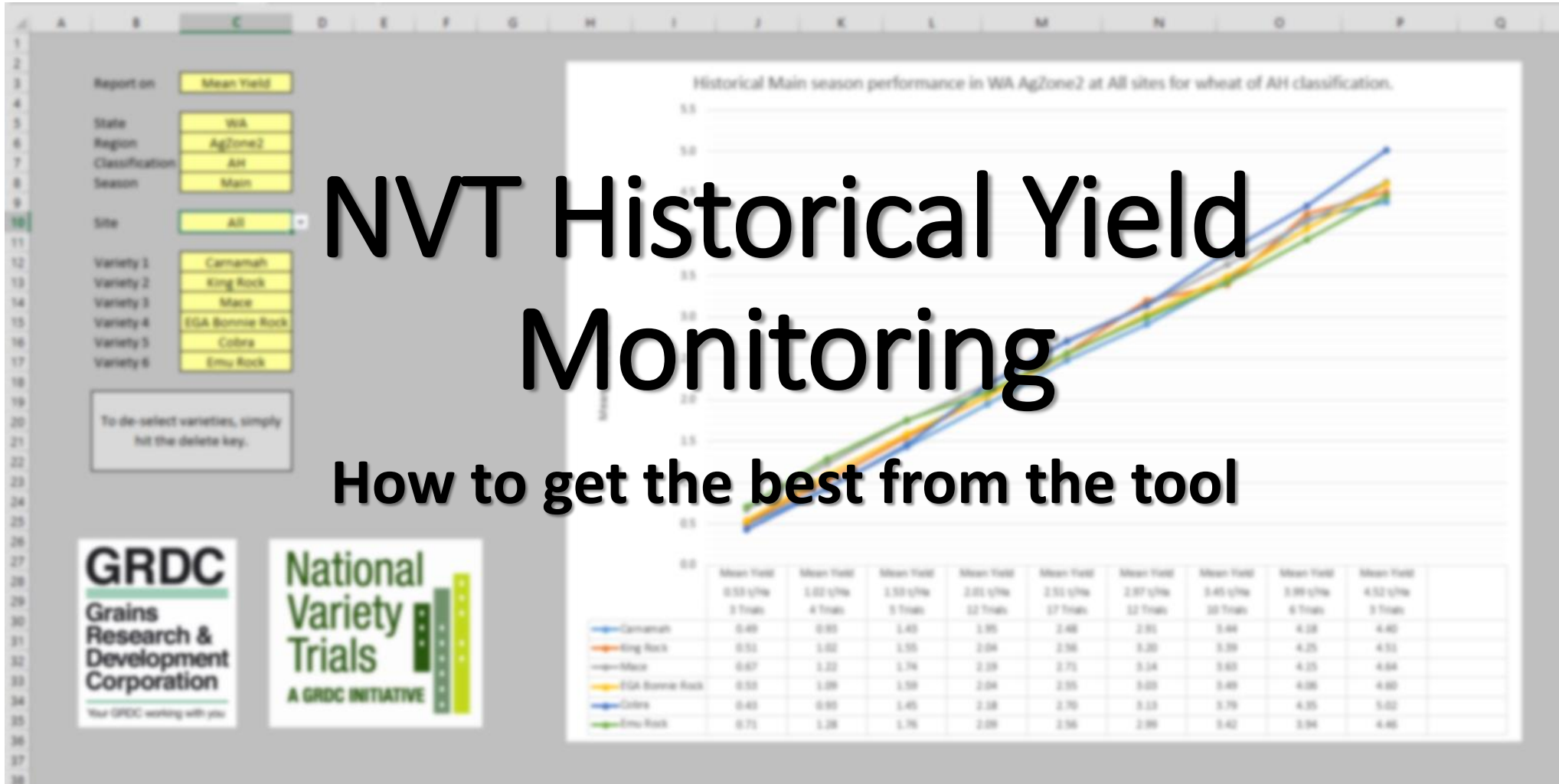


# NVT Historical Yield Monitoring

## How to get the best from the tool



# Introduction

- This user-guide accompanies the NVT Historical Yield Comparison tool which was made public recently. The tool is split along State & Commodity lines into a series of excel files which graphically present the data from the National Variety Trials (NVT) program which is funded annually by the Grains Research & Development Corporation (GRDC).

# Where do I find the Yield Comparison Tool?

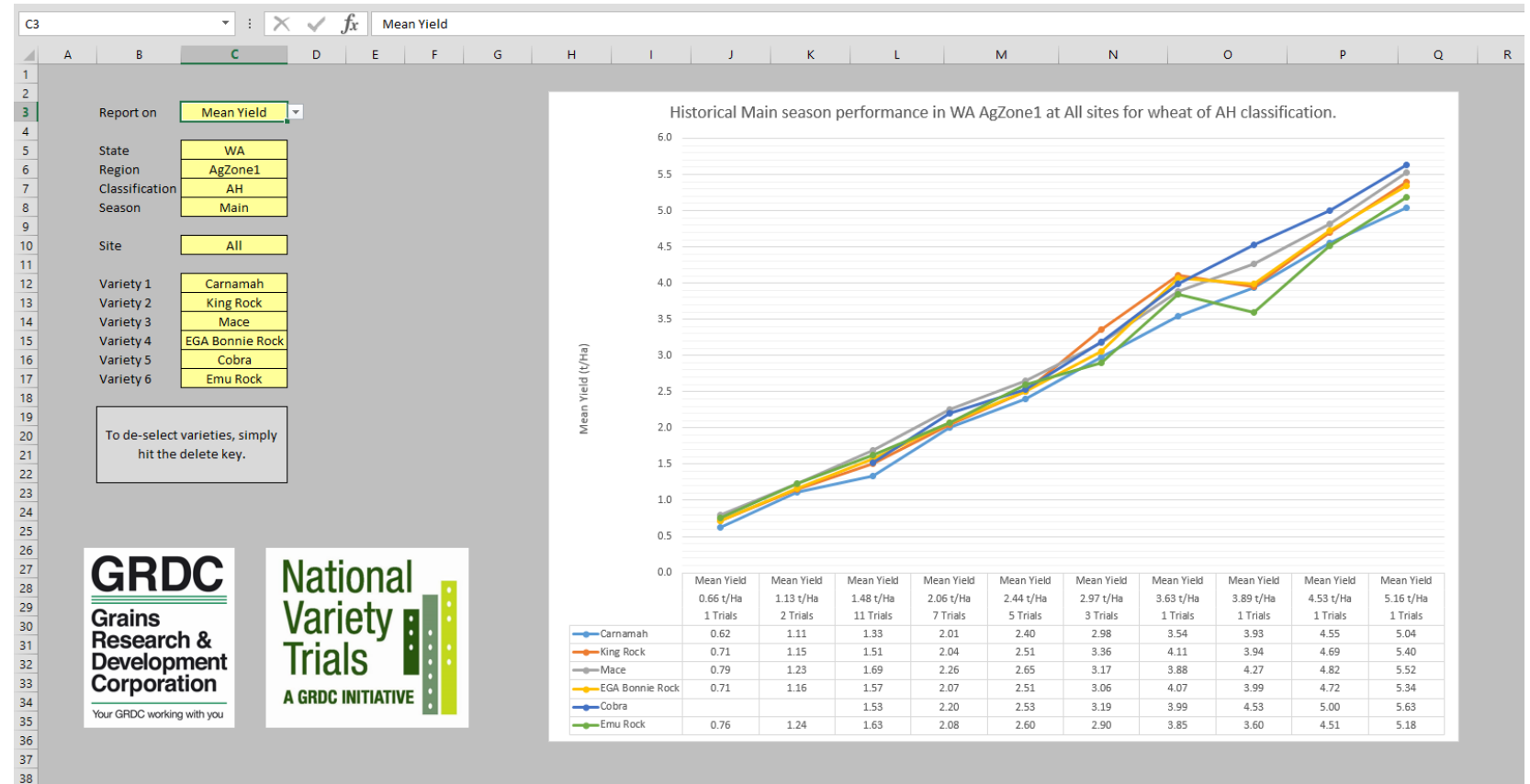
- The tool has been split into 10 separate files and can be located at [www.nvtonlione.com.au](http://www.nvtonlione.com.au)
- The files are arranged by commodity, season, & state. This is for ease of use and processing speed as the individual files are approximately 1.5mB in size. This table list the files currently available:

