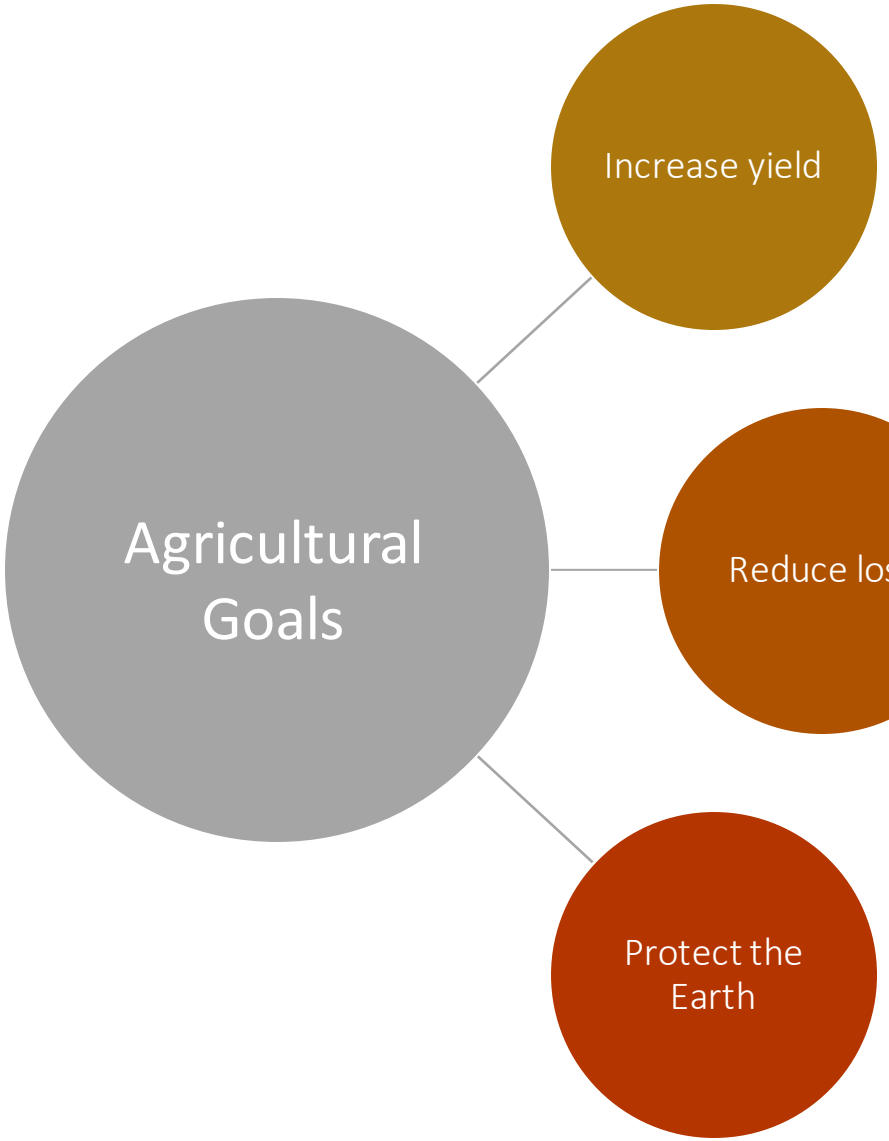


- Monitor pollinator populations

- Apply appropriate pesticides
- Promote beneficial insects

- Limit pesticide applications
- Identify new threats

Insect pollination provides the UK a benefit worth **£690 million** per year[1]

Insect-borne diseases like CYD can cause up to **33% yield loss** in barley[2]

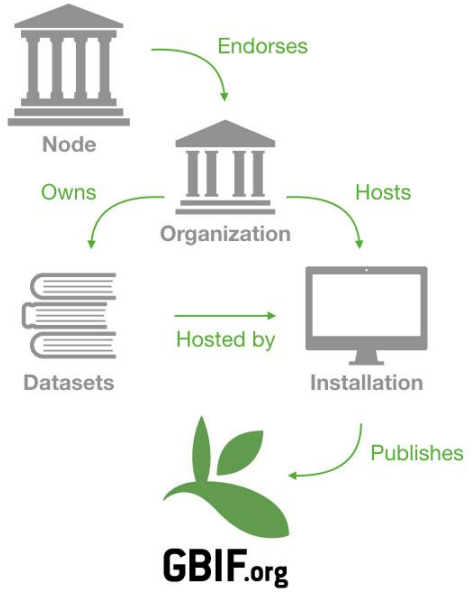
Invasive species cost the UK economy **£1.7 billion** per year[3]

Webapp features - Summary

- Identify and map images taken from farmland to relevant matching known (plant/insect/species/pest) species names with time and location (with detailed co-ordinates) stamp
- Store information collected and use to accumulate and monitor movement of species over time in terms of direction, volume/concentration, speed
- This functionality can be used to manage post control in a proactive manner and hence eliminating or at least significantly reducing crop damage and related costs for the farmers.

