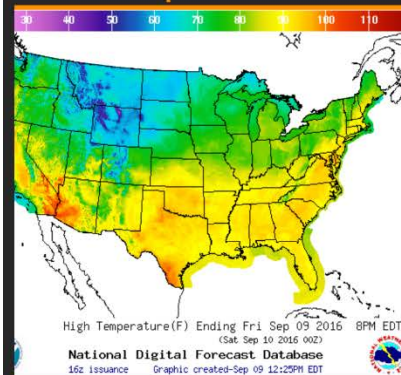
Sunrise: 7:07 AM

Sunset : 7:40 PM



Temperature

Precipitation



Live Cattle

Oct 16 Last Price : 104.38 Change : 2.98

Data Chart

Contract	Last	Change
Pull Down To Refresh		
Oct 16 >	104.38	2.98
Dec 16 >	105.05	2.45
Feb 17 >	105.35	2.13
Apr 17 >	104.15	1.35
Jun 17 >	98.20	0.90
Aug 17 >	97.13	0.70

FUTURES

Spot Market

Live Cattle 104.40 3.00	Feeder Cattle 134.50 2.90	Corn 328.50 1.50
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- Proteins >
- Grains >
- Energies >
- Metals >
- Equities >

CattleFax



Cash Grain Bids

AGWEB POWERED BY FARM JOURNAL

Cash Grain Bids

GRAIN HEDGE

All

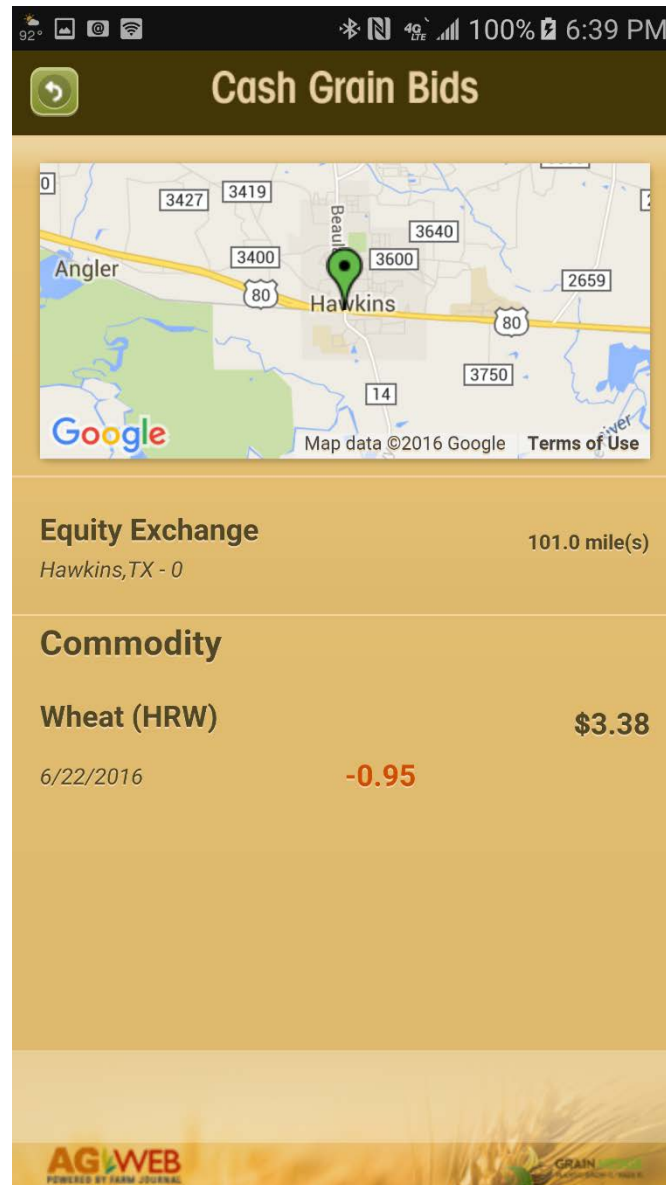
Price Distance

Wheat (HRW)

Provider	Address	Distance	Price
Equity Exchange	Hawkins, TX - 0	101.0 miles	\$3.38
Walters Coop	103 N Cherry Temple, ...	113.1 miles	\$3.43
Walters Coop	409 W Missouri St Wa...	120.7 miles	\$3.43
Coop Services	101 S Bridge Rd Gran...	131.3 miles	\$3.57
Coop Services	2434 SW F Ave Lawto...	137.0 miles	\$3.57

75034 - Frisco, US

Cash Grain Bids



The screenshot shows a mobile application interface. At the top, the status bar displays 92° temperature, signal strength, 4G LTE, 100% battery, and 6:39 PM. The app title 'Cash Grain Bids' is centered in a dark header. Below the header is a Google Map of Hawkins, TX, with a green location pin. The map shows highways 80, 14, 3427, 3419, 3400, 3640, 3600, 2659, and 3750. Below the map, the 'Equity Exchange' is listed as '101.0 mile(s)' for 'Hawkins, TX - 0'. The 'Commodity' section shows 'Wheat (HRW)' at a price of '\$3.38' as of '6/22/2016', with a change of '-0.95'. The bottom of the screen features the 'AG WEB' logo, 'POWERED BY FARM JOURNAL', and a 'GRAIN' logo.

