**Simulating flooding with DayCent-CABBI**

There are FLOD and DRAN events in the schedule file that do what those obsolete sitepar.in watertable parameters used to do, and there is a flood effect (FLODEFF(1)) on potential crop production.   The FLOD event in the schedule file is also available with muvps, but the flood effect on potential production is not.

WFPS may never get above 0.95 that is the upper limit. Not sure why that limit was implemented, but it might have to do with some numerical issue in the model.  But if you see wfps=0.95, you can assume that means DayCent is allowing saturation.

FLODEFF(1) is a crop.100 multiplier on potential crop production when soil in the rooting zone is saturated.  The flood effect on potential production is 1.0 at field capacity (or drier) and is decreased linearly to FLODEFF(1) as soil in the rooting zone becomes wetter. A value of 1.0 = no effect of flooding on potential production. A value of 0.0 will completely shuts off production when soil is saturated.

Here is information about how to use FLOD and DRAN events in the schedule files:

FLOD 0 - prevents drainage and allows precipitation and irrigation to accumulate in the layers, but does not add extra water

FLOD 1 - prevents drainage and adds water to soil layers to keep them saturated

DRAN return to normal conditions, allows water to drain again.

Here is an example schedule file block that I used for testing:

2             Block #   Flooding tests

2007          Last year

2             Repeats # years

1996          Output starting year

1             Output month

0.0833        Output interval

C             Weather choice

   1    91 CULT H1

   1   106 FERT N13

   1   106 CULT G

   1   107 FLOD 1        prevent drainage and add extra water to keep soils saturated

   1   128 CROP C10

   1   128 FERT N13

   1   129 PLTM

   1   129 CULT A

   1   167 CULT B

   1   293 HARV G0S

   1   299 CULT H1

   1   300 FLOD 0  prevent drainage but don't add water any extra water, precipitation and irrigation are the only water added

   1   300 LAST

   2    91 CULT H1

   2   106 FERT N13

   2   106 CULT G

   2   128 CROP C10

   2   128 FERT N13

   2   129 PLTM

   2   129 CULT A

   2   167 CULT B

   2   293 HARV G0S

   2   299 CULT H1

   2   300 DRAN   allow water to drain. Turns off FLOD effects

   2   300 LAST