



*Maximizing Bioprocessing to Create  
Food and Fuel*



# Business Premise

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Produce fuel ethanol in higher population ethanol deficit regions of the East Coast using a local high starch winter crop grain source.

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# Why Winter Cover Crops?

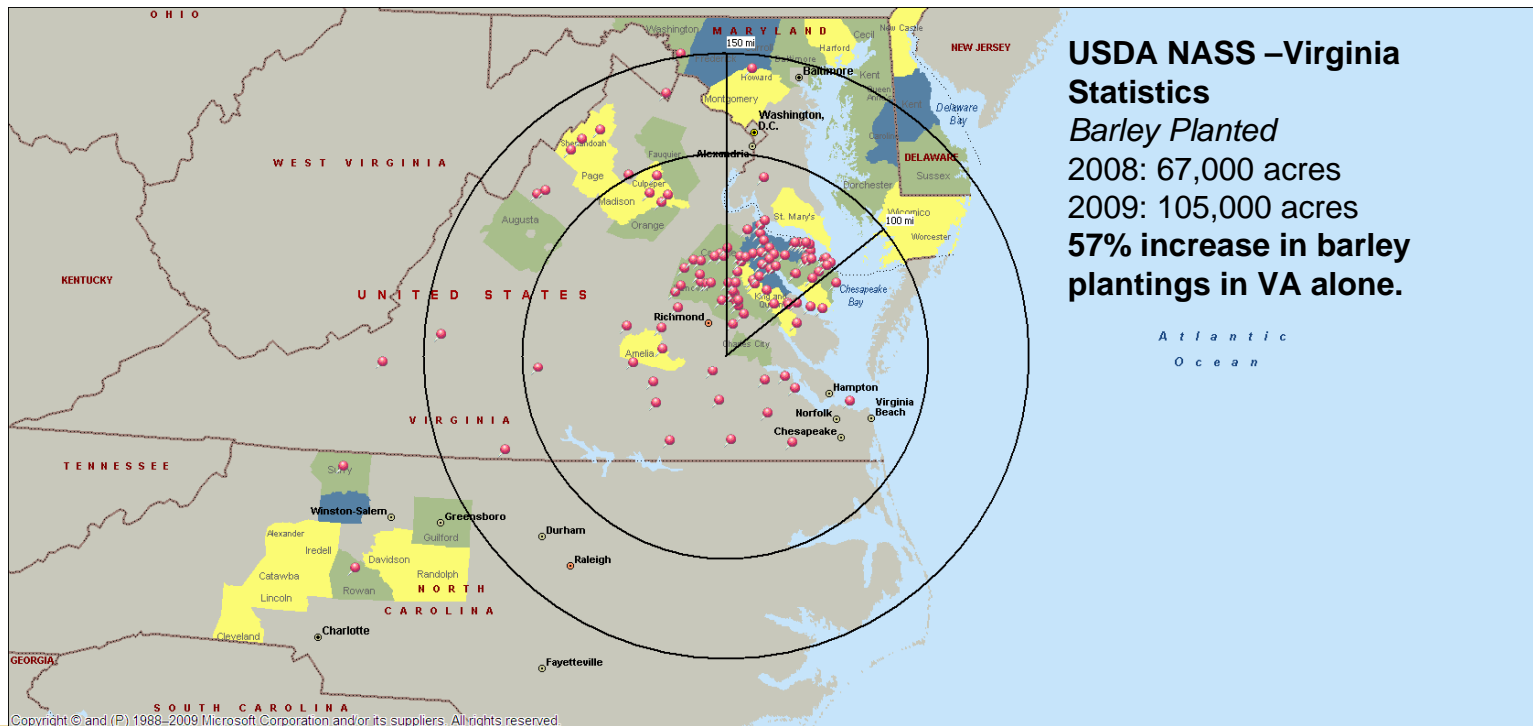
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- **Use of Mid-Atlantic cover crops has important advantages.**
    - Allows production of ethanol directly in a high population density region; therefore, it's produced where it's consumed!
      - Minimal energy wasted on transport
    - Requires zero additional land usage for ethanol crop production
      - Eliminates "indirect land use" issue
    - Adding hundreds of thousands of acres of winter cover crop in the Chesapeake Bay Watershed will have a significant positive impact on the Bay.
      - Chesapeake Bay Commission advocates use of winter barley
    - Osage process coupled with reduced transportation will result in ethanol which has less than 50% the carbon footprint of gasoline.
      - Could potentially become the first commercial Advanced Biofuel in the US!
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# The Agricultural Opportunity

Developing a market for barley in Virginia and surrounding areas that will provide farmers with a valuable **cash crop to serve as an alternative feedstock for ethanol production, produce a high-quality barley protein meal for livestock, and provide soil conservation benefits by promoting year-round farming opportunities.**

Will have an **economic impact in excess of \$100 million on the agriculture community in Virginia and neighboring states, while reversing the trend of declining farm acres.**





# First US Winter Barley Ethanol Facility



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