Fieldbook + MaizeFinder

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Introduction to Fieldbook

- Developed at CIMMYT
- Developed by maize breeders for maize breeders
- Tailored to maize but could be adapted for other crops
- Visual Basic for Excel
  - Very flexible
  - Power of excel at user's disposal
- Not a database

Introduction to Fieldbook

- Field books for (evaluation) trials (no pollinations) and nurseries stored in a series of excel files
- Excel files in turn stored in folders by season
- Making field books is template driven
- Templates are user defined
- Organize nurseries (pollinations) by type of pollination
- Batch processing is the key

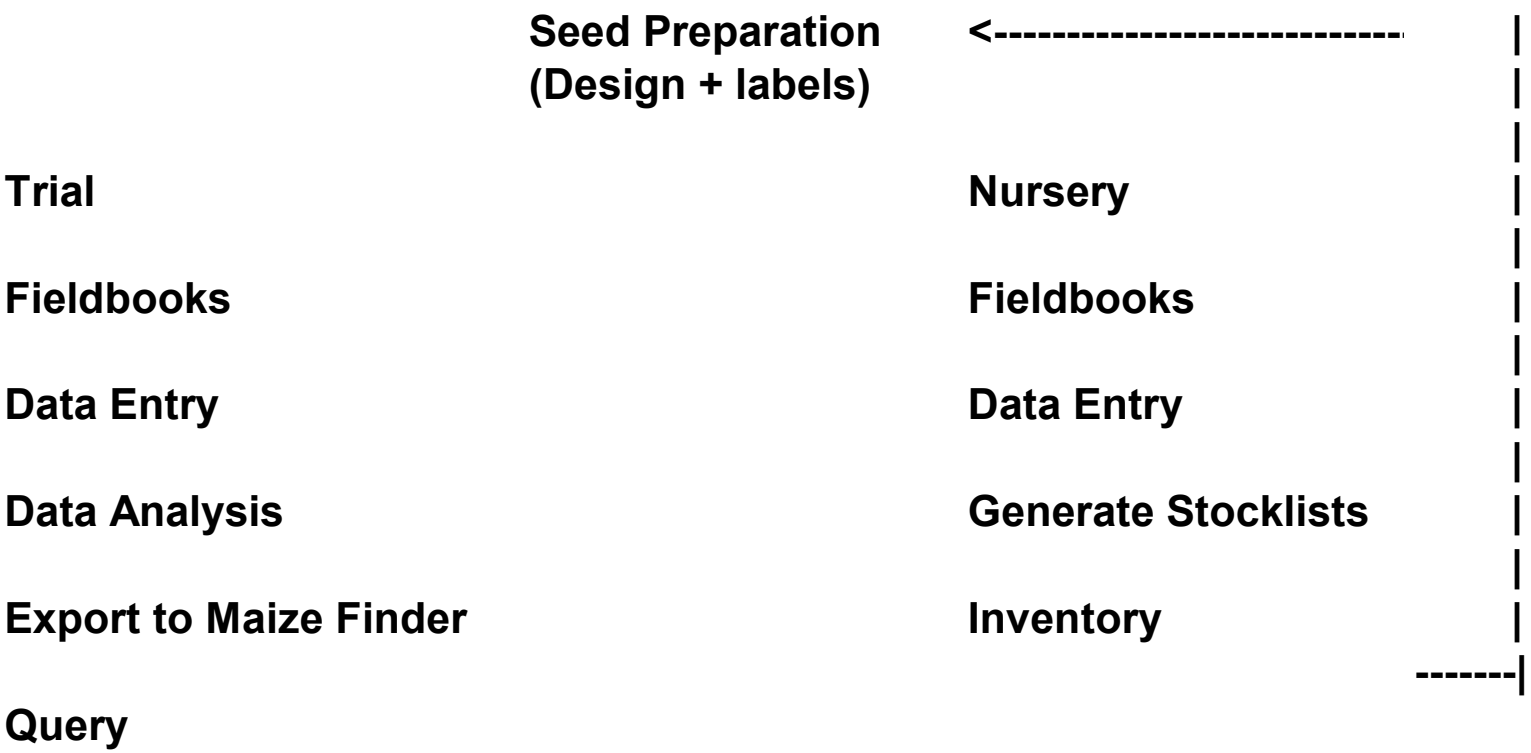
Fieldbook (cont'd)

- Has utilities to:
  - Make replicated and unreplicated designs
  - Make labels
  - Make field tags
  - Make maps (field layout using permutations and combinations)
  - Retrieve and manage pedigree information
  - Manage seed stocks (quantities)

Fieldbook (cont'd)

- Has utilities to:
  - Curate data
  - Statistically analyze data (REML) of individual sites
  - Calculate averages across sites
  - Make reports
  - Calculate selection indices
  - Format data for export to MaizeFinder
  - Define templates
  - Handle seed shipments

Work Flow


Seed Preparation
(Design + labels)
Trial
Fieldbooks
Data Entry
Data Analysis
Export to Maize Finder
Query
Nursery
Fieldbooks
Data Entry
Generate Stocklists
Inventory

Maize Finder

- MaizeFinder: back end database for storage of data.
- MaizeFinder: also a front end for making queries
- Currently only trial data can be queried
- Has GIS utility
- Flexible query based on user input
- Head to head comparison of germplasm

History and Future

- Adam, ICIS etc.
- Macros for repeated tasks
- Macros for automation of tasks
- Practical tools required in a (maize) breeding program
- Integration with ICIS
  - Fieldbook – front end
  - MaizeFinder – immediate back end for data storage and querying
  - ICIS – back end, manager of unique IDs (GMS)