# Available NVT Yield Comparison Tools

Commodity	Season	State	Filename
<b>Wheat</b>	Main	Queensland	NVT Main Season Wheat Yield App 2014 - Queensland.xlsx
<b>Wheat</b>	Main	New South Wales	NVT Main Season Wheat Yield App 2014 - New South Wales.xlsx
<b>Wheat</b>	Main	Victoria	NVT Main Season Wheat Yield App 2014 - Victoria.xlsx
<b>Wheat</b>	Main	South Australia	NVT Main Season Wheat Yield App 2014 - South Australia.xlsx
<b>Wheat</b>	Main	Western Australia	NVT Main Season Wheat Yield App 2014 – Western Australia.xlsx
<b>Barley</b>	Main	Queensland	NVT Main Season Barley Yield App 2014 - Queensland.xlsx
<b>Barley</b>	Main	New South Wales	NVT Main Season Barley Yield App 2014 - New South Wales.xlsx
<b>Barley</b>	Main	Victoria	NVT Main Season Barley Yield App 2014 - Victoria.xlsx
<b>Barley</b>	Main	South Australia	NVT Main Season Barley Yield App 2014 - South Australia.xlsx
<b>Barley</b>	Main	Western Australia	NVT Main Season Barley Yield App 2014 – Western Australia.xlsx

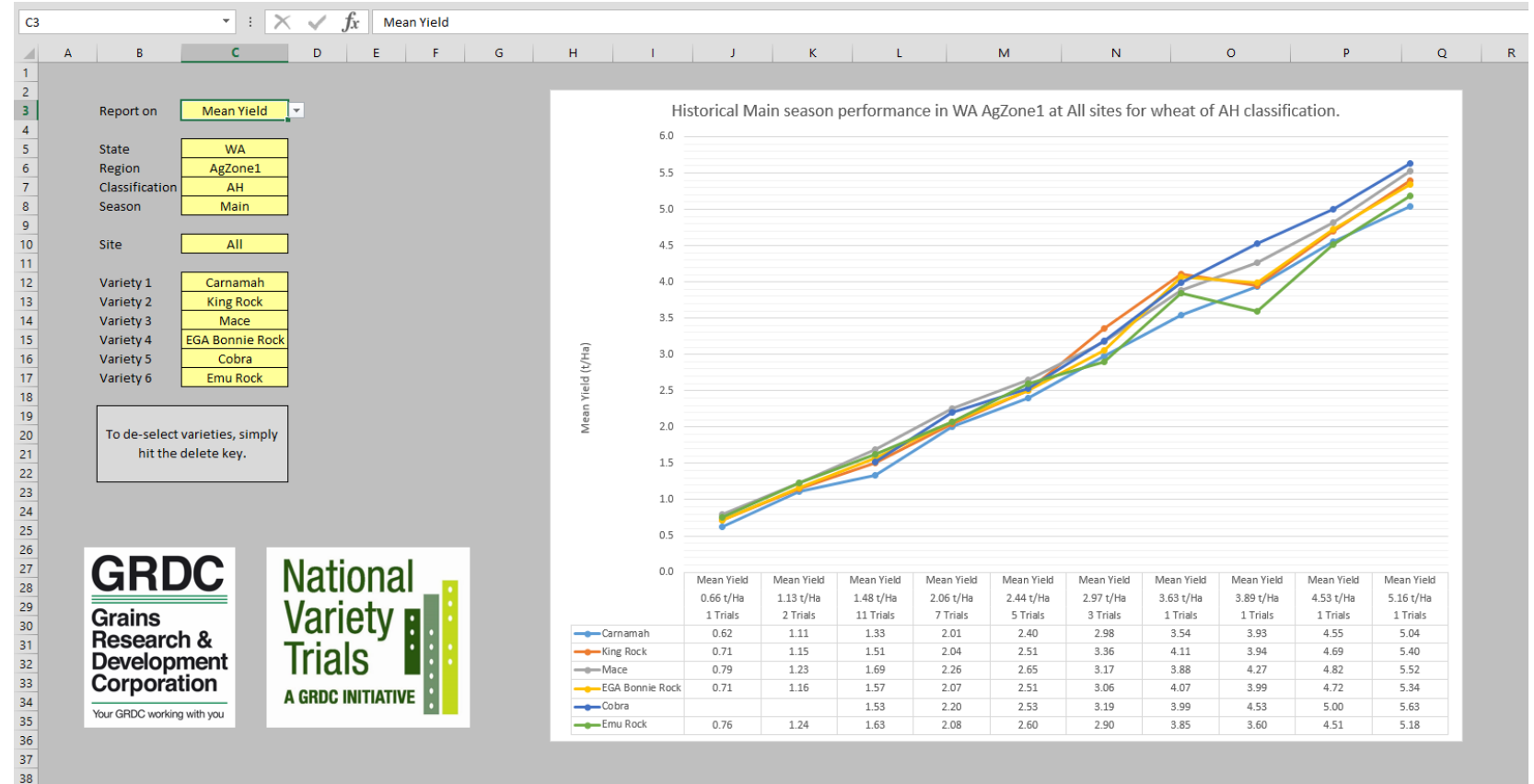
# How do I use the Yield Comparison Tool?

