

ARM Software Overview

Welcome to ARM, the software solution for managing agriculture research experiments.



Why use ARM Software?

ARM is the software solution to plan, create, manage, analyze and report agricultural experiments



Use ARM for all stages of an experiment: to plan and create protocols, to randomize and manage trials, to analyze data and report the results.



Why use ARM Software?

ARM provides:

- Structure for consistent information
- Master Lists to standardize vocabulary
- Tools for all phases of an experiment

Resulting benefits include:

- Improves efficiency
- Increases accuracy
- Promotes quality



ARM provides: a defined structure to enter information consistently, with Master list dictionaries to standardize vocabulary, and has tools for every step of an experiment.

Using ARM improves efficiency, increases accuracy, and promotes better quality of results.



Country affiliation of ARM clients



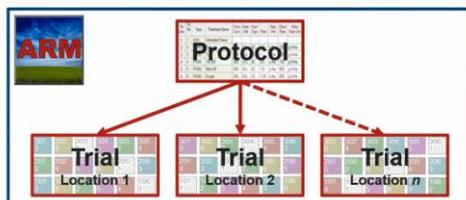
Thousands of researchers use ARM in nearly 100 countries across the world.

GDM Representatives offer local support in Europe, Africa, Asia, Australia, and North and South America.

Used by the largest global agro-chemical companies, ARM is the recognized and respected standard throughout the crop production and protection industry.

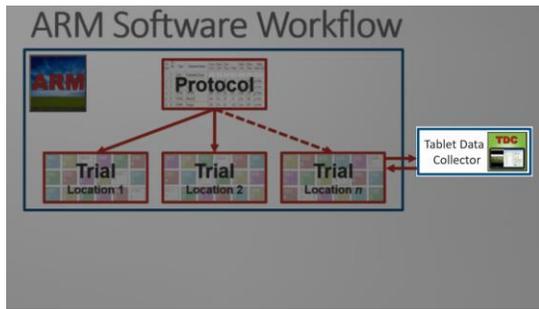


ARM Software Workflow



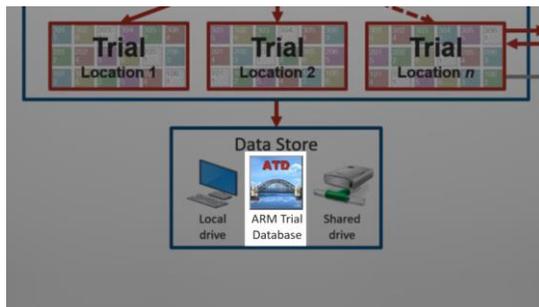
It is important to note that the ARM workflow uses 2 types of data files.

A **Protocol** is the plan for an experiment. Use a protocol to create **Trials** for each location or year of an experiment. Then enter assessments into each trial with Tablet Data Collector software while in the field, or by hand back in the office.



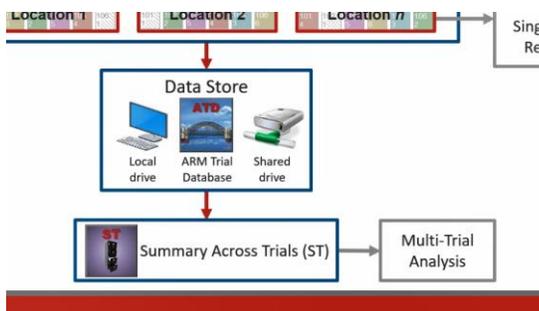
Tablet Data Collector runs the ARM software with additional features optimized for field data entry. It offers a touch number pad for data entry, and captures pictures and GPS coordinates at the trial or plot level.

ARM generates a variety of single-trial reports. These include labels & signs, Spray & Seeding plans, Tour Reports and assessment analysis with treatment comparisons.



Next, trials can be saved and stored to a variety of locations. These include a local drive, an ATD database, or a shared network or cloud drive.

The ARM Trial Database (also known as ATD) is a relational database to store and maintain trial information. Use ATD to manage large numbers of trials; create customized pivot tables, charts, and reports; and offer seamless multi-user access.

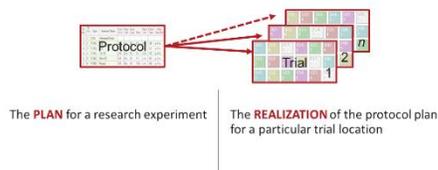


Summary Across Trials then reads stored trial information and performs multi-trial analysis.

Researchers, product managers and information technology groups use ST to summarize a set of research trials. The results can be used to measure consistency of research results, to improve the design of future trials and provide critical information for product release and use.

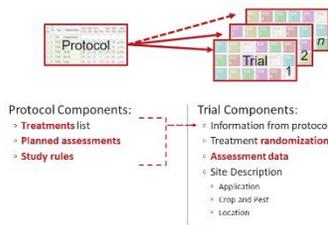
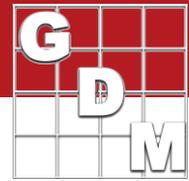
Next, we take a closer look at ARM protocols and trials.

Components of a study



A study has two essential components. The first component is a Protocol, the plan for an experiment. Essentially it is a "template" containing the design and instructions for trials.

The second component is a Trial, the realization of the plan. A trial is at one location, and is saved separate from the original protocol. Multiple trials can be created from a single protocol when performing a series of trials.



A protocol consists of: the Treatments to test, planned Assessments, and study rules to identify vital information to record.

A trial consists of: key information from the protocol, the randomization of treatments, data from assessments, and a description of all site details. The site description includes applications, crops and pests, and the location description.

Sharing information

ARM files are a standard file format

- Share all instructions and results between trialist and sponsor
- Validate the study for missing or invalid information *before* sending
- Share through email, cloud storage



Data Export

- Converts trial information to preferred file types for additional analysis or graphing



ARM protocol and trial files are the standard format for sharing instructions and results of an experiment. There's no need for a separate Word document protocol or to send trial data via Excel if you have ARM!

The Validation feature in ARM performs consistency checks and ensures all required information is included, before you share the study. It's a great tool to avoid embarrassment having to re-send a file to include information that was already requested.

ARM files can be attached to an email or saved to a cloud storage drive for easy sharing.

There are also a variety of Data Export options to convert trial information to preferred file types to analyze or graph data using other programs.