CROPLAND IRRIGATION PANEL UPDATE

TIM SEXTON, PANEL CHAIR

AGRICULTURE WORKGROUP QUARTERLY MEETING

JUNE 28,2017

MEMBERSHIP

Name	Affiliation	Role
Tim Sexton	Virginia Dept. of Conservation & Recreation	Panel Chair
James Adkins	University of Delaware	Panel Member
Judy Denver	USGS	Panel Member
Jerry Lewis	USDA NRCS	Panel Member
Greg McCarty	USDA ARS	Panel Member
Cory Whaley	University of Delaware	Panel Member
Tyler Monteith	*Delaware Dept. of Natural Resources & Environmental Control*	*Watershed Technical Workgroup representative*
Matt Johnston	*University of Maryland*	*Modeling Team representative*
Mark Dubin	*University of Maryland*	*AgWG Coordinator*
Lindsey Gordon	*Chesapeake Research Consortium*	*Staff*

CROPLAND IRRIGATION PANEL UPDATE

- **PANEL MEETING HISTORY**
  - PANEL HAS MET 6 TIMES SINCE AUGUST 2016
    - 4 WERE FACE-TO-FACE
  - LAST MET ON JUNE 6, 2017:
    - PANEL DISCUSSED RESULTS OF LITERATURE REVIEW
    - REVIEWED WHAT ELEMENTS OF IRRIGATION WOULD BE CONSIDERED
    - BEGAN TO DISCUSS BROAD STRUCTURE OF BMP

CROPLAND IRRIGATION PANEL UPDATE

- <u>PROGRESS</u>!
  - CROP LAND IRRIGATION -------- **OVERHEAD IRRIGATION ONLY!**
  - ROW CROPS **CENTER PIVOT**
  - CROPS EVALUATED **LATERAL MOVE**
    - CORN
    - COTTON
    - TOBACCO
    - WHEAT

CROPLAND IRRIGATION PANEL UPDATE

- **PANEL'S BMP FOCUS**
  - DEFINITION OF BMP SIGNIFICANT ACREAGE THRESHOLD
    - 10,000 IRRIGATED ACRES ANNUALLY REPORTED REGION-WIDE
  - WHAT DO WE HAVE?
    - CORN = 100,000 ACRES
    - WHEAT =10,000 ACRES?
    - TOBACCO = 6,500 ACRES
    - COTTON = 1,500 ACRES

CROPLAND IRRIGATION PANEL UPDATE

- **PANEL'S RECOMMENDATION FOCUS**
  - NUTRIENT/SEDIMENT
    - **NITROGEN** – LIMITED RESEARCH DATA AVAILABLE
    - PHOSPHORUS – INSUFFICIENT RESEARCH DATA AVAILABLE
    - SEDIMENT – INSUFFICIENT RESEARCH DATA AVAILABLE
  - WHAT RESEARCH IS AVAILABLE?
    - LITERATURE REVIEW – 120 PLUS PAPERS REVIEWED BUT ONLY ~30 APPLICABLE
    - RESEARCH PROJECTS – SEVERAL RESEARCH PROJECTS IN PROCESS BUT INCONCLUSIVE
    - MODELING – THEORETICAL MODELING DEVELOPED BY VIRGINIA TECH

CROPLAND IRRIGATION PANEL UPDATE

- **PANEL'S LITERATURE REVIEW RESULTS**
  - LITERATURE REVIEW – 120 PLUS PAPERS REVIEWED BUT ONLY ~30 APPLICABLE
    - 1 ON COTTON, 1 ON POTATOES, 2 ON TOBACCO, 1 ON WHEAT
    - ~25 ON CORN, BUT ONLY 2 HAD COLLECTED ANY LEACHATE DATA.
    - NONE ADDRESSED PHOSPHOROUS
    - 4 WERE NOT ON IRRIGATION BUT ON RAINFALL OR SIMULATED RAINFALL LEACHING TO SOME EXTENT
    - ONLY 2 WERE FOUND THAT SUPPORTED VT THEORETICAL MODEL OF N REDUCTIONS BASED UPON PROTEIN CONTENT REMOVED

CROPLAND IRRIGATION PANEL UPDATE

- **NITROGEN EFFICIENCIES**
  - BASED UPON DIFFERENCES IN NITROGEN REMOVAL OF CROP BETWEEN IRRIGATED VERSES NON IRRIGATED CROP PRODUCTION
    - CORN - (GRAIN/SILAGE) ONLY AT THIS TIME
    - WHEAT - UNDER CONSIDERATION
    - COTTON AND TOBACCO - INSUFFICIENT ACREAGE OR RESEARCH DATA AVAILABLE
    - SPECIALTY CROPS – INSUFFICIENT ACREAGE OR RESEARCH DATA AVAILABLE

QUESTIONS AND COMMENTS?