- Download and open the tool and the following is a screen shot of how the tool will deploy.



# How do I use the Yield Comparison Tool?

- The tool is simple to use and behind each of the yellow boxes are a series of selection options.



# Select how data is to be presented

- Mean Yield
  - The yield in t/Ha for each variety selected.
- B.L.U.P.
  - This can be interpreted at the variance ( $\pm$  t/ha) about the Site Mean Yield (SMY) for each of the varieties selected.

Report on	Mean Yield
State	WA
Region	AgZone1
Classification	AH
Season	Main
Site	All
Variety 1	Carnamah
Variety 2	King Rock
Variety 3	Mace
Variety 4	EGA Bonnie Rock
Variety 5	Cobra
Variety 6	Emu Rock

To de-select varieties, simply hit the delete key.

# Select the State.

- At this stage, only a single state can be selected.

Report on	Mean Yield
State	WA
Region	WA
Classification	AH
Season	Main
Site	All
Variety 1	Carnamah
Variety 2	King Rock
Variety 3	Mace
Variety 4	EGA Bonnie Rock
Variety 5	Cobra
Variety 6	Emu Rock

To de-select varieties, simply hit the delete key.



# Select the Region

- A list of the regions in the state selected will be available,
- Only one region can be selected at a time.

Report on	Mean Yield
State	WA
Region	AgZone1
Classification	AgZone1 AgZone2 AgZone3 AgZone4 AgZone5 AgZone6
Season	
Site	
Variety 1	Carnamah
Variety 2	King Rock
Variety 3	Mace
Variety 4	EGA Bonnie Rock
Variety 5	Cobra
Variety 6	Emu Rock

To de-select varieties, simply hit the delete key.

# Select the Classification

- A list of the all the commodity classifications for region selected will be available.
- By selecting lower classifications (eg feed) all varieties in the trials will be made available for review.
- Choosing higher classifications reduces the list of available varieties. i.e. choosing AGP removes varieties whose maximum classification is FEED etc.

Report on	Mean Yield
State	WA
Region	AgZone1
Classification	AH
Season	AH ANW APW ASF1 ASW
Site	
Variety 1	Carnamah
Variety 2	King Rock
Variety 3	Mace
Variety 4	EGA Bonnie Rock
Variety 5	Cobra
Variety 6	Emu Rock

To de-select varieties, simply hit the delete key.

# Select the Site

- Selecting ALL will present the data for trials conducted at ALL of sites in the region.
- By selecting an individual site, the data presented will include ONLY those trials conducted at this particular site.
  - Only one site can be selected in this version of the model.

Report on	Mean Yield
State	WA
Region	AgZone1
Classification	AH
Season	Main
Site	All
Variety 1	Binnu
Variety 2	Carnamah
Variety 3	Carnamah-North
Variety 4	Eradu
Variety 5	Mingenew
Variety 6	Morawa
	Morawa West
	Cobra
	Emu Rock

To de-select varieties, simply hit the delete key.

# Select the variety

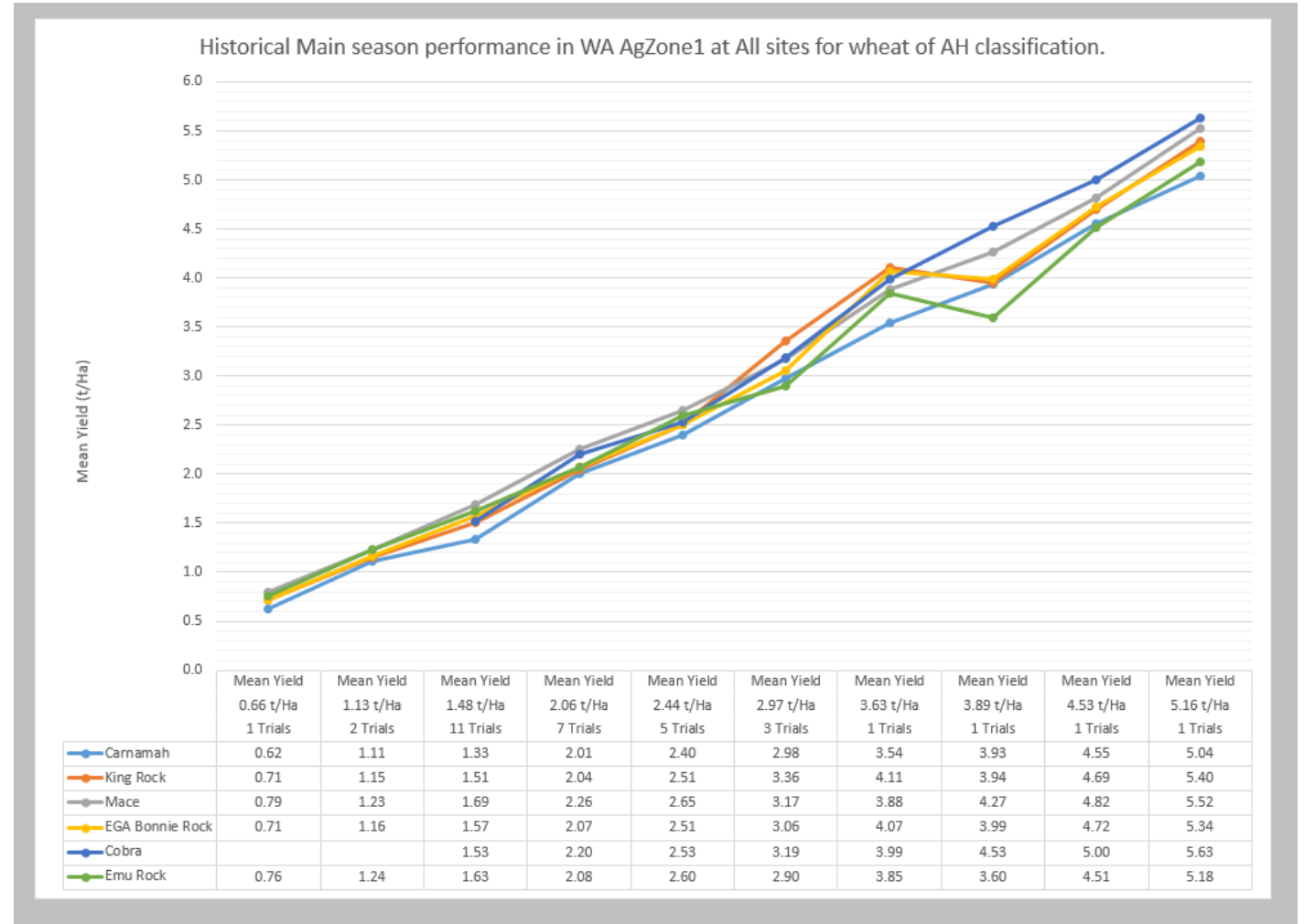
- The model allows up to six varieties to be selected.
- The model ensures only those varieties with approved results will be available for selection.
- The model ensures each variety can only be selected once.
- To ensure the results are displayed, hit keyboard F9 key or Calc on iPad
- The options give the Regional Output for historical variety performance.

