

WHICH PROJECTS ARE SUITABLE FOR THE CPQ?

Global E&P Unit

22/07/19

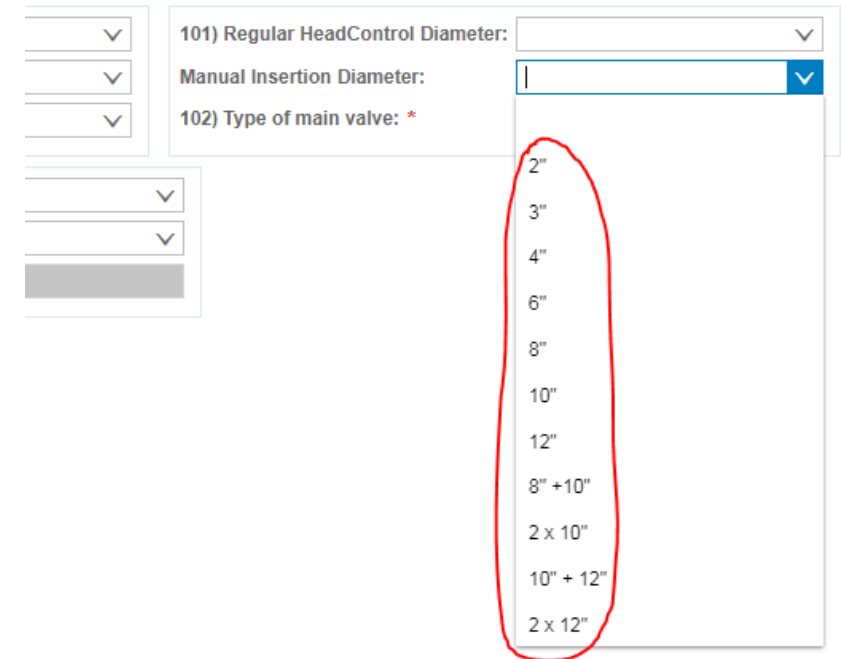
OPEN FIELD PROJECTS ONLY

- Plantations
- Field crops
- Open field nurseries
- No Micro-sprinklers for Greenhouses is used in CPQ
- No BOM and EDB materials for GH applications.

SIZE AND FLOW

- Area – maximum 200ha
- Flow –maximum 1400m³/h
- Recommended: 1ha-100ha

1.4 HeadControl Attributes



The screenshot shows a web form titled "1.4 HeadControl Attributes". It contains several dropdown menus. The "101) Regular HeadControl Diameter:" dropdown is open, showing a list of options: 2", 3", 4", 6", 8", 10", 12", 8" + 10", 2 x 10", 10" + 12", and 2 x 12". A red oval highlights the options from 2" to 12". The "102) Type of main valve: *" dropdown is also open, showing a list of options. The "Manual Insertion Diameter:" dropdown is also open, showing a list of options.