Cash Grain Bids

Equity Exchange 101.0 mile(s)
Hawkins, TX - 0

Commodity

Wheat (HRW) **\$3.38**
6/22/2016 **-0.95**

AG WEB
POWERED BY FARM JOURNAL

GRAIN

Cattle Market Mobile

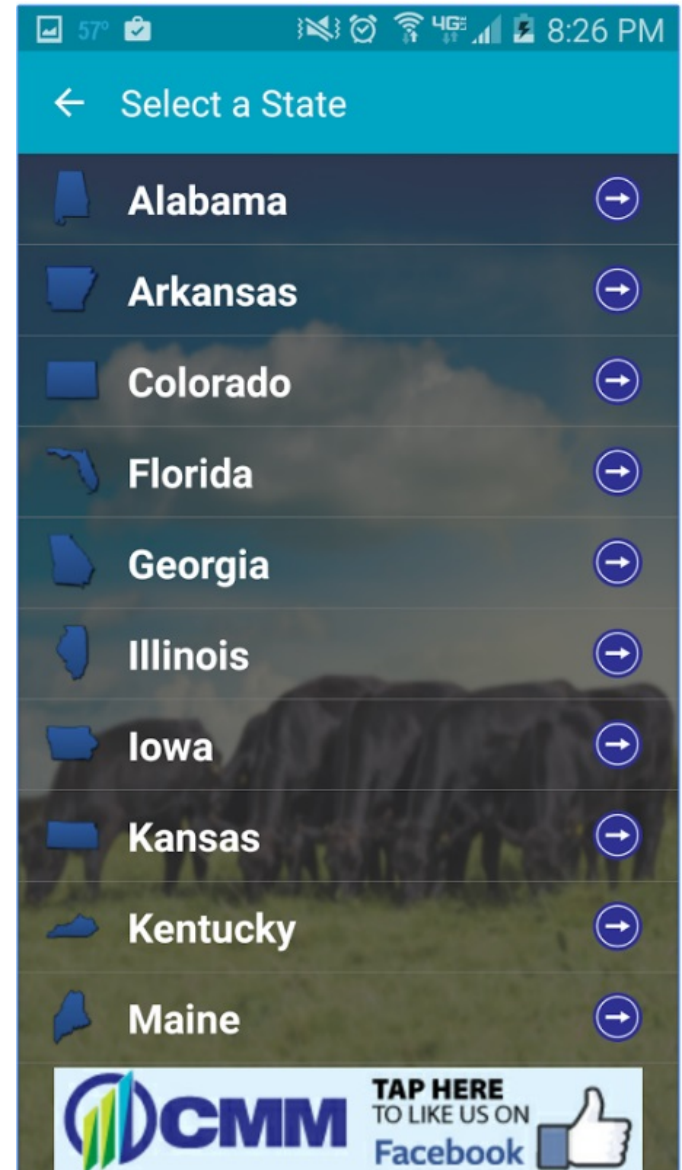
- ⦿ Cattle Market Mobile is app designed to help cattle producers monitor current auction prices across the United States
- ⦿ This app displays reports produced by the USDA's Agricultural Marketing Service as well as reports from a variety of other sources