Report on	Mean Yield
State	WA
Region	AgZone1
Classification	AH
Season	Main
Site	All
Variety 1	Carnamah
Variety 2	King Rock
Variety 3	Mace
Variety 4	EGA Bonnie Rock
Variety 5	Cobra
Variety 6	Emu Rock

To de-select varieties, simply hit the delete key.

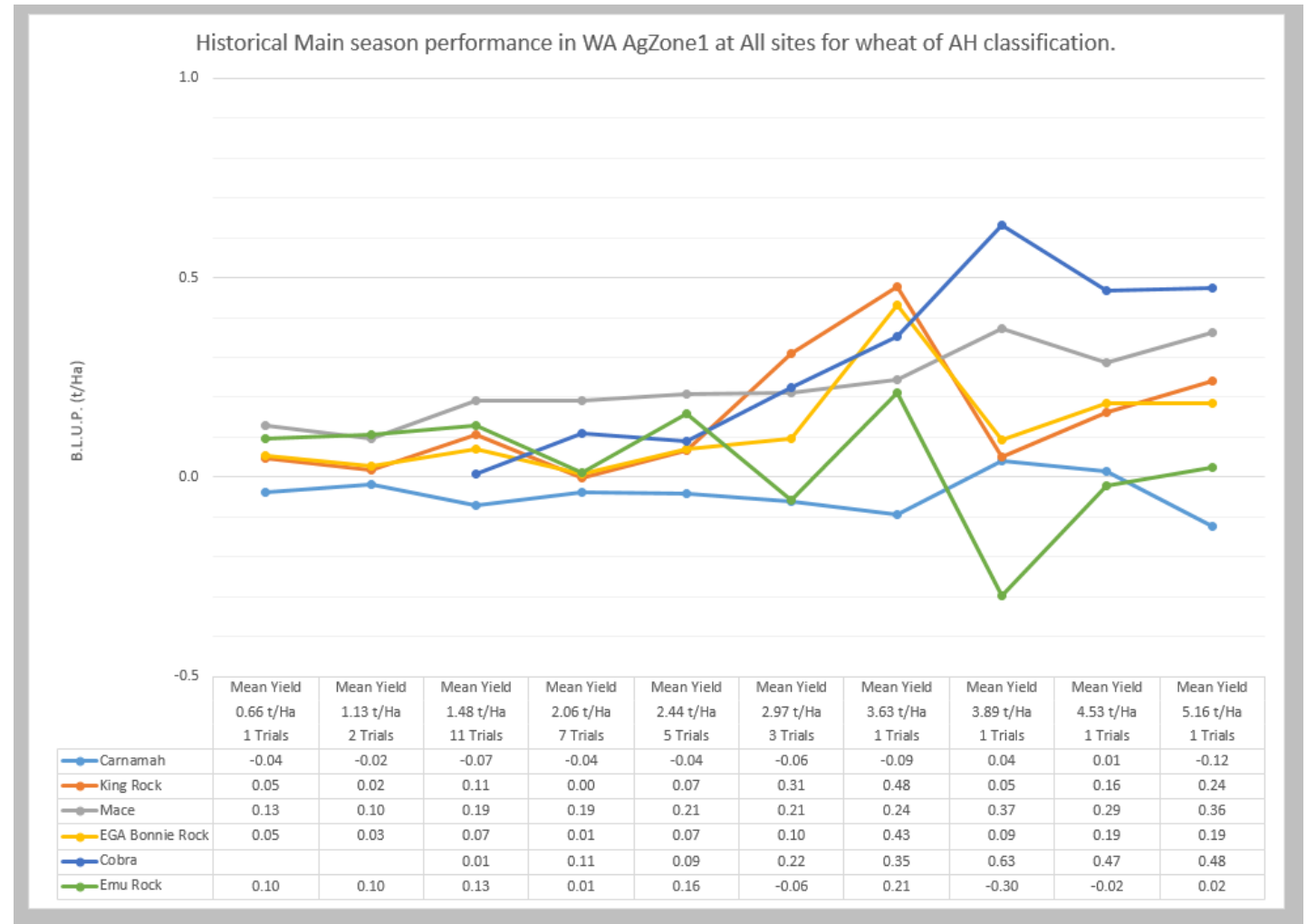
# View the results: Regional Output Results

- The Regional Mean Yield graph will look like this.



# View the results: Regional Output Results

- The Regional B.L.U.P. graph will look like this.



# Explaining the Regional Mean Yield results

- The model aggregates the SMYs into 0.5t/Ha bands
  - 0.5, 1.0, 1.5, . . . . . t/Ha etc.
- The SMY for trials in each of these bands are averaged and the result is displayed under the Mean Yield label in each column.
  - So, for AgZone1 selections in this example, the average the Site Mean Yields in the 0.5 t/Ha band is 0.66 t/Ha



# Explaining the Regional Mean Yield results

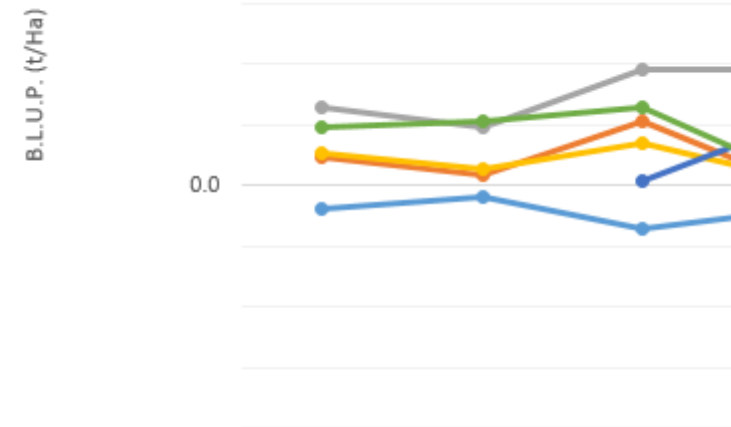
- The results displayed for each of the selected varieties, at the Regional level, is its average yield in each band
  - At all trials where the variety Carnamah had a measured yield in the 0.5 t/Ha band (i.e. between 0.25 & 0.74 mt/Ha), the average yield was 0.62 t/Ha.
- This allows a comparison against the other varieties in each band AND against the Average Mean Yield for the region at each band level.





