CHP 2021-02-16

Problem: N uptake is integrated directly into soil variables at the beginning of the rate section. These are values from yesterday, so the rationale was that they need to be integrated early so soil variables are updated before other soil processes occur.

Trial solution: move N uptake integration into soil NO3 and soil NH4 to integration section of code.

Method:

1. Add UNO3 and UNH4 to DLTSNO3 and DLTSNH4 at beginning of rate section. These are values from yesterday because SOIL is called before PLANT. Previously, these were added directly to SNO3 and SNH4.
2. In integration section, correct the value of N uptake using the values calculated in the rate section today. But, this has the potential to move NO3 and NH4 negative if calculated uptake today is more than uptake yesterday.

Effects:

1. N does go negative for some experiments.
2. N balance is off.

Conclusion: leave it alone for now.