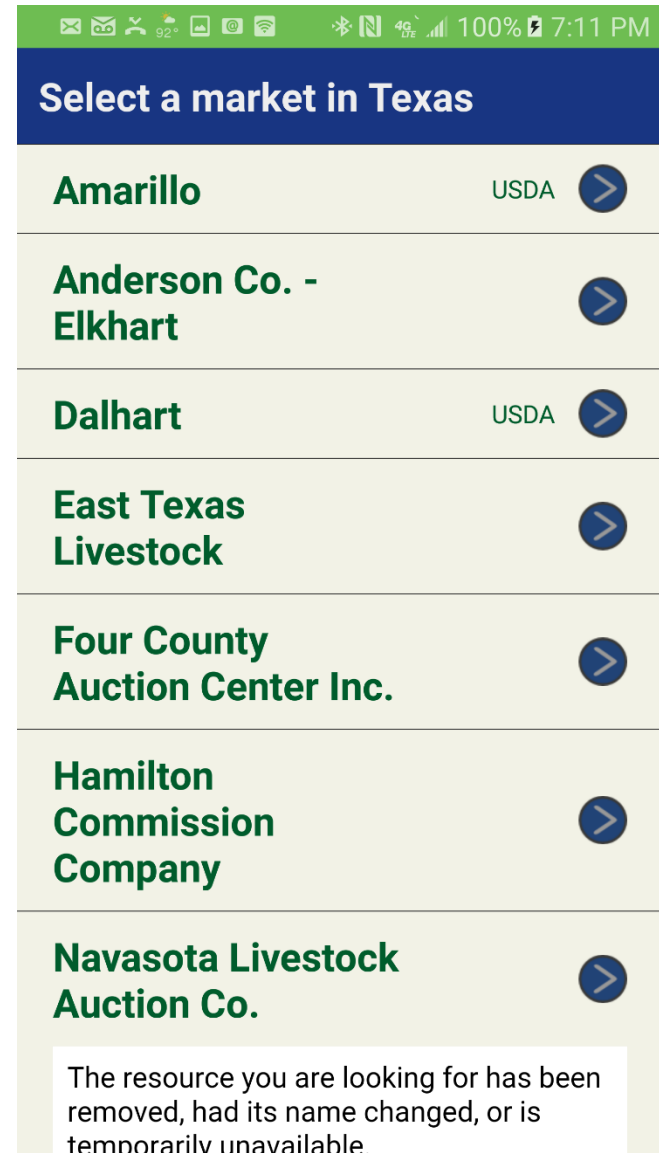
Cattle Market Mobile



Cattle Market Mobile



Cattle Market Mobile



Cattle Market Mobile

93° [Icons] 63% 1:43 PM

S **H** **B** **C-X** **B-X** **T**
STEERS HEIFERS BULLS COWS X BULLS X TRENDS

Amarillo, TX

Tue Aug 30, 2016

Feeder Steers Medium and Large 1-2

Avg Wt	Price Range	Avg Price
376	\$165.00-\$170.00	\$166.75
Avg Wt	Price Range	Avg Price
459	\$145.00	\$145.00
Avg Wt	Price Range	Avg Price
695	\$136.50	\$136.50
Avg Wt	Price Range	Avg Price
670	\$128.50	\$128.50*
Avg Wt	Price Range	Avg Price
734	\$129.00-\$131.00	\$129.65
Avg Wt	Price Range	Avg Price
752	\$131.00	\$131.00
Avg Wt	Price Range	Avg Price
765	\$127.00	\$127.00*

Feeder Steers Medium and Large 2-3

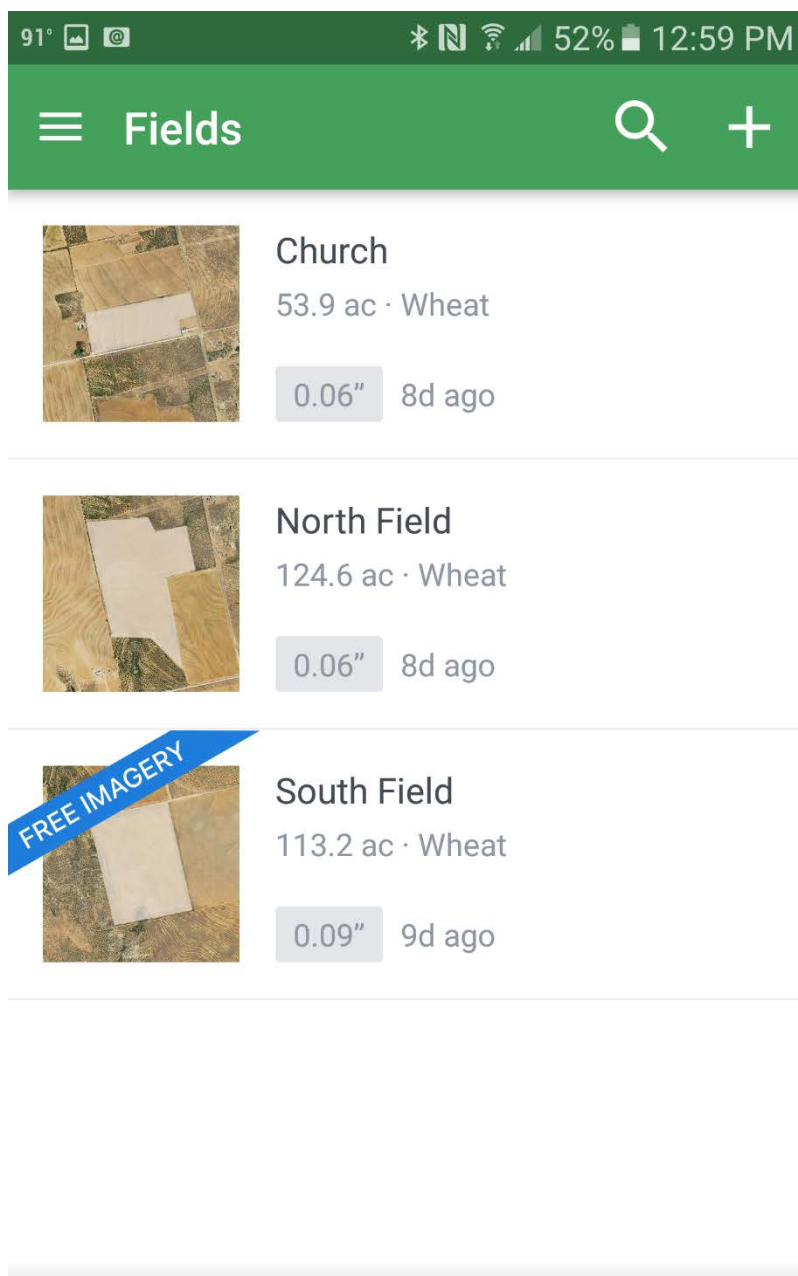
The resource you are looking for has been removed, had its name changed, or is temporarily unavailable.

Farm Logs

- ⦿ Just recently found
- ⦿ Gives you the ability to see
 - ⦿ In-season crop health maps
 - ⦿ Rainfall and heat reports
 - ⦿ Soil data
 - ⦿ Crop history
 - ⦿ Yield maps
 - ⦿ Keep track of field operations
 - ⦿ Even sends you an email when you get rain or have stress on a crop



Farm Logs




You've added **44%** of your acreage!



