Integrated Breeding Platform (IBP)

Make Field Map - BETA

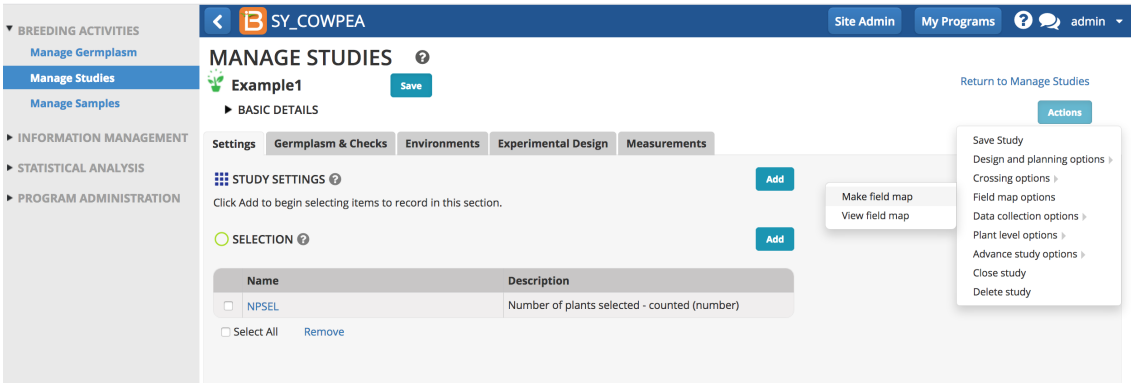
BMS 13.0-14.0 Manual

Beta Functionality

Field design is BETA functionality with known usability limitations. Expect to see improvements in future versions.

Access

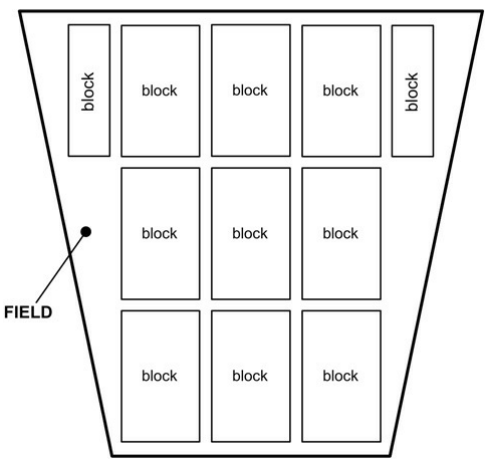
- Field design is accessible from the Actions menu within studies. Select Make Field Map to get started.



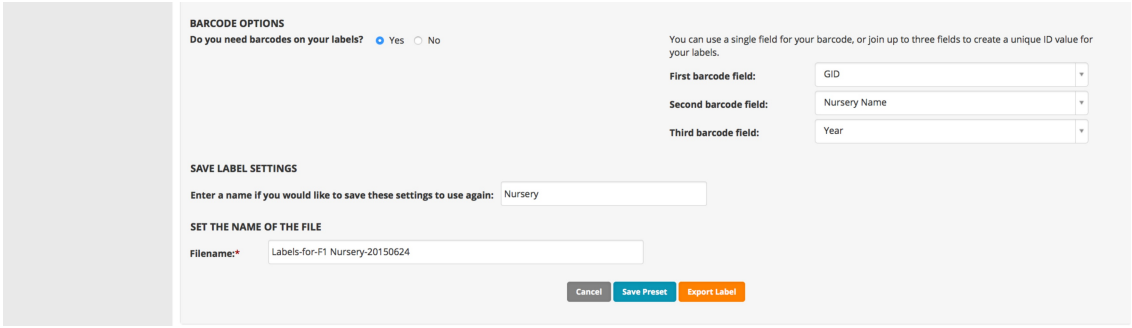
Field & Block Details

The BMS uses the term ‘field’ to represent a large area at a location that is subdivided into blocks of land, where a ‘block’ is part of the field that will be planted in a consistent way. Planting block is the unit that is mapped.