# Explaining the Regional B.L.U.P. results

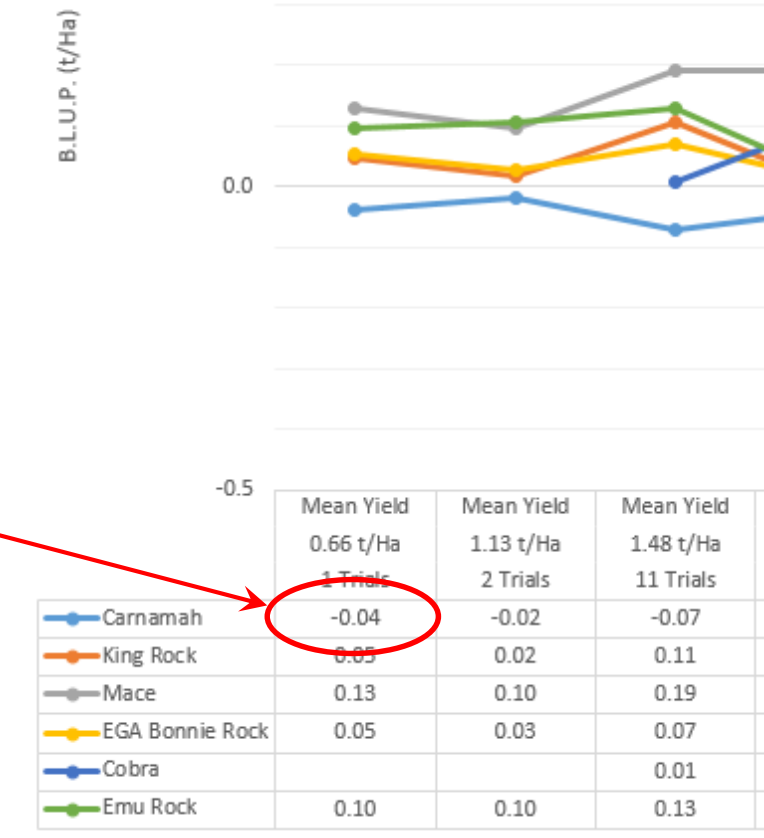
- Again, the model aggregates the SMYs into 0.5 t/Ha bands
  - 0.5, 1.0, 1.5, . . . . t/Ha etc.
- The SMY for trials in each of these bands are averaged and the result is displayed under the Mean Yield label in each column.
  - So, for AgZone1 selections in this example, the average the Site Mean Yields in the 0.5 t/Ha band is 0.66 t/Ha
- This is the same as the Mean Yield Output



	Mean Yield 0.66 t/Ha 1 Trials	Mean Yield 1.13 t/Ha 2 Trials	Mean Yield 1.48 t/Ha 11 Trials
Carnamah	-0.04	-0.02	-0.07
King Rock	0.05	0.02	0.11
Mace	0.13	0.10	0.19
EGA Bonnie Rock	0.05	0.03	0.07
Cobra			0.01
Emu Rock	0.10	0.10	0.13

# Explaining the Regional B.L.U.P. results

- The B.L.U.P. results displayed in each of the bands is the difference between the average site mean yield and mean variety yield for each variety.
  - For variety Carnamah, -0.04 is the mean of trial yields (0.62 t/Ha) **MINUS** the regional mean yield of 0.66 t/Ha
  - This gives a quick snapshot of how each variety performed relative to the average regional site mean yields in each band.



# Selecting a single site

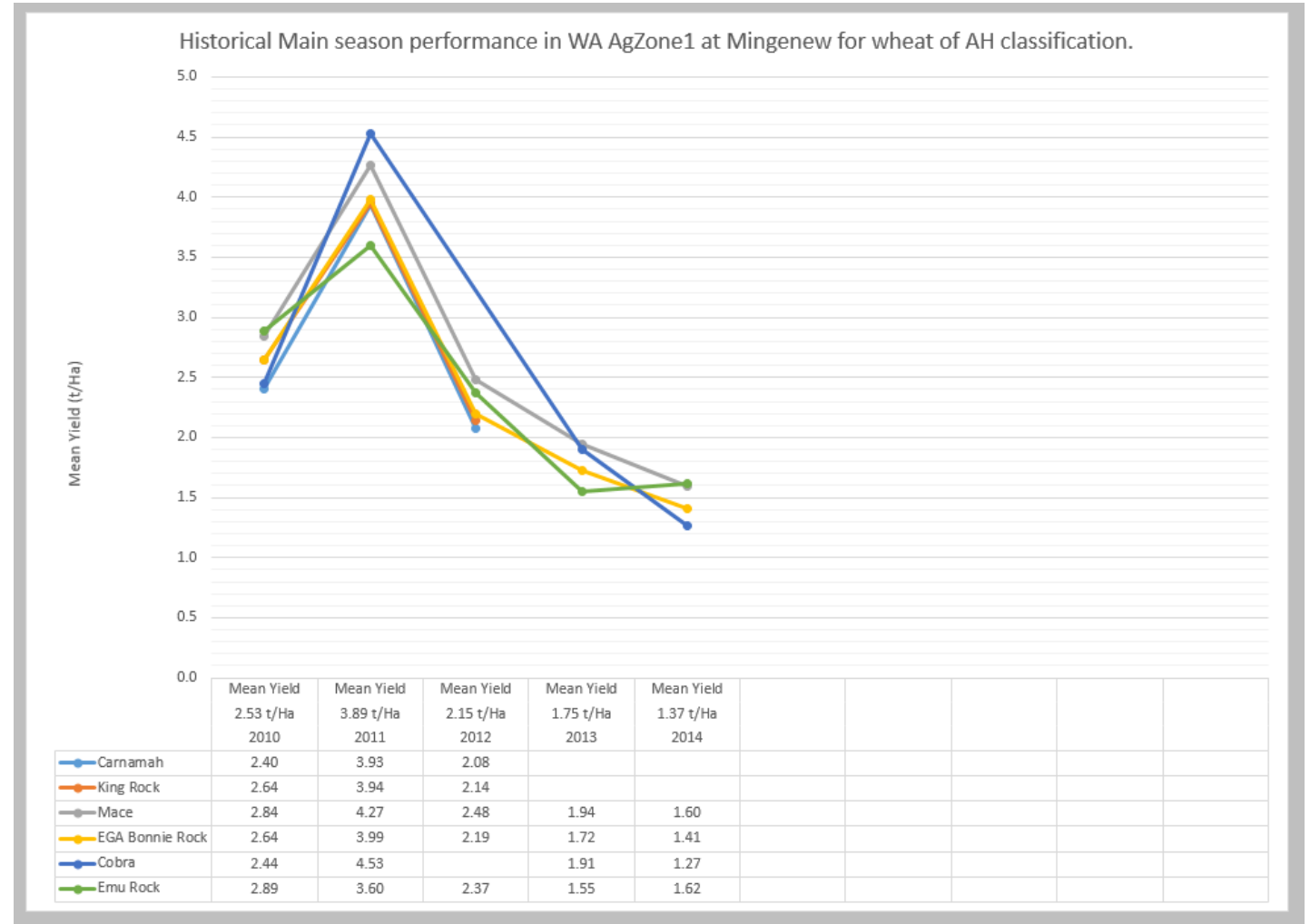
- Selecting a single site, Mingenew, gives the historical variety performance at trials from this site.
- To ensure the results are displayed, hit keyboard F9 key or Calc on iPad