Farm Logs

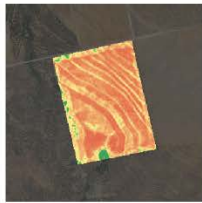
91° 52% 12:59 PM

← Field EDIT



South Field
113.2 acres
0.09" [9d ago](#)

Crop Health **ADVANTAGE**



August 24, 2016
16 days ago
LATEST IMAGE

[VIEW ALL IMAGERY](#)



South Field

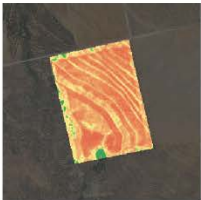
113.2 acres

0.09" 9d ago



Crop Health

ADVANTAGE

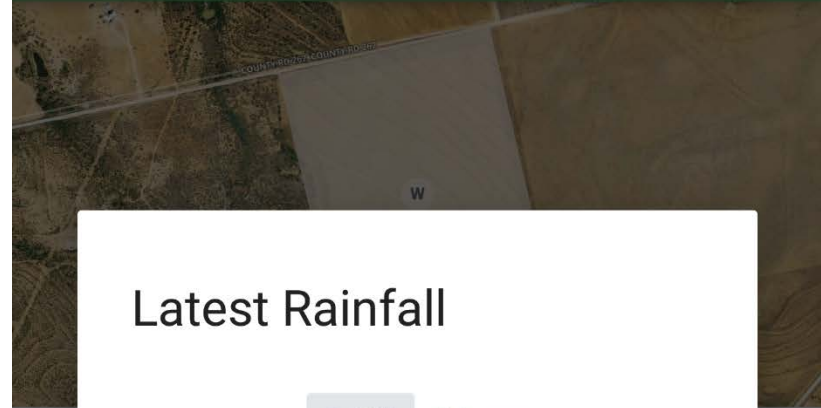


August 24, 2016

16 days ago

LATEST IMAGE

[VIEW ALL IMAGERY](#)



Latest Rainfall

0.09" 9d ago

It hasn't rained on your field for 9 days.

The last time it rained, your field received 0.09 inches.

OK



10 days ago
LATEST IMAGE

[VIEW ALL IMAGERY](#)



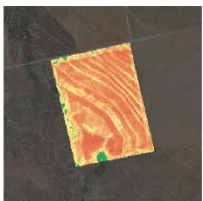
South Field

113.2 acres

0.09" 9d ago

Crop Health

ADVANTAGE



August 24, 2016

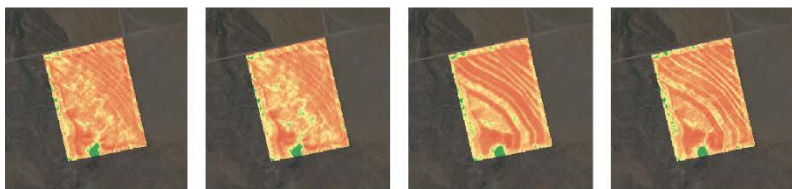
16 days ago

LATEST IMAGE

[VIEW ALL IMAGERY](#)



LOW VEGETATION HIGH VEGETATION



JUL 3, 2016

JUL 14, 2016

AUG 4, 2016

AUG 24, 2016

Field

EDIT

Rainfall

20.6 inches
YEAR-TO-DATE

[VIEW CHARTS](#)



Heat Units

4,714 GDD
YEAR-TO-DATE

[VIEW CHARTS](#)

Soil



49.7% Sandy Loam

[VIEW SOIL MAP](#)

Activities

You haven't logged any activities this year

[LOG ACTIVITY](#)

[VIEW ALL ACTIVITIES](#)

South Field Rainfall

W

Wheat 2016

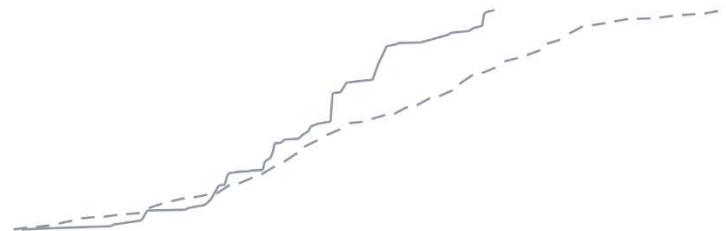
20.6 inches

Since Jan 1

[LOG PLANTING](#)

Log a planting activity to see rainfall accumulation for this crop

Accumulated Rainfall



[VIEW CHART](#)

Daily Rainfall

Field

EDIT

Rainfall

20.6 inches
YEAR-TO-DATE

[VIEW CHARTS](#)

Heat Units

4,714 GDD
YEAR-TO-DATE

[VIEW CHARTS](#)

Soil



49.7% Sandy Loam

[VIEW SOIL MAP](#)