Fields & Blocks



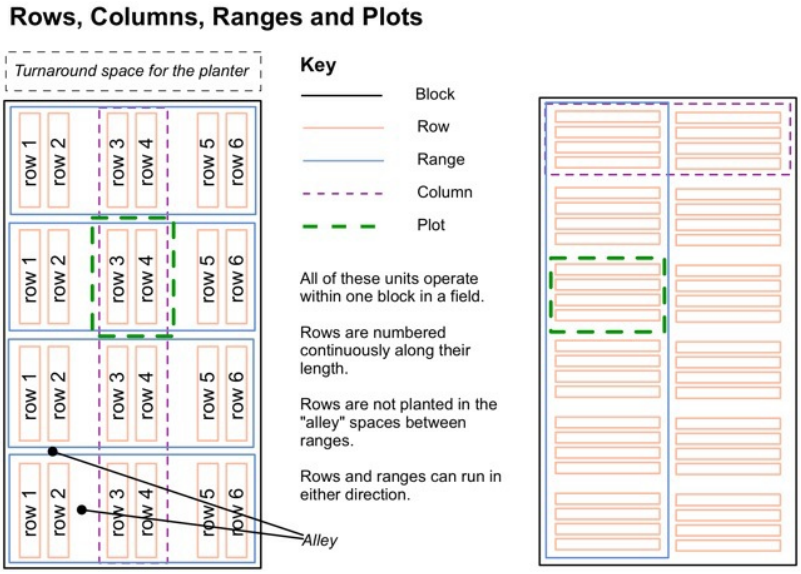
Establish the field location, field name, and block name.



Row, Column, Range, & Plot

Field Map Definitions:

- Row: Planting row; if only one row per plot is specified, row is equivalent to column
- Column: Vertical position of plots, width determined by the number of rows per plot
- Range: Horizontal position of plots
- Plot: Specified by column (vertical position) and range (horizontal position), may contain 1-8 planting rows



Calculate the number of plots available in the planting block. Enter the number of rows per plot that you will use. Number of rows in the block is the number of plant rows available across the block horizontally. For crops which are not grown in rows, you can enter the number of plots for number of rows and 1 for rows per plot. The number of ranges is the number of plots available across the block vertically.

Calculation of Available Plots:

- The number of rows must be evenly divisible by the number of rows per plot to give the number of plots across the block.
- The total number of plots available in the block must equal or exceed the number of plots needed.

$$Plots\ Available = \left(\frac{Rows\ in\ block}{Rows\ per\ plot}\right)(Ranges\ in\ block)$$

178 | F1 Nursery | 2015
Plot No. : 1
DESIGNATION : Pioneer
GID : 178
CHECK : Check entry

509 | F1 Nursery | 2015
Plot No. : 2
DESIGNATION : MT125
GID : 509
CHECK : Test entry

510 | F1 Nursery | 2015
Plot No. : 3
DESIGNATION : MT126
GID : 510
CHECK : Test entry

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For this nursery example:

- Number of Rows in Block = 100
- Number of Rows Per Plot = 2
- Number of Ranges in Block = 10

$$Plots\ Available = 500 = \left(\frac{100}{2}\right)(10)$$

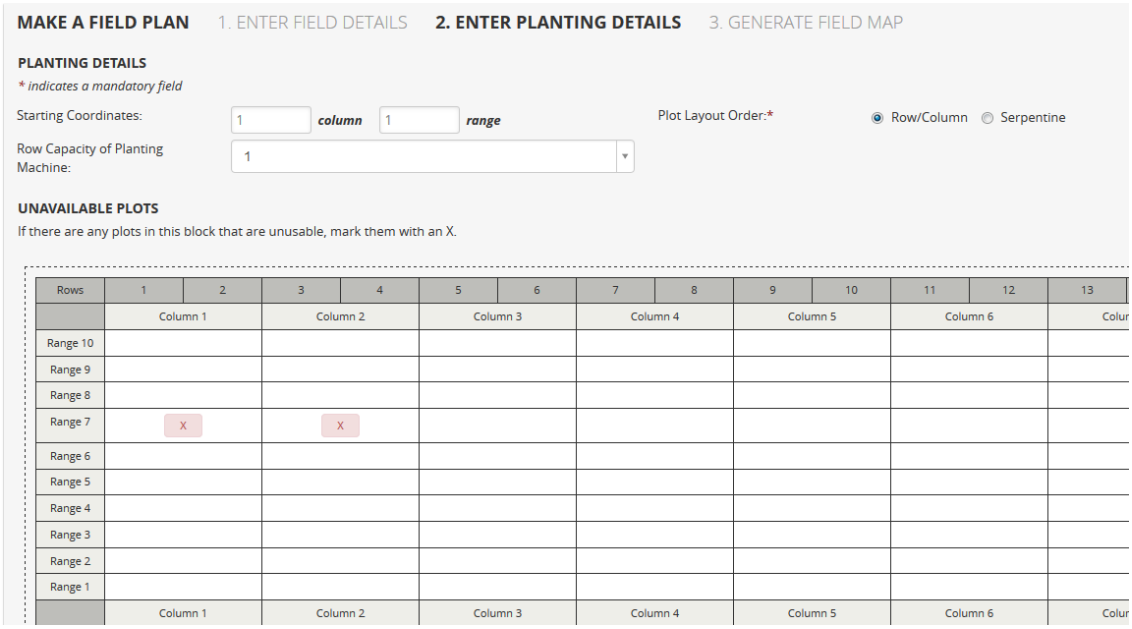
The field plan is 50 X 10 plots. In this example, we specified 100 rows and 2 rows per plot, so the field plan has 50 columns by the specified 10 ranges.