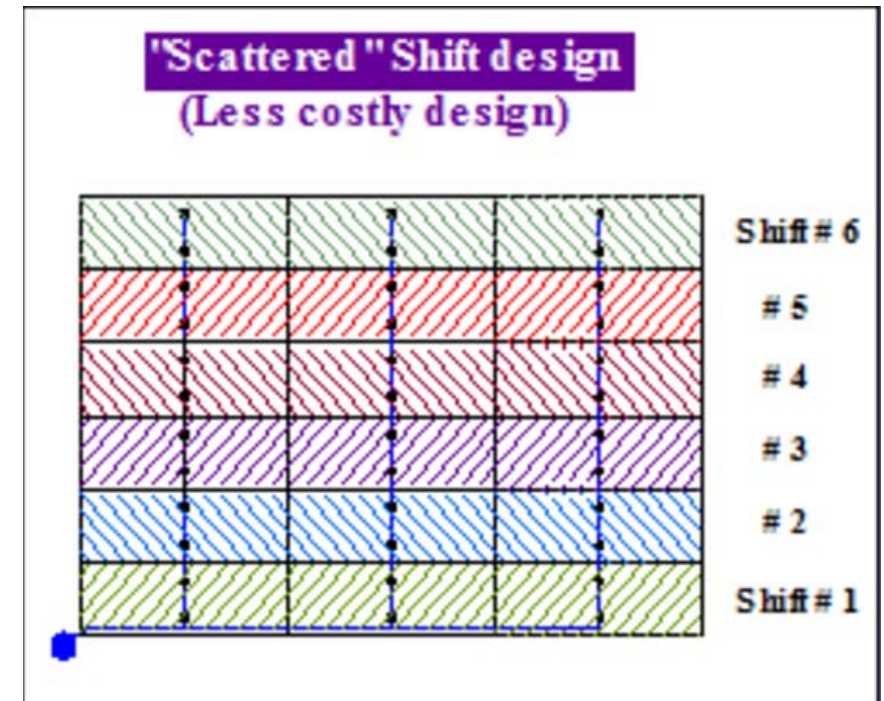
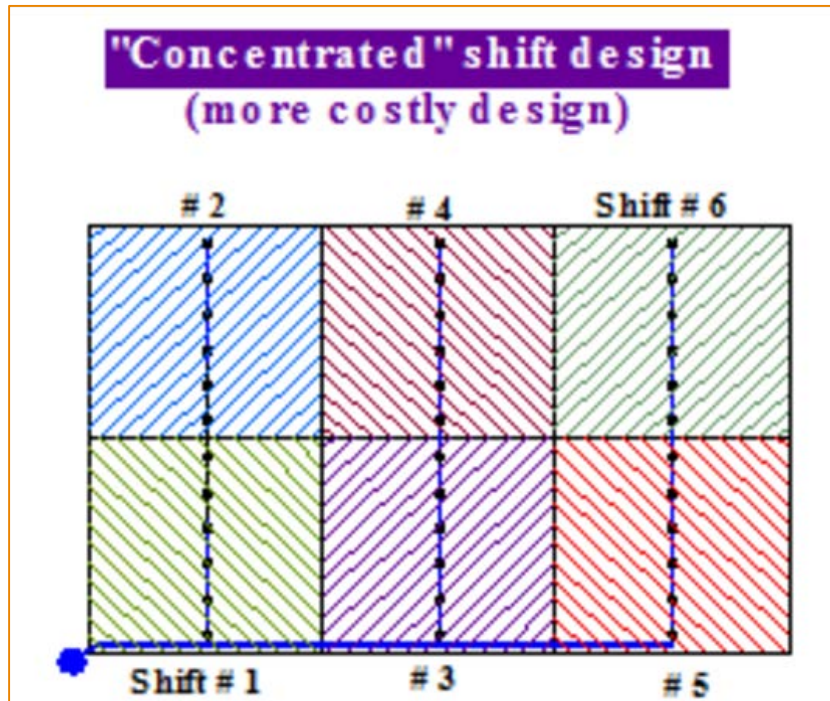
**Our recommendation is to use the tool on averaged size/flow projects.
When using it for the edge cases the risk of precision errors is higher.**

CROPS

- **Only one crop per project**
- **Only one max. water requirement per project.**
*combining different stages of crops is not possible.
- **Only one planting spacing**

SHIFTS MANAGEMENT

- No 'mosaic' shifts pattern in CPQ:
only 'concentrated' or 'scattered'



SHAPE

- The CPQ uses rectangular model for calculations. The algorithm transforms the required area to characteristic rectangle and has factor for different shapes irregularities.

- **Irregularity considerations**

Most areas shapes are manageable by the CPQ.

In some extreme cases when the area has a very high irregularity in shape – the precision of the tool is affected.

A typical unsuitable area for CPQ would be a field competing a Center Pivot circle to its confining square. The reason being that lateral length is changing too much and covering the Max. length will shorten the submains too much and might miss ~50% of driplines outlets

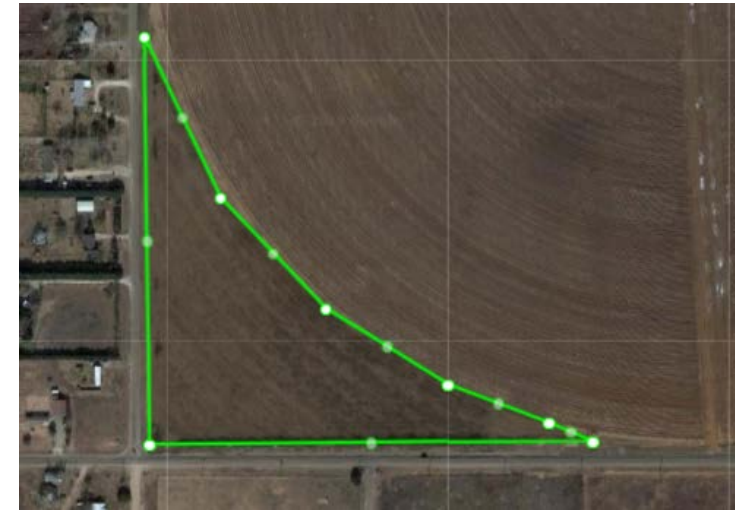


SHAPE

■ Irregularity considerations – CP leftover

A typical unsuitable area for CPQ would be a field competing a Center Pivot circle to its confining square. The reason being that lateral length is changing too much and covering the Max. lateral length will shorten the submains too much and might miss ~50% of driplines outlets.