Report on	Mean Yield
State	WA
Region	AgZone1
Classification	AH
Season	Main
Site	Mingenew
Variety 1	Carnamah-North
Variety 2	Eradu
Variety 3	Mingenew
Variety 4	Morawa
Variety 5	Morawa West
Variety 6	Nabawa
	Ogilvie
	Yuna
	Cobra
	Emu Rock

To de-select varieties, simply hit the delete key.

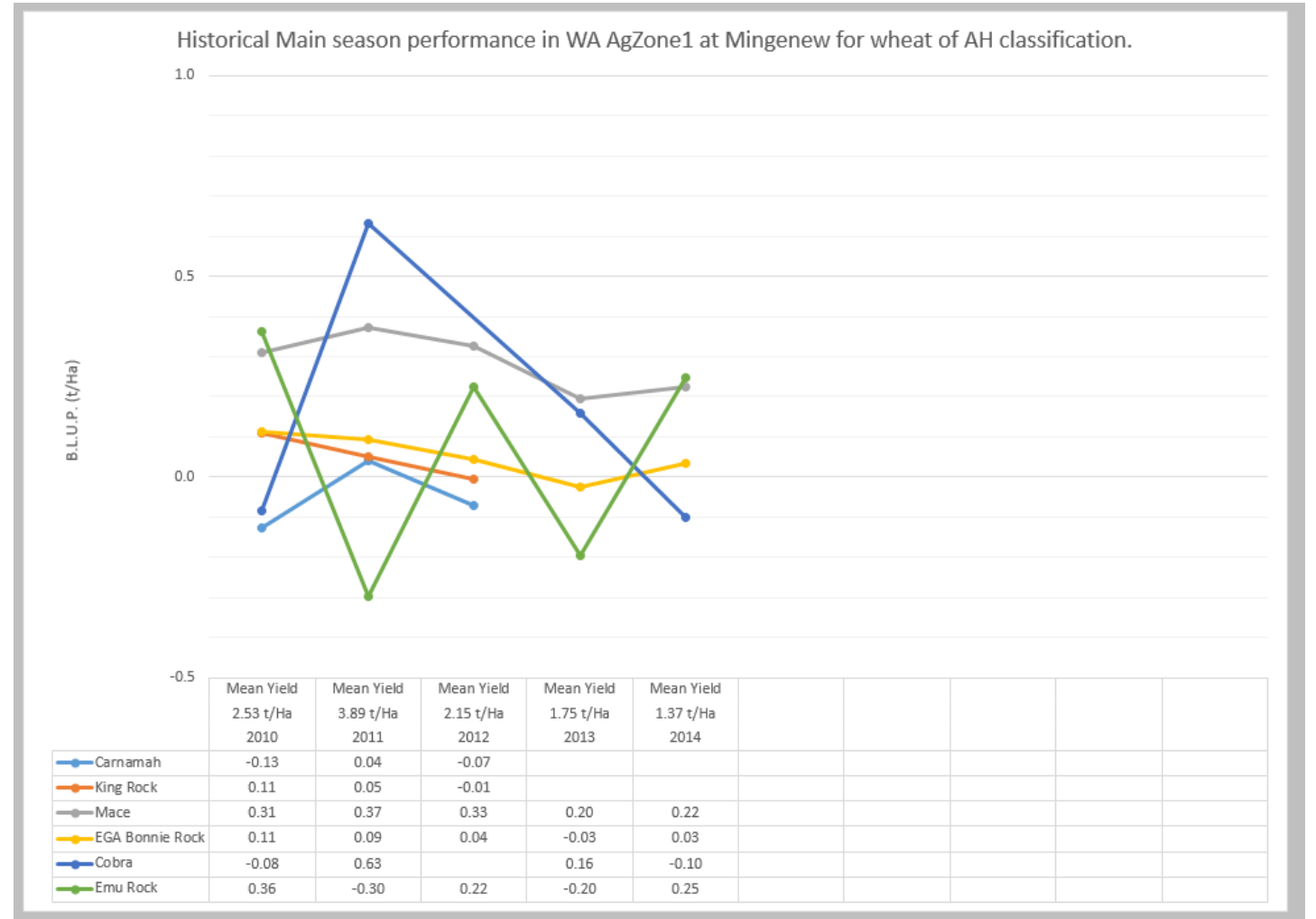
# View the results: Site Level Output Results

- The site level yield results graph will look like this.



