

Ailing Delta can take lead in ag-based drive to 'bioeconomy'

By Peter Nelson, Special to The Commercial Appeal

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While the economic problems of the Mississippi River Delta region are long-standing and complex, there is hope for the region and it lies directly under our feet.

The very factor that a Nov. 8 article in The Commercial Appeal's Viewpoint section cited as one of reasons for the demise of the Delta region -- agriculture -- can be the catalyst for unprecedented rural economic development in the movement toward a "bioeconomy." Simply put, the bioeconomy is an economic engine based around the utilization of plant-based materials in a wide variety of bio-based products, including chemicals, plastics and biofuels.

According to a recent report from consultants McKinsey & Company, the development of biobased products and clean-technology processes has already become a \$140 billion annual industry globally, and is growing rapidly. Recent reports from the U.S. Department of Energy, the United Nations and the World Wildlife Federation show similar results.

Memphis Bioworks Foundation, working with an unprecedented group of regional partners, recently completed a study showing how these trends can benefit the Mississippi River Delta region. The study, led by Battelle Memorial Institute, included a 98-county area in five states. The report cited the region's agricultural prowess along with Memphis' superior logistics and manufacturing base as keys to developing a revitalized economy that utilizes existing industrial infrastructure, attracts technology and investment, and puts people back to work.

The results of this economic development study revealed that in the Delta region:

Sustainably grown and harvested agricultural crops and forests in the region surrounding Memphis can adequately supply an \$8 billion biofuels and bio-based products industry without affecting the food and feed supply chain.

The transformation to a bioeconomy can support as many as 25,000 "green" and supporting jobs during the next 10 years, and more than 50,000 jobs within the next two decades related to bioprocessing and its supply chain in both rural and urban locations.

The bioeconomy will open up markets for new crops which will increase biodiversity in the region, leading to reduced use of synthetic fertilizers, agricultural chemicals and water, while increasing options for local farmers.

The bioeconomy will contribute to reducing greenhouse gas emissions, improving air quality, providing sustainable raw materials for local industries and bolstering national security.

In addition, it is important to note that other clean-tech options vying for alternative energy prominence along with biomass, such as solar, wind and even nuclear power, produce only energy. Biomass will be valuable for many other uses even if other energy sources emerge. The multiple-use options for biomass mean a more sustainable source of jobs over the long term.

So what does all of this mean? It means green, sustainable jobs for both the rural and urban areas of the Mississippi Delta region. It means novel new materials to give our manufacturing base competitive advantages. It means the region's farmers can participate fully in a major international economic shift that will be sustained long into the future. It also means adaptive reuse of existing industrial infrastructure that is idle or underutilized, creating an urban benefit to this rural initiative.

The Memphis Bioworks Foundation's mission is to establish the Memphis region as an International Bioscience Center for the development and commercialization of biotechnologies. We realize that the same techniques used to understand the human genome will help scientists crack the genetic playbook in plants. With that information, new seeds, enzymes and chemical materials can be made, creating an integrated and vibrant environment for industry to blossom and jobs to be created.

Although this newspaper's Nov. 8 article accurately depicted the problems in the region and the many ways that they have been addressed in the past, it did not portray the cooperative strategic effort now under way to build a strong agricultural sector that is supporting a global demand for new materials and new strategic partnerships from the farm to the consumer.

The Delta economy was born and raised on a foundation of agricultural leadership and innovation. As the world economy shifts (which it must do) from a petroleum foundation back to an agricultural foundation, the Delta has the opportunity to again benefit and lead based on innovative use of the soil beneath our feet. It will require all of us working together -- traditional, established business and entrepreneurs, urban and rural. But we can, we must, do it.

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