Product & features

- Identify plant species via image recognition
- Retrieve latest scientific data from international databases
- Store and view a map of all your observations
- Analyze invasive species movements over time



https://data-blog.gbif.org/post/installations-and-hosting-solutions-explained/

Unique Value Proposition

	PlantMap	PictureThis (Glority)	Picture Insect: Bug Identifier (Glority)	iNaturalist	Our app
Species Recognition:					
Plants	Manual[1]	x		x	x
Insects			x	x	x
Location Mapping	x	Community Sharing	Community Sharing	Community Only	x[2]
Tiers	Basic/Premium	Free/ Subscription	Free/ Subscription		
Desktop	x	x		x	x
Mobile		x	IOS only		
Actionable Suggestions					x

1 – Search and pick closest species from community database or add new entry manually

2 – Farmland/local level

Farmer surveys field, uploads pictures of what he sees

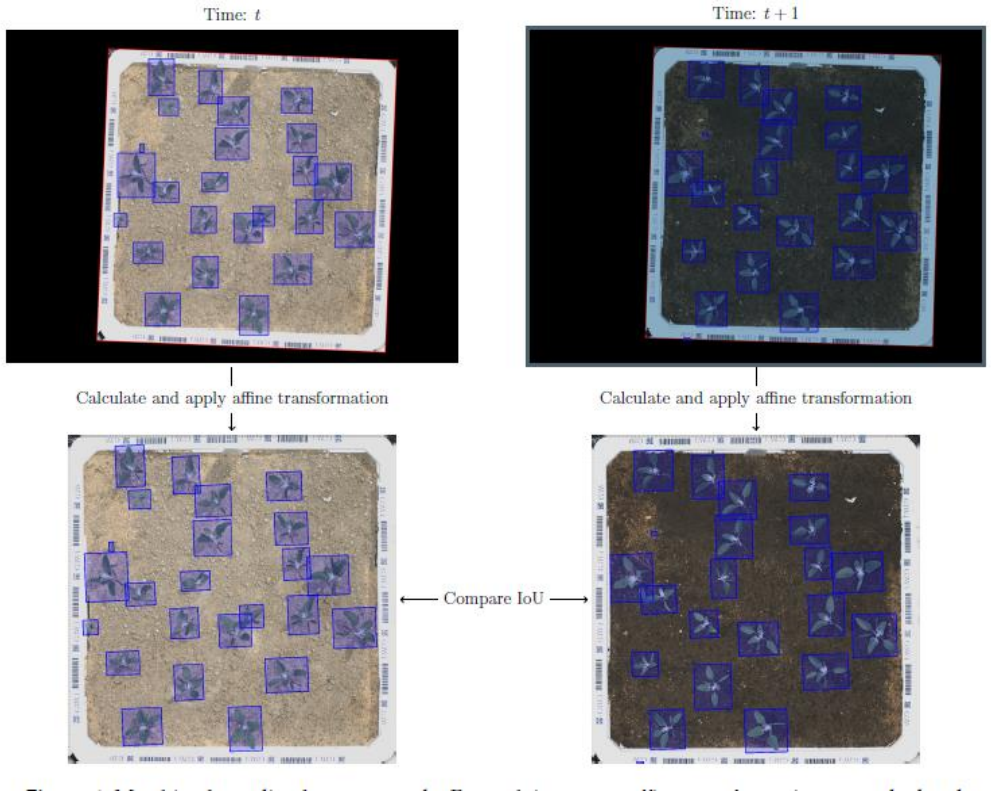
Farmer makes an informed decision about treatments

