

Wylie, Allan

From: Bryce Contor [bcontor.uidaho@gmail.com]
Sent: Thursday, July 08, 2010 9:21 AM
To: Wylie, Allan; Greg Sullivan; Jim Brannon
Cc: Raymondi, Rick
Subject: economics-informed calculations of max. deficit consumptive-use fraction
Attachments: ALF_GRAV_ECON.xls; ALF_SPRINK_ECON.xls; GRAIN_GRAV_ECON.xls; GRAIN_SPRINK_ECON.xls; POTATO_GRAV_ECON.xls; POTATO_SPRINK_ECON.xls

Attached are six versions of the spreadsheet that uses economically-driven irrigator responses, and evapotranspiration production functions, which give an objective estimate of full-deficit consumptive use fraction. I've done gravity & sprinkler for grain, alfalfa and potatoes.

- 1) You'll see that the parameters I used are rough and ready and could benefit from refinement.
- 2) I've used uniform effective precipitation for all crops. It would not be unreasonable to increase this slightly for crops with deeper roots.
- 3) The best way to set parameter "z" is to look at the graph that starts in cell G25 and adjust "z" to get the subjectively correct price/adequacy relationship.
- 4) I forgot to turn on protection but please only edit yellow cells.
- 5) These results are a little different from the SWAGS I used in the big spreadsheet I sent out a few minutes ago.
- 6) The shape of the graph of consumptive-use fraction as a function of irrigation depth is something we should try to honor, in the long run.

I probably won't have Internet access again until a few minutes before our phone meeting on Monday.

Bryce

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