

CONSERVATION TILLAGE: YESTERDAY AND TODAY

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INTERPRETIVE SUMMARY

Production agriculture is in need of meetings such as this one where researchers, consultants, state and federal agencies representatives and producers can come together to share information on better ways to conserve, protect, and enhance our environment and have a sustainable farming operation. We believe it is very important to get the message out that an economically sustainable farming operation and an environmentally sustainable farming operation can and should be one in the same.

Agriculture operations are coming more and more under a microscope due to the concerns of nonpoint source pollution related to crop, livestock, and forestry production. We are hearing more and more about how nonpoint source pollution is a major cause of many of our nation's water not meeting water quality standards or their designated uses. We hear how nonpoint source pollution could be the major cause of Hypoxia in the Gulf of Mexico. And we have read that production agriculture is the major source of nonpoint source pollution. We are hearing that global warming is a major concern with its associated changes on weather patterns.

Prior to the early 1990's, monitoring of agriculture activities mainly dealt with soil erosion and the resulting sediments affecting water quality. We used the Universal Soil Loss Equation and then the Revised Universal Soil Loss Equation to measure tons of soil movement per acre. Today the effectiveness of cropping systems are gauge by the measurement of pollutants such as pesticides and nutrients in downstream receiving waters.

Conservation tillage started off as an erosion control practice on highly erodible lands to reduce soil movement. Now conservation tillage is being recognized as an important practice on fields with a flat topography to reduce the amounts of pesticides entering receiving waterways.

Conservation tillage is not the whole answer to address water quality issues associated with row crop agriculture but could be a principal practice in a conservation system. Conservation tillage needs to be planned along with its companion practices including nutrient management, pest management, filter strips buffers and etc.

Research has shown that conservation tillage is not only an important practice to control soil erosion and improve water quality but conservation tillage also provides many other important benefits. Some of its benefits that are well known and have been documented include: improved soil health and tilth; reduced soil compaction and temperature; increased water holding capacity; reduced runoff; serves as a carbon sink and sequestering carbon and increased pore space for root development. All of these benefits translates into healthier crops and improve yields.

On May 4, 2000, the US Senate Subcommittee on Production and Price Competitiveness held a hearing regarding carbon sequestration and other issues related to global climate change. An imbalance of the carbon cycle has been identified as a major contributor to global climate change. At the hearing, Former NRCS Chief William Richardson testified on the need to support Conservation Tillage because of its positive effects on carbon cycling through its ability to sequester carbon in the form of organic matter in the soil.

Although conservation tillage research in Louisiana dates back to the late 1960s, there was virtually no conservation tillage being practiced in Louisiana until the early 1980s. Thanks to the coordinated efforts of the Louisiana State University Agricultural Center, innovated producers and NRCS viable conservation systems have been developed for most of the major cropping systems in Louisiana. Last year over 20% of all crops planted, over 792,000 acres, were planted using conservation tillage. We have come a long ways but there is still a long ways to go.

We believe that conservation tillage will protect producers against more regulations. We feel like these types of practices and the voluntary support for these types of practices incorporated into the routine cultural treatment of crop production should go a long way in reducing the need for more regulation on agriculture.