The CRP Choice

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Overview:

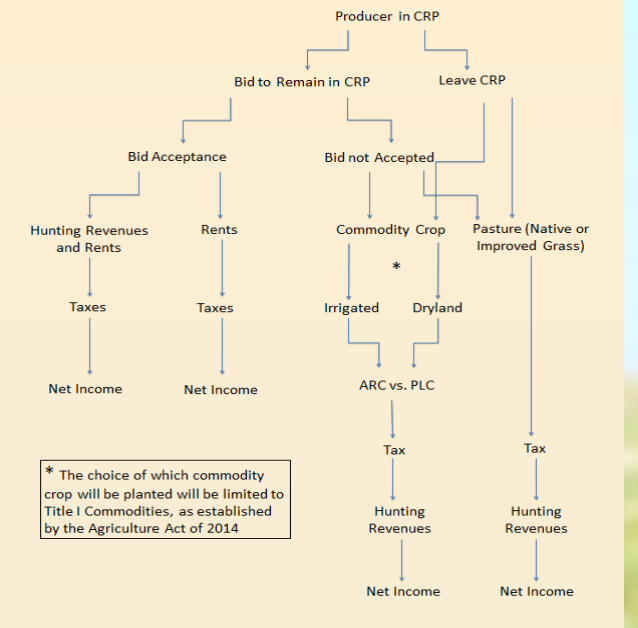
- The Food Security Act of 1985 established the Conservation Reserve Program (CRP), a cost-sharing program designed to reduce soil erosion, improve wildlife habitat availability and quality, and increase the rate of groundwater recharge, by providing a 'rent' to farmers who follow practices conducive to those goals.

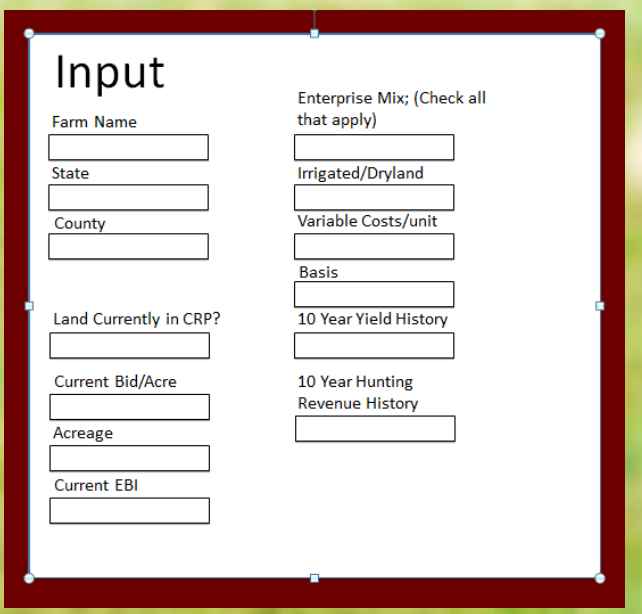
- The Agriculture Act of 2014 mandates an acreage reduction for the program from 32-million acres to no more than 24-million by 2018.
- As of 2014, there were approximately 25-million acres of land enrolled in CRP.
- High crop prices encouraged farmers to take land out of CRP over the last few years.
- Complicating the situation further is the drastic decrease in commodity crop prices over the last year.

Objectives:

- The goal of this research is to develop a web-based decision model to assist producers in making their CRP enrollment and bid decision.

- Secondary outcomes are the development of a sensitivity analysis producing a 'probability of selection' based on bid levels and Environmental Benefit Index (EBI) scores, and to develop a test case using a representative farm.





Procedures:

- Monte Carlo simulation is used to estimate distributions of net returns for 10 years across the alternative CRP and farming options.
- The choice of whether to remain in CRP or transition to another type of land use is evaluated by comparing the distribution of the present value of CRP returns to the present value of returns to farming.
- The flow chart traces the decision of producers currently enrolled in CRP.
- If the producer chooses to leave the CRP, the the land can be left in grass for grazing or converted to commodity crops.
- Land left in pasture generates net returns for grazing and/or haying receipts.
- Production costs are estimated by the producer for various enterprises.
- The productivity of converted CRP land is a stochastic variable as are production and prices.
- The decision of which crop to grow on post-CRP ground will depend on crops previously grown on that land, the predominate crops in the region, and likely profits for each potential crop.
- A significant improvement over past CRP decision aids is the explicit inclusion of hunting and wildlife related variables. The CRP wildlife refuge may significantly affect hunting returns. Other farmer's CRP decisions may also affect potential hunting revenues.