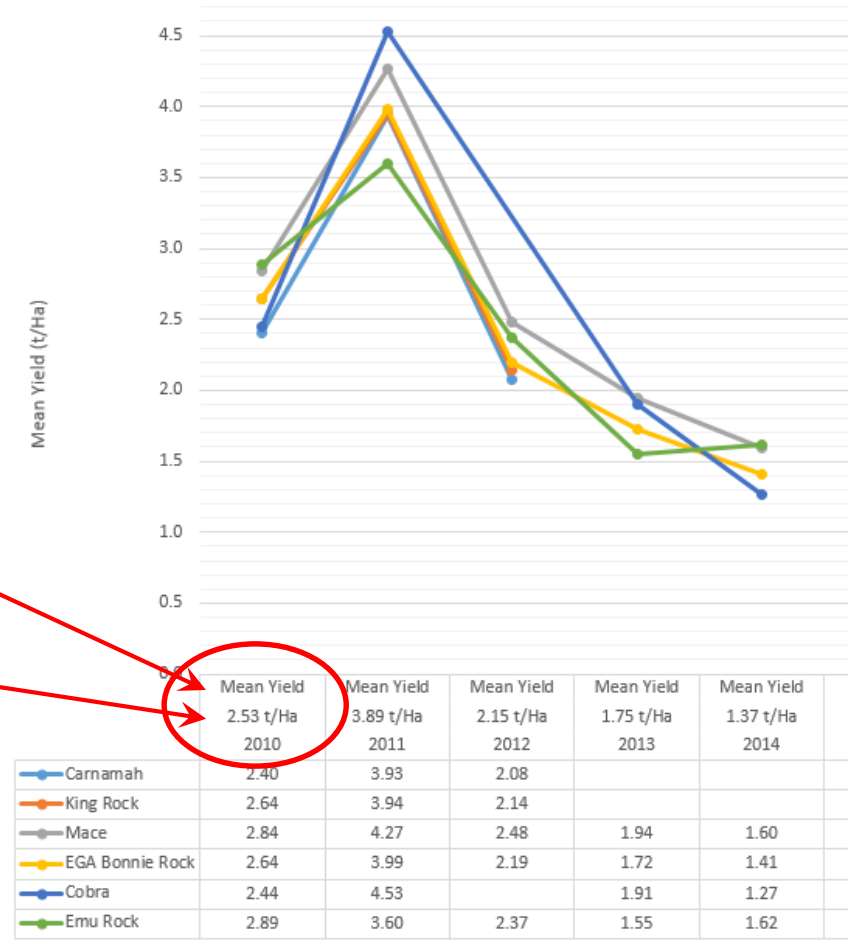
# View the results: Site Level Output Results

- The site level B.L.U.P. results graph will look like this.



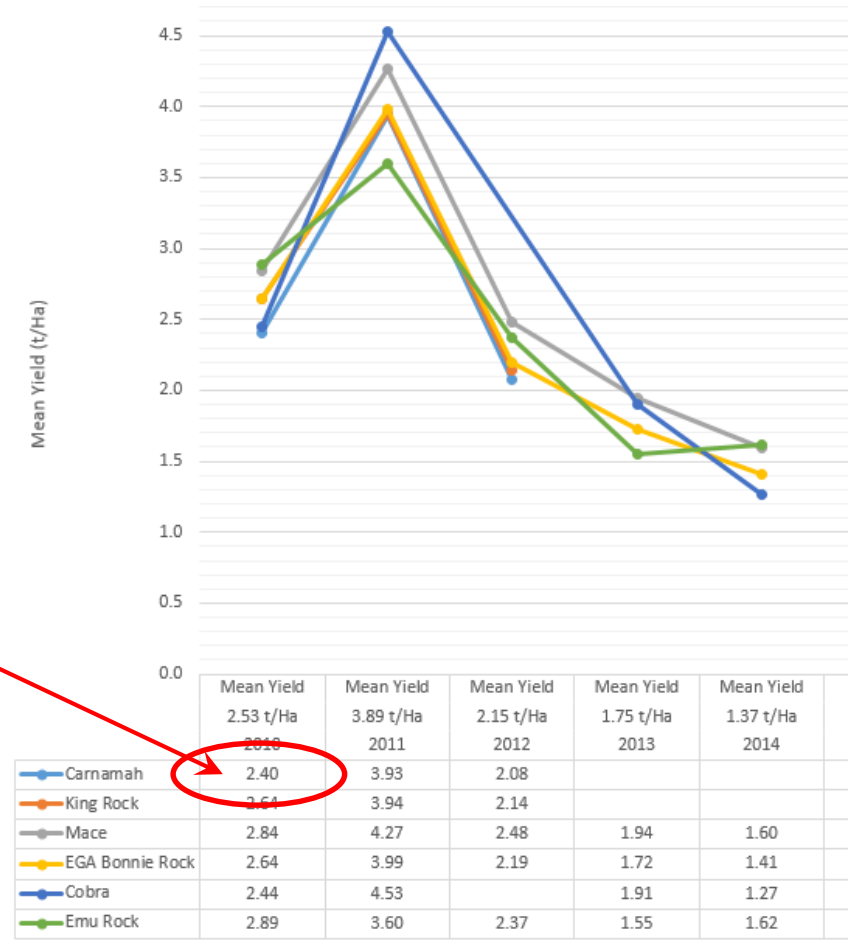
# Explaining the Individual Site Yield results

- This aspect of the model presents trial results banded by year.
  - 2010, 2011, . . . . etc.
- The Mean Yield presented is the SMY for the site, Mingenew, in the 2010 trial
  - So, for Mingenew, the SMY in for 2010 was 2.53 t/Ha across **ALL** variety entries.



# Explaining the Individual Site Yield results

- The results displayed for each of the selected varieties, at the individual site level, is its observed yield in the trial
  - For 2010, the variety Carnamah had an observed yield of 2.40 t/Ha.
  - This allows a comparison against the other varieties within each of the trials.