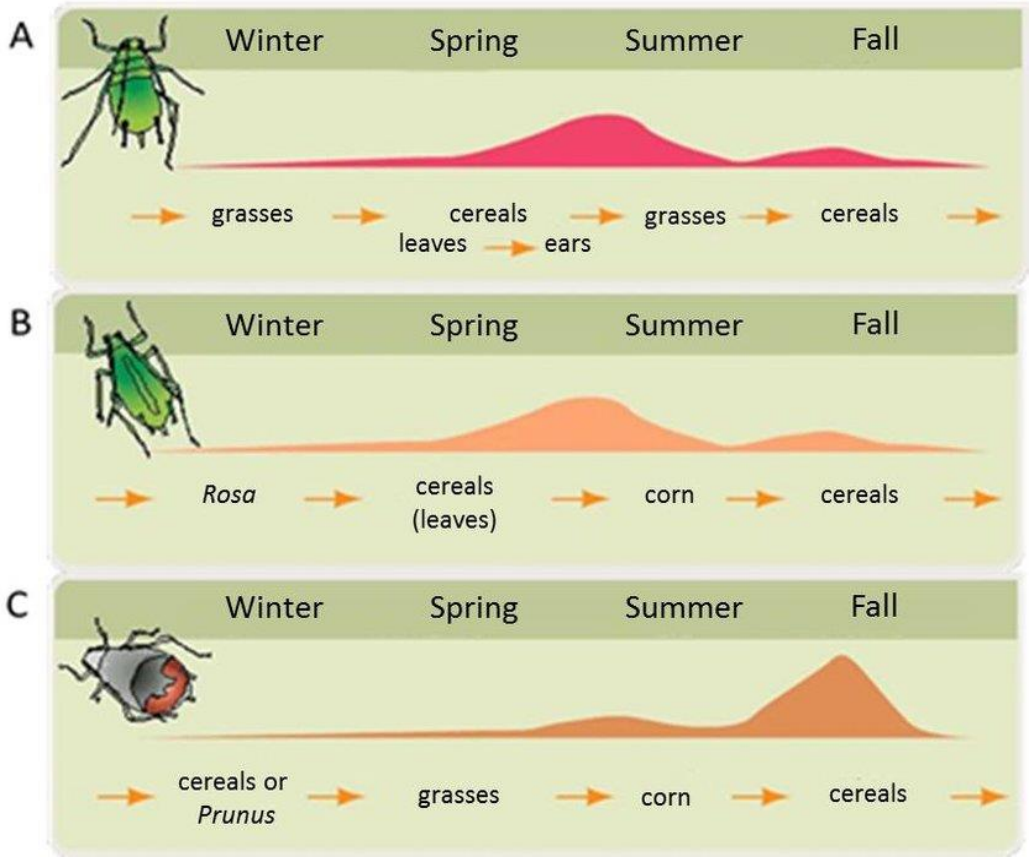
FarmSmart

1. Stores picture data
2. Identifies species
3. Extracts and maps geolocation
4. Plots metrics
   - Classification (Friend vs Pest)
   - Abundance
   - Change through time

