10 Questions before Precision Purchase: Sniffing out Digital Snake Oil

Terry W. Griffin, PhD
Department of Agricultural Economics
twgriffin@ksu.edu
@SpacePlowboy

InfoAg
St. Louis Missouri
July 23-25, 2019
Defining Precision Agriculture

“Precision Agriculture is a management strategy that gathers, processes and analyzes temporal, spatial and individual data and combines it with other information to support management decisions according to estimated variability for improved resource use efficiency, productivity, quality, profitability and sustainability of agricultural production.”

https://ispag.org/
Disclaimer

This is a work of fiction for educational purposes only. Names, characters, businesses, places, events, locales, and incidents are either the products of the presenter’s imagination or used in a fictitious manner. Any resemblance to actual vendors, living or dead, or actual events is purely coincidental. If you feel convicted at any time, that’s on you.
What is a Snake Oil?

• “...from the 19th-century American practice of selling cure-all elixirs in traveling medicine shows. Snake oil salesmen would falsely claim that the potions would cure any ailments. now-a-days it refers to fake products, comes from the 19th-century American practice of selling cure-all elixirs in traveling medicine shows. Snake oil salesmen would falsely claim that the potions would cure any ailments. now-a-days it refers to fake products or services.”
What's the biggest digital snake oils you see in #precisionag?

Trying to come up with a list

4:13 PM · Apr 29, 2019 · Twitter for Android

28 Retweets 63 Likes
What's the biggest digital snake oils you see in precisionag?

Trying to come up with a list

I usually start by asking the question, is this a solution in search of a problem?

I see some hear wanting to say this data or that data is a snake oil or even what you can do with it. THAT ISN'T SNAKE OIL! It's data and GIS tools. The snake oil is how it's sold or portrayed. I'm tired of people blaming a type of dataset. People and marketing are the Snakes.
Terry Griffin
@SpacePlowboy

What’s the biggest digital snake oils you see in #precisionag?

Trying to come up with a list

Kyle Morrow @kmorrow63 · 02 May
Replying to @SpacePlowboy

There is some great stuff out there and there is a lot of non sense, unfortunately it takes a lot of time to sift through everything.

Isaac Ferrie CCA @IFerrie... · 02 May

I think it may have more to do with how you are conducting your studies.
Terry Griffin
@SpacePlowboy

What’s the biggest digital snake oils you see in #precisionag?

Trying to come up with a list

Chris Lobmeyer
@ChrisLobmeyer

Replying to @LynnSosnoskie and @SpacePlowboy

Paying Corporation A $x100/ yr so they can turn around and sell your “aggregated” data.

4:51 PM · 29 Apr 19 from Kansas, USA · Twitter for iPhone

28 Likes

Bill Spiegel @BillSpiegel · 29 Apr

Replying to @ChrisLobmeyer
@SpacePlowboy and @LynnSosnoskie

What he said.
What's the biggest digital snake oils you see in #precisionag?

Trying to come up with a list

@SpacePlowboy

JobyPrince @JobyPrince · 29 Apr
Replying to @SpacePlowboy
I'm not going to throw drones under the bus but as someone who works heavily with them I will say some of these "smart tools" that automate decision making with imagery seem poorly defined and overhyped.

@SpacePlowboy

Fiona Lake @FionaLakeAus · 29 Apr
Replying to @SpacePlowboy
#drones. Why I call my drone workshops mythbusting 🤣. So many fall for a 'miracle cure' that'll make heaps more $ for 0 effort. IE unrealistic customers have enabled snake oil pitches to thrive. Unfortunately the many useful but simple jobs for farm drones now overlooked.

@SpacePlowboy

02 May

Stepher Rice @idahodr... · 02 May
Replying to @SpacePlowboy
I think you know my answer. Always with tones.
Analysis based on Kansas Farm Management Association data

Preliminary results

- Automated Guidance
- Combine Yield Monitor (w/ GNSS)
- Combine Yield Monitor (w/out GNSS)
- Grid Soil Sampling
- Variable Rate Fertility
- Automated Section Control
- Lightbar Guidance
- Variable Rate Seeding
Variable Rate Prescriptions

• Soybean seeding
  – Indiana planter recs
    • 131K seeds per ac
• VR prescription
  – Low rate 130K
  – Medium rate 145K
  – High rate 170K
Farm Data Quality Litmus Test #1

Unprocessed yield data

Flow delay set
Farm Data Quality Litmus Test #6

Limited gaps near headlands: “holes in data”
Selecting Farm Data Group to “Join”

- Cyber insurance
Search hits

Keyword:
- data privacy
- data security

Source: https://www.google.com/trends/
Do we need cyber insurance?
Ask yourself: who’s your biggest threat?

- Self
- Neighboring farmer
- Disgruntled partner
- Retailer
- Manufacturer
- Commodity traders
- Government
- Extremists
10 questions to ask

• Variable Rate
  – Does prescription vary rates along flat spot of curve?
  – What does “proprietary algorithm” mean?

• Before “joining” data community
  – How many growers/farms/fields/acres in system?
  – So, what kind of cyber insurance do you carry?
  – What data quality controls are being used?
  – What community analytics benefit my farm?
  – Who owns farm data? (actually don’t ask this)
10 questions to ask

• Data quality (especially yield monitor data)
  – Has data been cleaned with rigorous technique?
  – Why does data look like it’s been photoshopped?
  – You POSITIVE other farmers calibrated yield monitor?
Sequels

11 Precision Ag Myths that Must be Dispelled

12 Days of Precision Ag: The Dirt on Variable Rate Technology

13 Unlucky Technologies and One Ace in the Hole

14 Distributed Ledgers: Off the BlockChain

Precision/Technology 2020: Building the farm data community to benefit investors but gonna make farmers pay for it!
Terry Griffin, PhD
@SpacePlowboy
twgriffin@ksu.edu

Cropping Systems Economist, Kansas State University
Treasurer, International Society of Precision Agriculture