Planting Details

Establish the planting details.

- Starting Coordinates: Leave the default starting coordinates for plots set to column 1 and range 1. If you wish to start planting at another position, for example to fill a field that is already partially planted, you can customize the starting coordinates.
- Plot Layout Order: The Row/Column option will cause the planting order to return to the same side to start each row. The Serpentine option will cause the planting order to run in alternating directions from row to row. Select Row/Colum for the planting order of this field plan.
- Row Capacity of Planting Machine: Determines how many rows are planted in each direction in one pass of the planting machine, but does not affect the plot layout. Leave this set to 1, which is also a suitable setting if your field will be planted by hand.
- Unavailable Plots: Specify any plots in the block that are unsuitable for planting. Click on the plot in the block map to generate a red X. For this example, note Column 1/Range 7 and Column 2/Range 7 as non-plantable.?

Select Next to generate the field map.



Field Map

The field map shows each plot within the block from the starting position with the trial or nursery name and plot number on the top line and the Entry number on the second line. The option to export the field plan to an Excel file is available under the Actions menu.

- Review the summary of the field map settings as well as a graphical display. Click finish to save the field map and return to the Manage Nursery view.

SUMMARY OF NURSERY, FIELD AND PLANTING DETAILS

Selected Nurseries:

Order	Nursery	Dataset	Plots Needed
1	MT2011F3	MT2011F3-PLOTDATA	274

Total Number of Plots : 274

FIELD AND BLOCK DETAILS

Field Location: CIMMYT Harare

Field Name: Field 1

Block Name: Block 1

ROW, RANGE AND PLOT DETAILS

Block Capacity: 100 Rows, 10 Ranges

Rows per Plot: 2

Columns: 50

PLANTING DETAILS

Starting Coordinates: Column 1, Range 1

Plot Layout Order: Row/Column

Row Capacity of Planting Machine: 1

FIELD MAP

Actions

Arrows indicate direction of travel of the planting machine.

Range 8											
Range 7	X		X								
Range 6	MT2011F3-251 Entry 251		MT2011F3-252 Entry 252		MT2011F3-253 Entry 253		MT2011F3-254 Entry 254		MT2011F3-255 Entry 255		MT2011F3-2 Entry 256
Range 5	MT2011F3-201 Entry 201		MT2011F3-202 Entry 202		MT2011F3-203 Entry 203		MT2011F3-204 Entry 204		MT2011F3-205 Entry 205		MT2011F3-2 Entry 206
Range 4	MT2011F3-151 Entry 151		MT2011F3-152 Entry 152		MT2011F3-153 Entry 153		MT2011F3-154 Entry 154		MT2011F3-155 Entry 155		MT2011F3-1 Entry 156
Range 3	MT2011F3-101 Entry 101		MT2011F3-102 Entry 102		MT2011F3-103 Entry 103		MT2011F3-104 Entry 104		MT2011F3-105 Entry 105		MT2011F3-1 Entry 106
Range 2	MT2011F3-51 Entry 51		MT2011F3-52 Entry 52		MT2011F3-53 Entry 53		MT2011F3-54 Entry 54		MT2011F3-55 Entry 55		MT2011F3-5 Entry 56
Range 1	MT2011F3-1 Entry 1		MT2011F3-2 Entry 2		MT2011F3-3 Entry 3		MT2011F3-4 Entry 4		MT2011F3-5 Entry 5		MT2011F3- Entry 6
	Column 1		Column 2		Column 3		Column 4		Column 5		Column 6
	↑	↓	↑	↓	↑	↓	↑	↓	↑	↓	↑	
Rows	1	2	3	4	5	6	7	8	9	10	11	