Activities

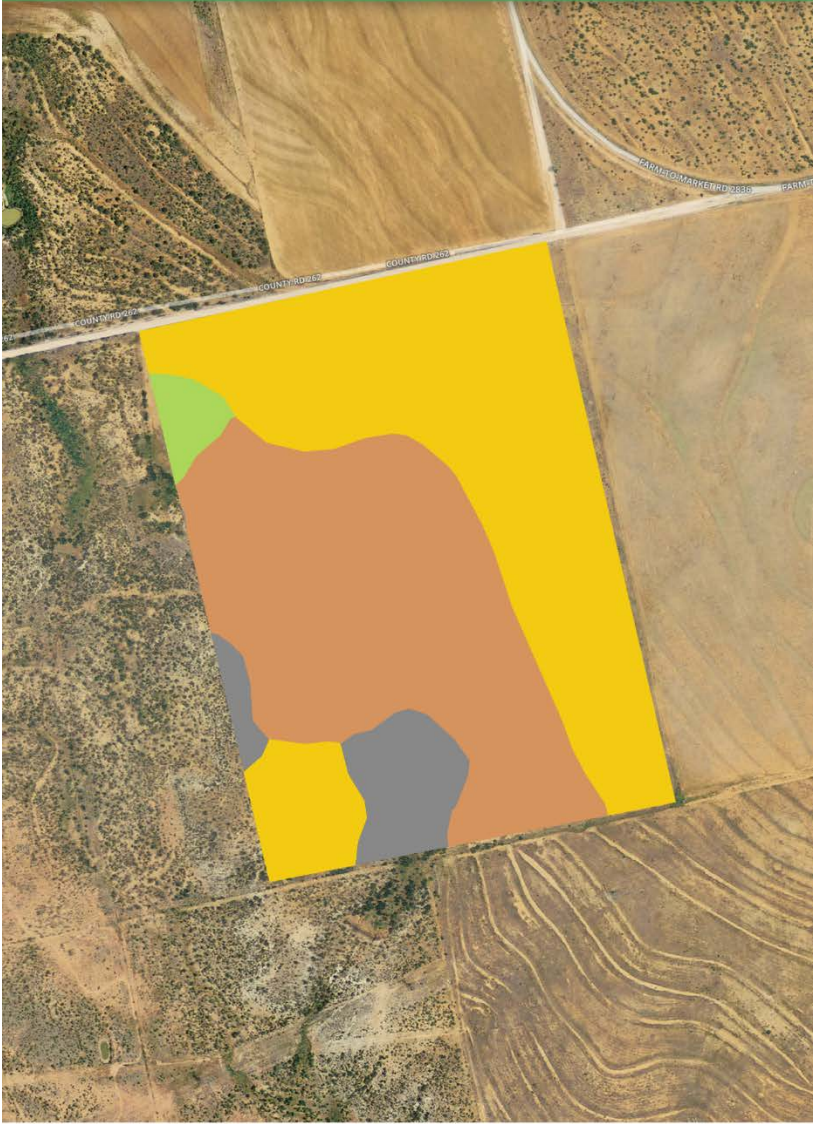
You haven't logged any activities this year

[LOG ACTIVITY](#)

[VIEW ALL ACTIVITIES](#)

