Motivation, or why Metadata is important

Data such as yield, geo-referenced NDVI values, plant trait measurements, etc. only have value to machine learning or artificial intelligence algorithm development if the fuller context is known.

➢ Example 1: Unmanned Aerial Vehicle image data, to be useful for machine learning, should have tags identifying soil type, previous weather, plant population, crop type, etc.
➢ Example 2: Yield data is much more valuable for algorithm development if nutrient applications, plant population, plant and harvest dates, etc. are documented.

Who has time for that?

➢ When UAV operators get ready to fly…
➢ When machine operators get ready to plant, spray, or harvest …
➢ When crop scouts identify pests…

They don’t have the time to fill out a form or take a survey. This is an ideal application for a mobile application which uses autofill and smart form filling based on previous entries and specifics of the device and location.

A G R I C U L T U R E

Google Sheets

➢ Controlled by the person collecting the data
➢ Sharable easily in collaboration
➢ Easily editable in Google Sheets

Prototype App

➢ Offline-first web app works on both mobile and desktop
➢ Initial roll-out focused on UAV metadata
➢ Phase 2 to include cropping system data
➢ Extendable to many contexts for pictures, videos, data files, or data platforms

A simple, but enabling tool

Our metadata app will be a tool for quickly capturing context of activities and data files. With date/time/location identity, alignment of other files with common attributes will be simpler and more robust. For example …

➢ Where are images of 45 day old corn on sand for which there has been no rain for 10 days
➢ Tally the acres chisel plowed during November of each year
➢ Tally fields covered by Schmutz McGillicuddy in April
➢ Sort out the fields that are corn after corn with fall applied N