

ARM can export a trial map or field map to HarvestMaster Mirus software, providing treatment randomization and plot arrangement information for use with HarvestMaster Harvest Data Systems, research sprayers, and other research equipment. Recorded data can then be imported back into ARM for analysis.

## Exporting a single trial to Mirus

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A single trial can be exported to Mirus, either to provide randomization information for spraying, or to take yield or other assessment data.

1. Select Tools > Connect Electronic Data Collector.
2. Select 'Push trial(s) to EDC' and 'HarvestMaster Mirus' options.
3. Specify an EDC Path to save the trial information so Mirus can import it. If Mirus is not on the same PC as ARM, click Browse to select a folder to make it easier to share files, then click Next.
4. On the ARM Study List, select the trial to use, and click OK.
  - a. Note that if this trial is part of a field map, all trials on the field are automatically selected. To export just 1 trial, deselect the other trials on that field before selecting OK.
5. ARM exports the trial randomization to a *[trial\_name].csv* file, and saves it to the Imports folder at the specified EDC Path. A confirmation message appears, listing the trial that was exported.



Use Mirus to import this file, so it can be used by the HarvestMaster research equipment.

## Exporting an entire field to Mirus

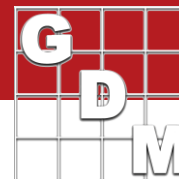
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Often times, there is more than one trial that is taking place on a single field, and so gathering harvest data occurs across several trials at the same time. ARM uses a Field Map file (\*.fld) to keep track of how trials are positioned relative to each other in the field. This information can be shared with Mirus in order to export all trials in a field to Mirus, as well as import harvest data back from Mirus into each individual trial file.

To export multiple trials to Mirus:

1. Select Tools > Connect Electronic Data Collector.
2. Select 'Push trial(s) to EDC' and 'HarvestMaster Mirus' options.
3. Specify an EDC Path to save the trial information so Mirus can import it. If Mirus is not on the same PC as ARM, click Browse to select a folder to make it easier to share files, then click Next.
4. On the ARM Study List, select a trial that is part of the field map you wish to export. All trials in this field are then automatically selected. Click OK to proceed.
  - a. If a field map has not yet been created, select all trials that should be included on the field, and click OK. See *Creating a new field map* section of this document for the next steps in this process.
5. ARM exports the trial randomizations and relative locations to a *[field\_name].csv* file, and saves it to the Imports folder at the specified EDC Path. A confirmation message appears, listing the trials that were exported as part of the selected field map.
6. Use Mirus to import this file, so it can be used by the HarvestMaster research equipment.

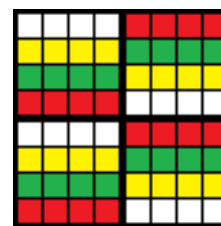




## Creating a new field map

After selecting a group of trials that are not already linked to an existing field map, ARM prompts to create a new field map file. A field map keeps track of how trials are positioned relative to each other in the field. Note that a trial can only be linked to 1 field map, so if a study is already linked to a field, it is not added to the new field.

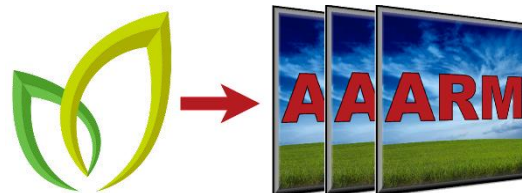
1. The Field Map Settings dialog displays first, to set basic settings for the field.
  - a. The 'Field boundary points' options define the size and shape of the field. A basic rectangular field has 4 points, with Point 1 being the origin of (0,0) or specified GPS coordinates.
  - b. The 'Default trial arrangement' option defines how the selected trials are arranged by default on the field map.
2. Next, choose a location to save this file to, and select a file name if not already done so on the Settings dialog. Field maps are saved with the \*.fld file extension.
3. The Field Map Layout dialog displays next, to edit and arrange the field.
  - a. The 'Snap trial to grid' option is very important for communicating with Mirus, to ensure that all trials are aligned to match the actual field. This option requires that all trials have equivalent plot dimensions, so that the trials align.
  - b. To add another trial to the field map, select the Trial Map toolbar button, and select the trial(s) to add from the study list. To remove a trial from the field, right-click and select Delete.
4. Once the field is configured, click Save to save all changes, then click Close to continue the export to Mirus process.



## Importing data from Mirus

Once field data has been recorded by HarvestMaster equipment and collected into Mirus software, it can be imported back into the ARM trial(s).

1. Select Tools > Connect Electronic Data Collector.
2. Select 'Pull trial(s) from EDC' and 'HarvestMaster Mirus' options, verify the EDC Path, and click Next.
3. Select the file that was exported by Mirus (\*.csv or \*.mtoa), containing the recorded data from the field.
4. The data from the Mirus data file is automatically added to the individual trials that were included in the original export.
  - a. The data file from step 3 is moved to the 'Completed' Mirus folder, so it not accidentally imported again.



To capture more data with Mirus, simply Push the trial or field map again, and repeat the process.