Photo by sbushes on iNaturalist.org CC BY-NC 4.0

Screenshots





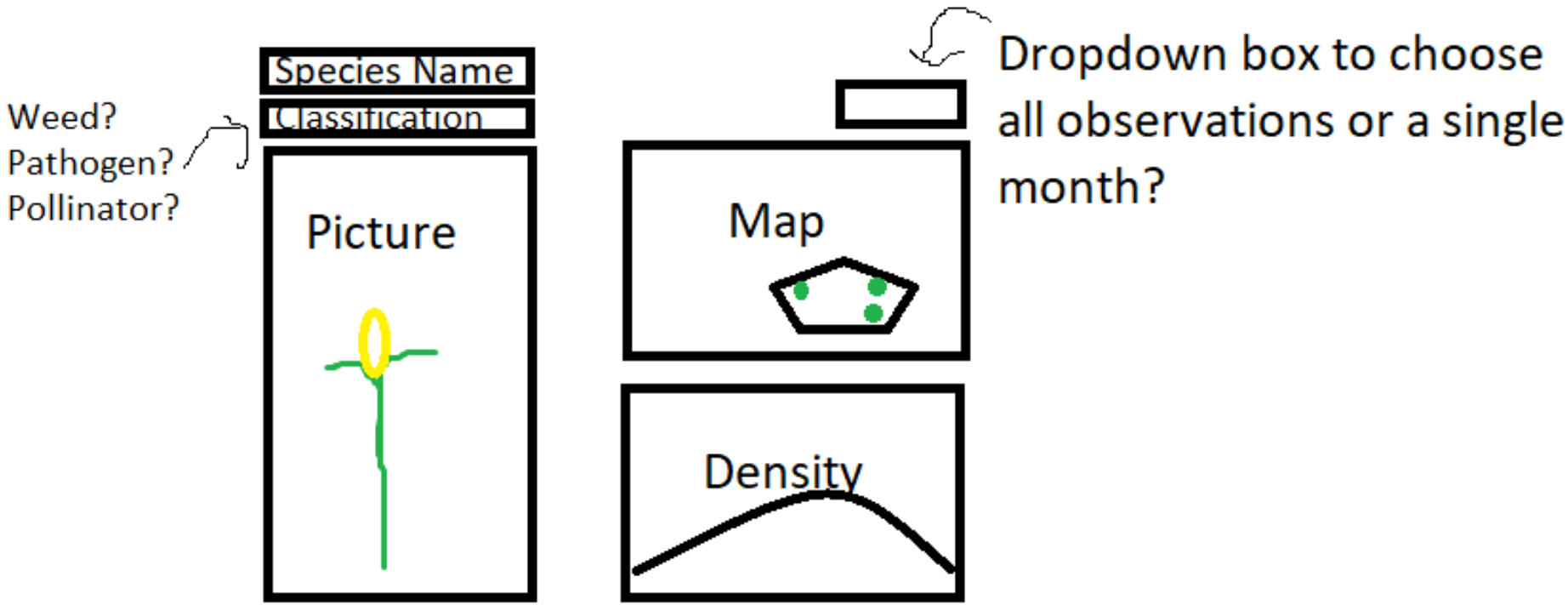
Market and Future Directions

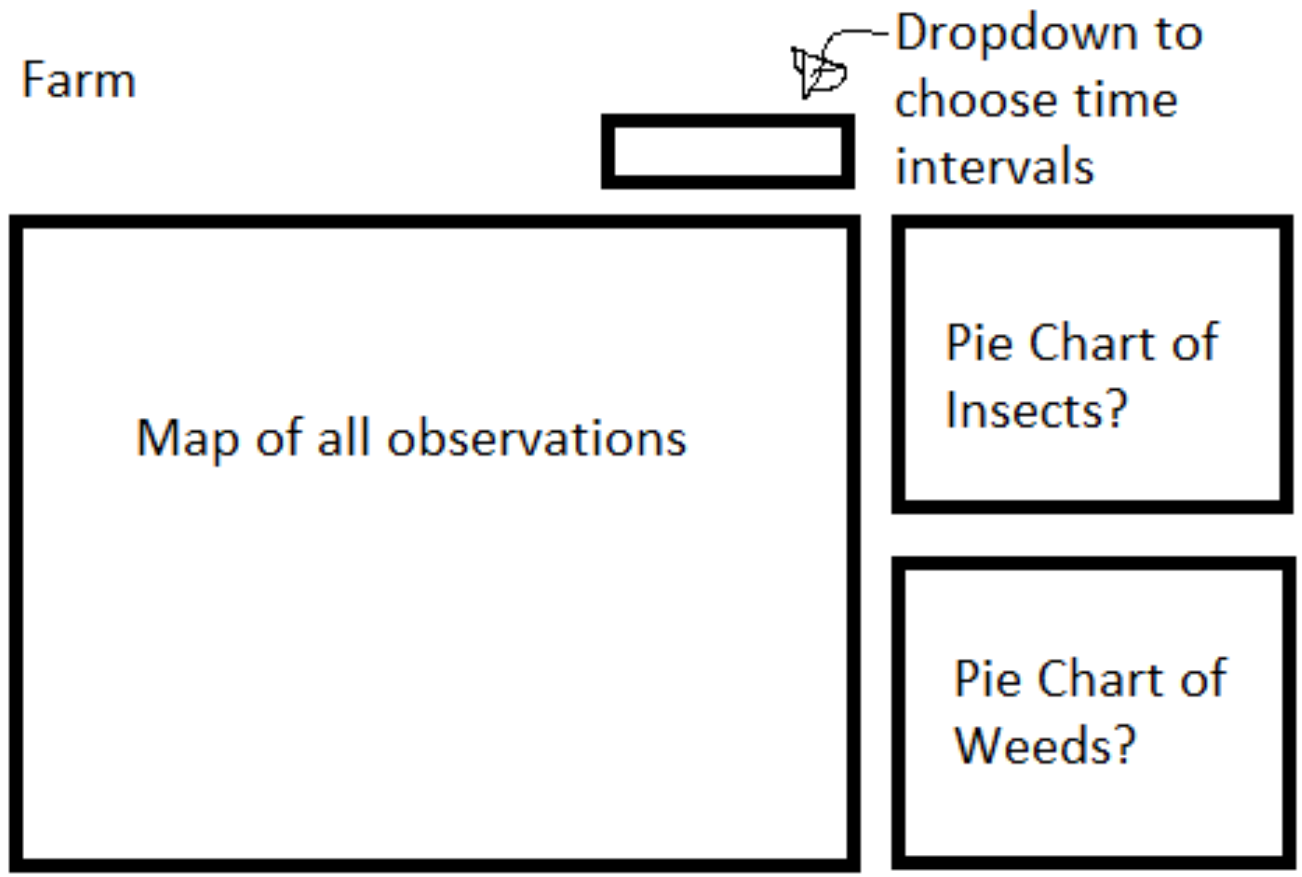
- Precision agriculture

Existing Tech

- Tools to identify species
  - Glority (www.glority.com)
  - PictureThis (www.picturethisai.com)

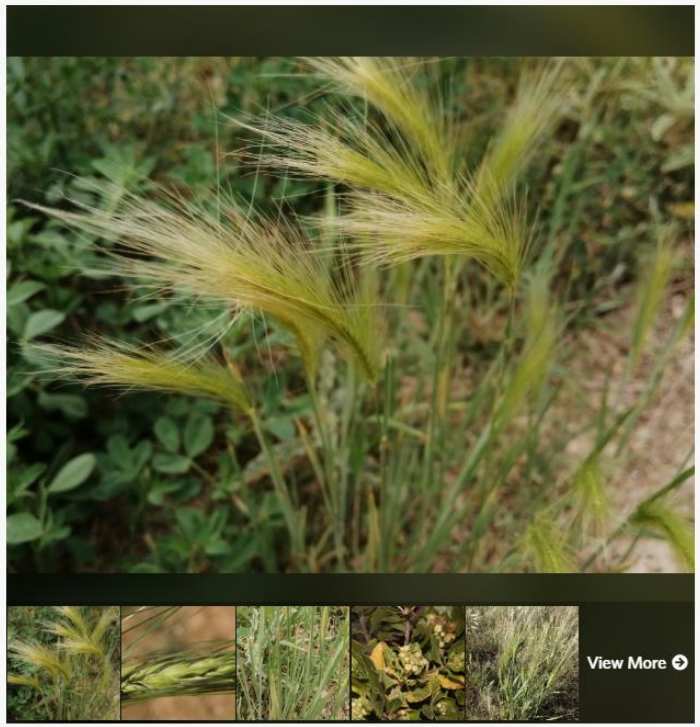
- Tools to learn about pests
  - Croprotect (croprotect.com)
  - CABI's Plantwise Factsheets Library (www.cabi.org/isc/datasheet)


Species Name
Classification
Weed?
Pathogen?
Pollinator?