On the other hand, covering the submain length properly will use very short lateral run which may select a lower lateral diameter than actually



SHAPE

- **Only one consecutive area**

Few areas may be designed, however in few different projects, so common system such as Pump station or Head Control will need 'manual correction'



ROWS DIRECTION

Only one rows direction is possible in CPQ



WATER SOURCE

Only one water source is possible in one project .

However, splitting the project to 2 subprojects in the CPQ, could be a solution .



TOPOGRAPHY AND SLOPES

High slopes

For CPQ, recommended slope parallel to row direction should be maximum 10%

Non-uniform slopes

Consideration should be taken when applying CPQ to non-uniform sloped area.

At the moment all areas are automatically considered as ~ uniform, in near future this will have better dedicated solution

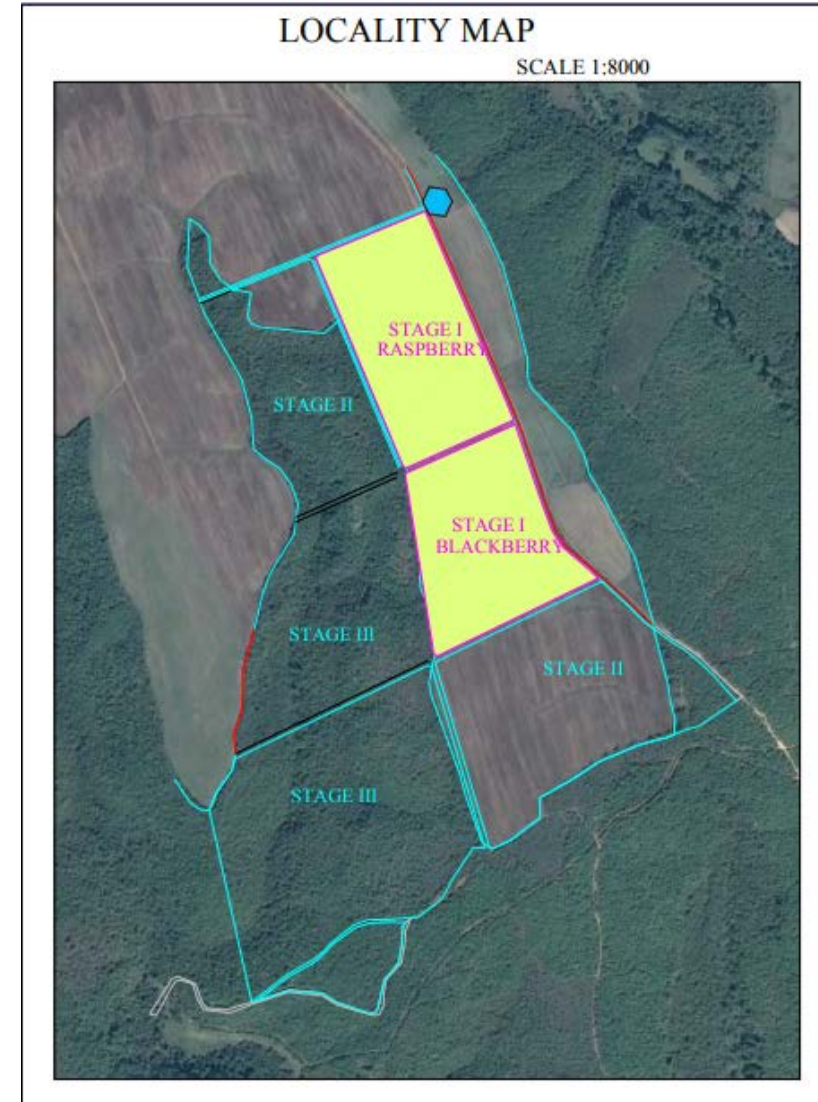


ONE STAGE ONLY

In CPQ there isn't a provision to take into consideration future flow for extension phases.


However, manual provision is available mainly at Head Control (HC) WBS, where manual higher diameter insertion is optional and user can irrigate from same HC future extra area.

Same option is available for Mainline diameter which requires higher expert level of user.



INFIELD LIMITATIONS

- **No emitter type combination**
 - can't combine between sprinklers and drippers
- **No emitters models combination**
 - can't combine between different model/flows/diameters of driplines for example.
- **No frost protection system combined with irrigation system**



THANK
YOU