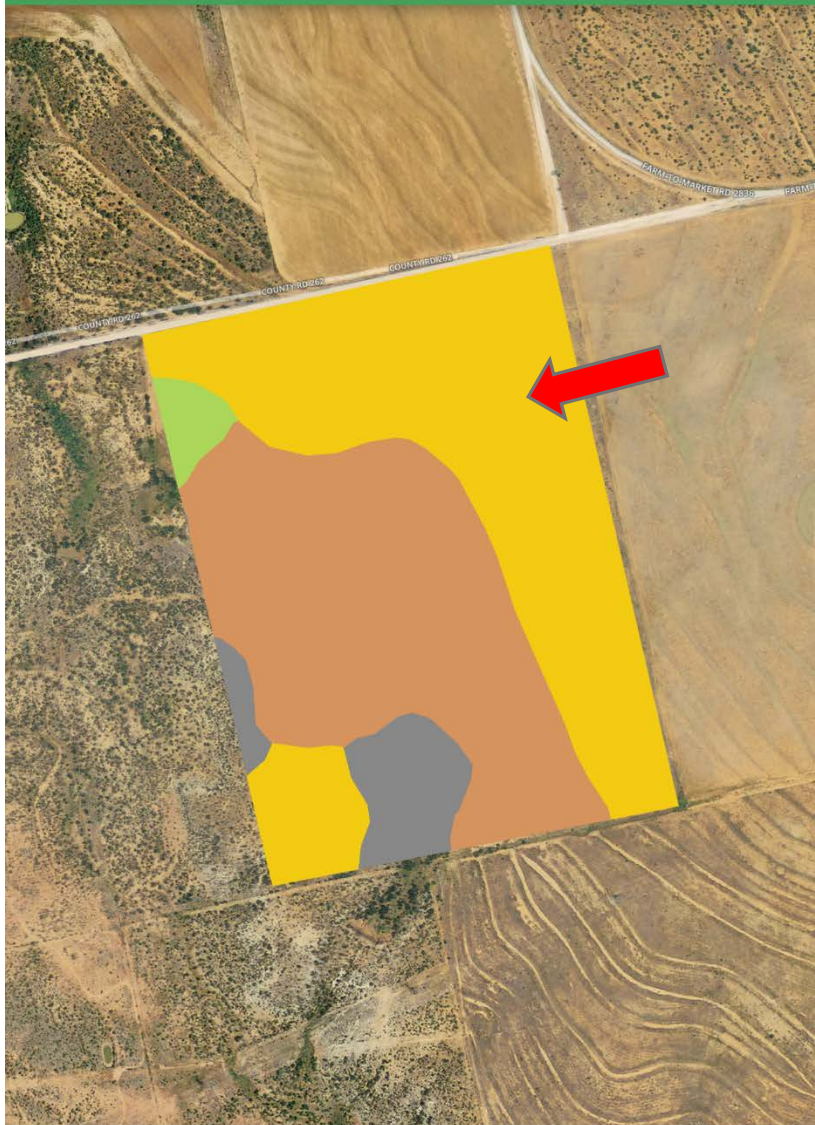


South Field Soil



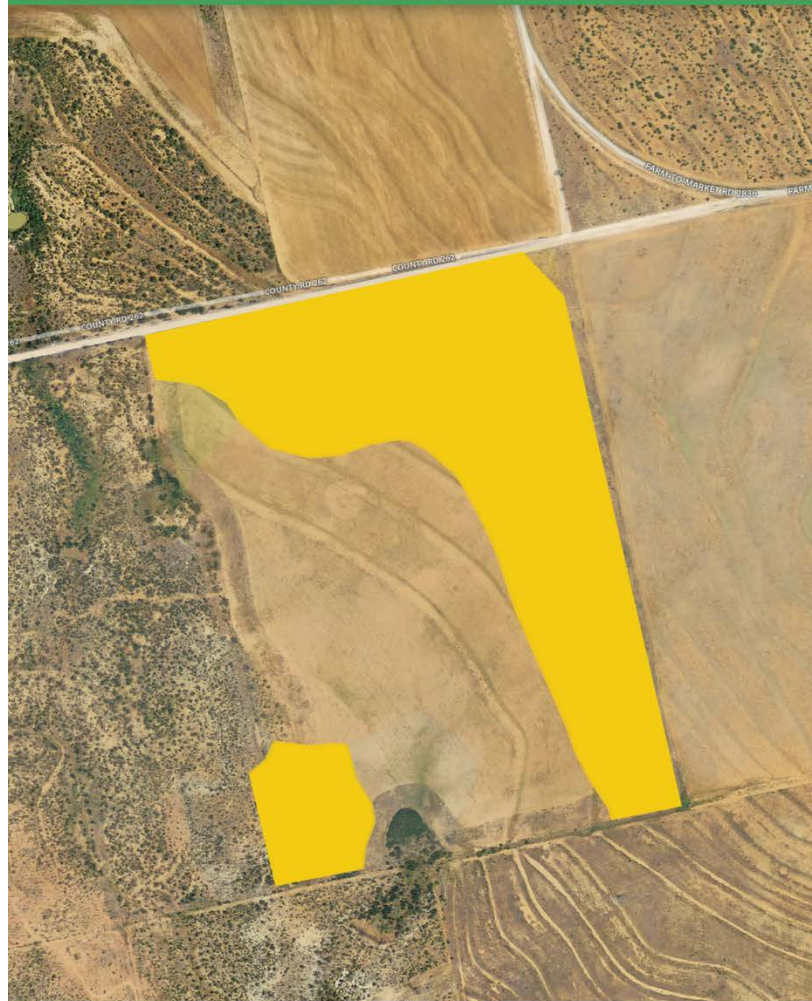
Tap to highlight soil types

South Field Soil



Tap to highlight soil types

South Field Soil



Sandy Loam



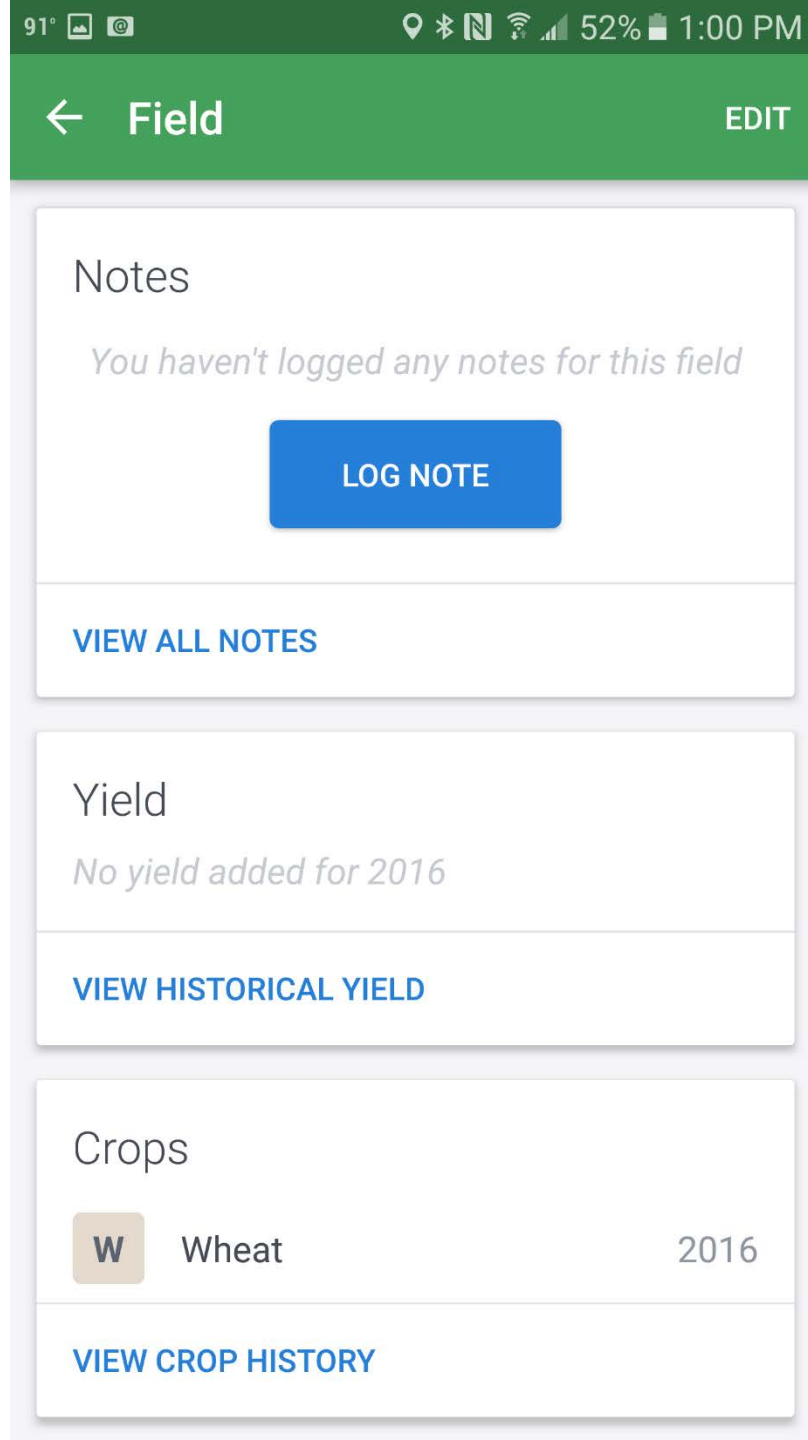
Miles fine sandy loam

55.9 ac

1 to 3 percent slopes

49.4%

Farm Logs



Farm Logs

Don't forget about the email alerts.