Picture
Map
Density
Dropdown box to choose all observations or a single month?


Farm
Dropdown to choose time intervals
Map of all observations
Pie Chart of Insects?
Pie Chart of Weeds?

Barley (*Hordeum vulgare*)

Filter by Place



TOP OBSERVER

apseregin

Leaderboard 10

TOP IDENTIFIER

marknesbitt

Leaderboard 154

LAST OBSERVATION

October 03, 2020

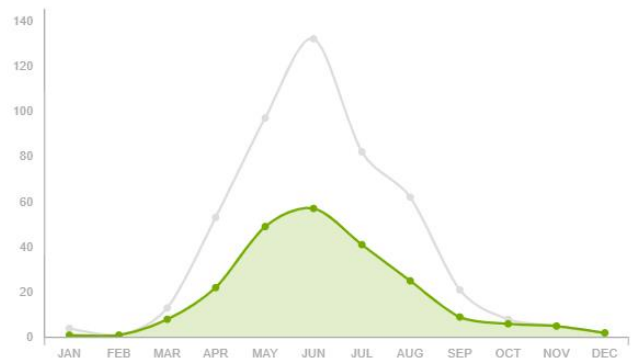
View Observation

TOTAL OBSERVATIONS

480

View All

Seasonality | History | Plant Phenology



Map | About | Taxonomy | Status | Similar Species