# Explaining the Regional B.L.U.P. results

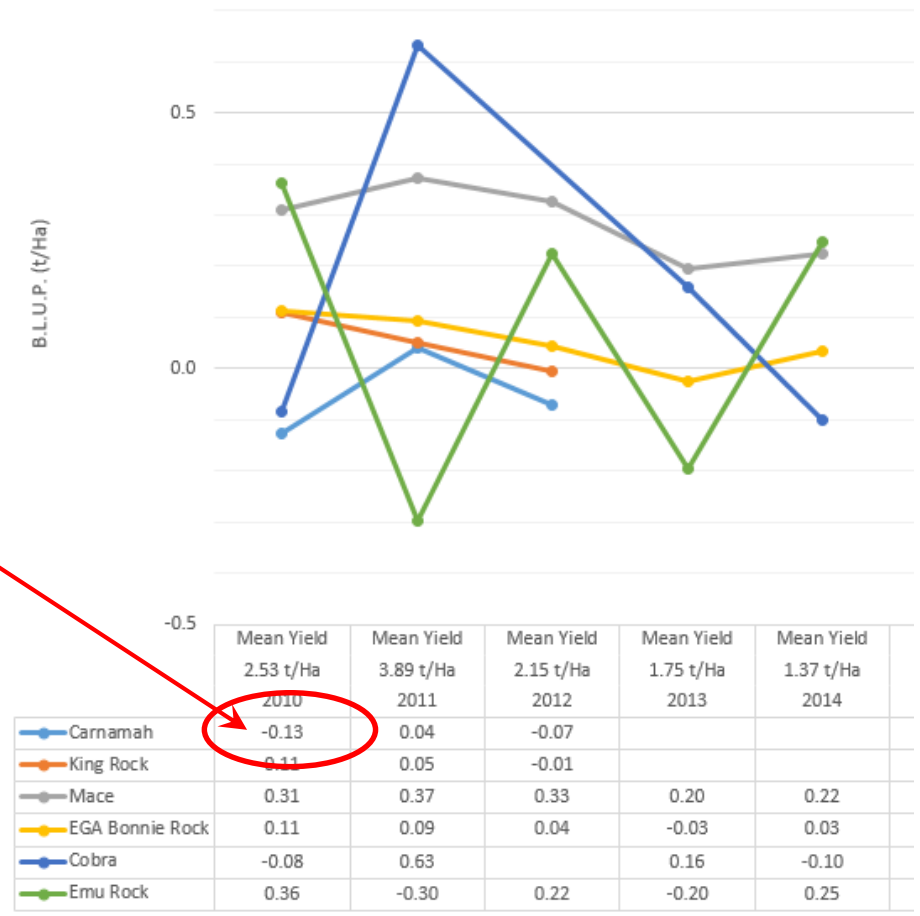
- Again, this aspect of the model presents each of the trials by year.
- The SMY for each trial is displayed under the Mean Yield label in each column.
  - So, for Mingenew, as in this example, the average the SMY for 2010 2.53t/Ha
- This is the same as the Mean Yield Output





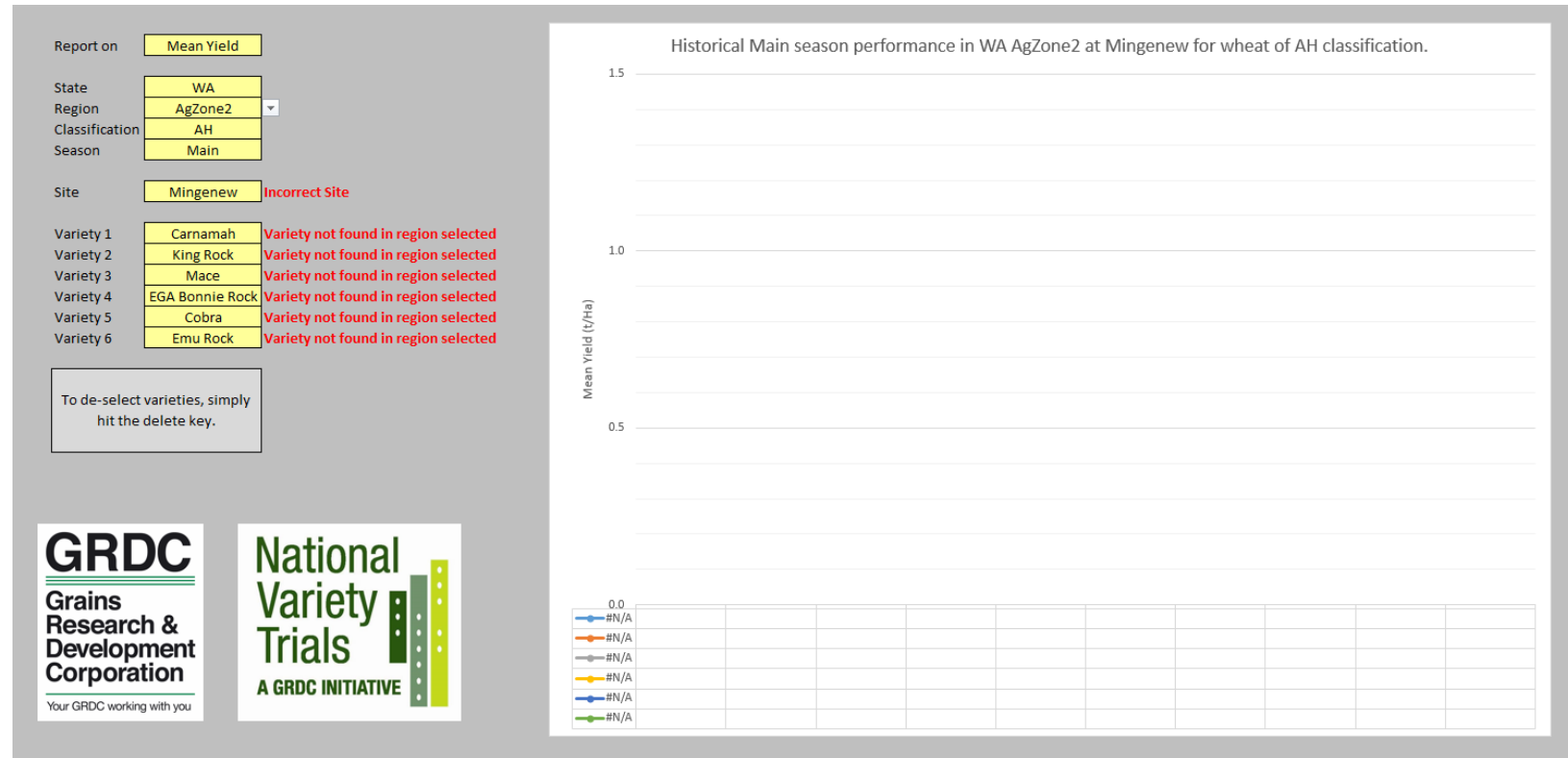
# Explaining the Regional B.L.U.P. results

- The B.L.U.P. results displayed in each of the bands is the difference between the SMY and observed yield for each variety.
  - For variety Carnamah, -0.13 is the observed trial yield (2.40t/Ha) **MINUS** the SMY of 2.53t/Ha
  - This gives a quick snapshot of how each variety performed relative to the average regional SMYs in each band.



# Some common error messages

- If the region is changed the Tool detects the site is not in the new region.
- The graph disappears and messages like this appear.
- To fix, select ALL as the site, or pick a site in the new region.



# Some common error messages

- When changing from lower to higher classifications, the Tool will flag that some varieties are not found.
  - Here, Catalina is not an AH variety so it flagged.
- To fix, just make a new selection at Variety 1