FarmLogs

Field Rainfall Report for August 27 2016

Hi Blake,

All of your fields received rain between 6 AM yesterday and 6 AM CDT today. [Log in to FarmLogs](#) to see the latest rainfall for your fields.

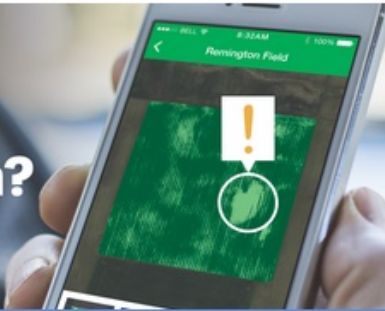
	South Field 113.17 acres Wheat
	Church 53.88 acres Wheat
	North Field 124.65 acres Wheat

[See Latest Rainfall](#)

How has the rain affected your nitrogen?

Our newest tool can tell you.

[LEARN MORE](#)



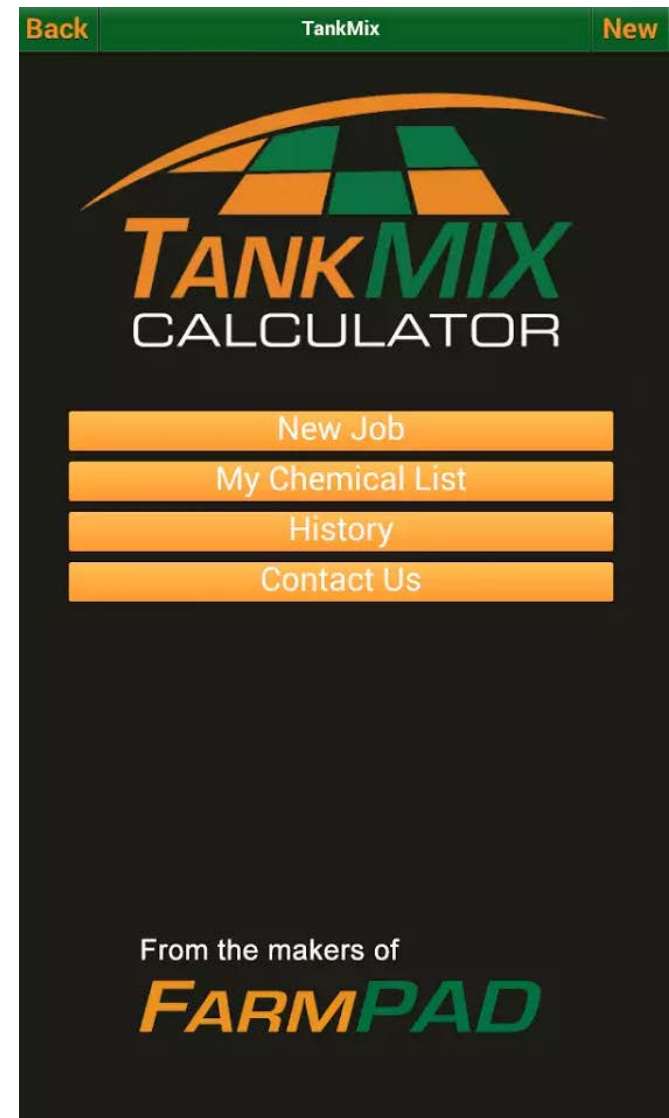
Tank Mix Calculator

- ⦿ Helps you generate a tank mix
- ⦿ Enter the acreage, tank size, and carrier volume
- ⦿ Select your chemicals from the list or add your own
- ⦿ The App will then calculate the number of loads required to spray your acreage (along with full and partial load mixes of the chemicals you selected)



Tank Mix Calculator

- ⦿ Allows you to save jobs for quick recall
- ⦿ Provides the chemical labels
- ⦿ Again, you can add your own chemical if not on the list
- ⦿ Combined with an accurate acreage estimate (like the one given with the FarmLogs App) can save money



Other Apps Not Specifically for Ag

- ⦿ Your own bank's app
 - ⦿ A lot of bigger banks have apps that allow you to look at your account balances, move money between accounts, even deposit checks from your phone
 - ⦿ I use my bank's app almost daily



Other Apps Not Specifically for Ag

- ◎ Flashlight

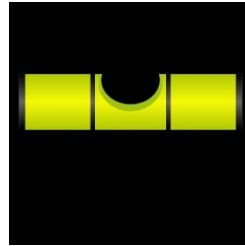
- ◎ There are a lot of flashlight apps on the market
- ◎ Pick one and try it out
- ◎ They come in handy at times would wouldn't even expect



Other Apps Not Specifically for Ag

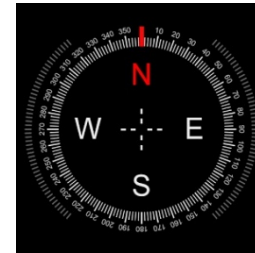
- ◉ Bubble Level

- ◉ Take your pick



- ◉ Compass

- ◉ The need may arise



- ◉ Unit Converter

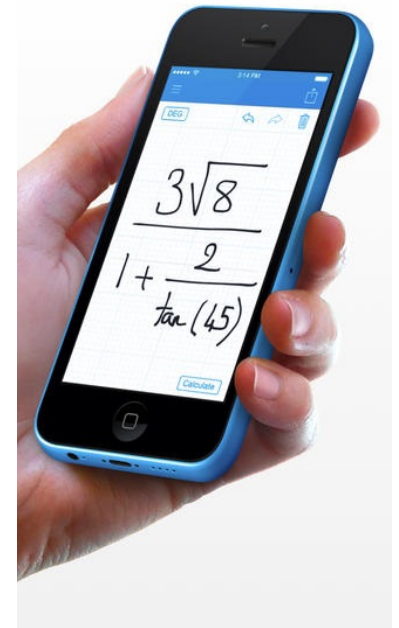
- ◉ Because I still don't understand the metric system



Other Apps Not Specifically for Ag

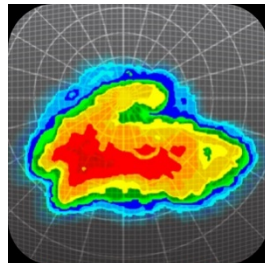
- Calculators

- Many on the market
- My Script Calculator
 - One that I just downloaded and looks interesting
 - You can write the equation with your finger and the program will interpret your handwriting



- Weather

- These are invaluable



Other Apps Not Specifically for Ag

- ◉ Need to measure an angle?
 - ◉ Get a protractor app

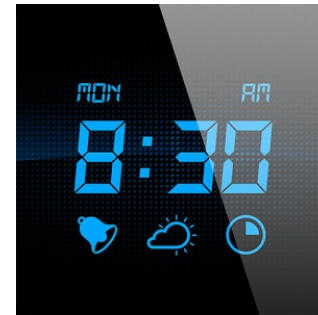
- ◉ Remember these guys?



Other Apps Not Specifically for Ag

- Alarm Clock

- Take your pick
- There are even some that make you do a task before the alarm can be turned off.



- Auto Insurance Apps

- Today, most auto insurance companies have apps for phones
- You can have your auto insurance card on your phone rather than having to sort through the stack of expired ones in your glovebox. *(Note: I still do it the old fashioned way)*

Other Apps Not Specifically for Ag

- Solitaire

- Admit it...we all have our vices



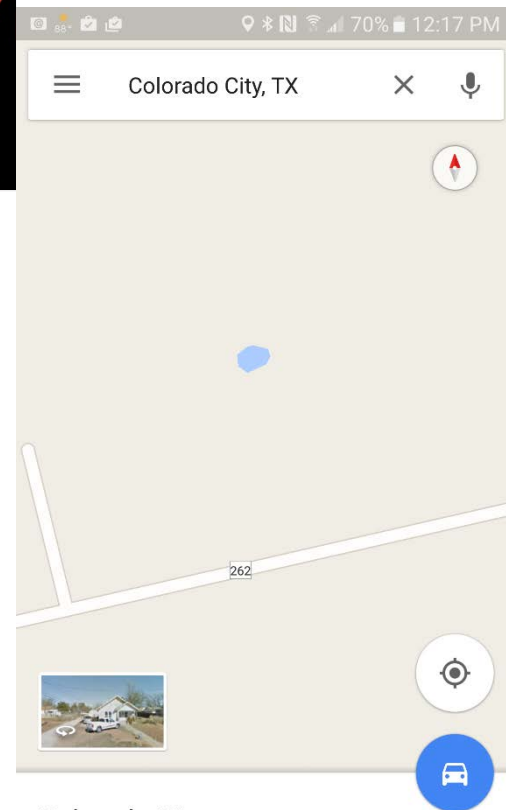
- Radio Apps

- If you would like to listen to your favorite radio station, but get nothing but static...there's an app for that



Apps Already on Your Phone

- ◉ Google/Apple Maps
- ◉ Driving directions
- ◉ Can even help while hunting



Colorado City
Texas 79512

3 hr 57 min

Some Helpful Hints

- ⦿ To save battery life
 - ⦿ Set your screen to black background
 - ⦿ Note: The “black” background on your phone is not truly black. You can go to the web and download a “true black background” as a picture and set the picture as your background.
 - ⦿ This uses less battery
 - ⦿ Close down all apps that you are not using
 - ⦿ Turn off your Bluetooth / Wi-Fi
 - ⦿ Turn down the brightness of your screen / use auto brightness
 - ⦿ Don't leave your phone in direct sunlight

Some Helpful Hints

- ⦿ Paying extra for a Wi-Fi hotspot?
 - ⦿ Did you know that your phone has the capability of turning your device in to a hotspot itself for other devices to connect and get on the web?
 - ⦿ If you have phone service, you will have Wi-Fi hotspot capabilities.

Conclusion

- ⦿ There are so many apps available today, the sky seems to be the limit
 - ⦿ A Google search for “Best Agriculture Apps” returned 3,000,000 hits
 - ⦿ A Google search for “Efficiency Apps” returned 32,300,000 hits
- ⦿ Do a search on the web from time to time
 - ⦿ Firms, universities, Extension are always coming out with new apps
 - ⦿ Popular ag magazines are constantly putting out reviews of new apps