

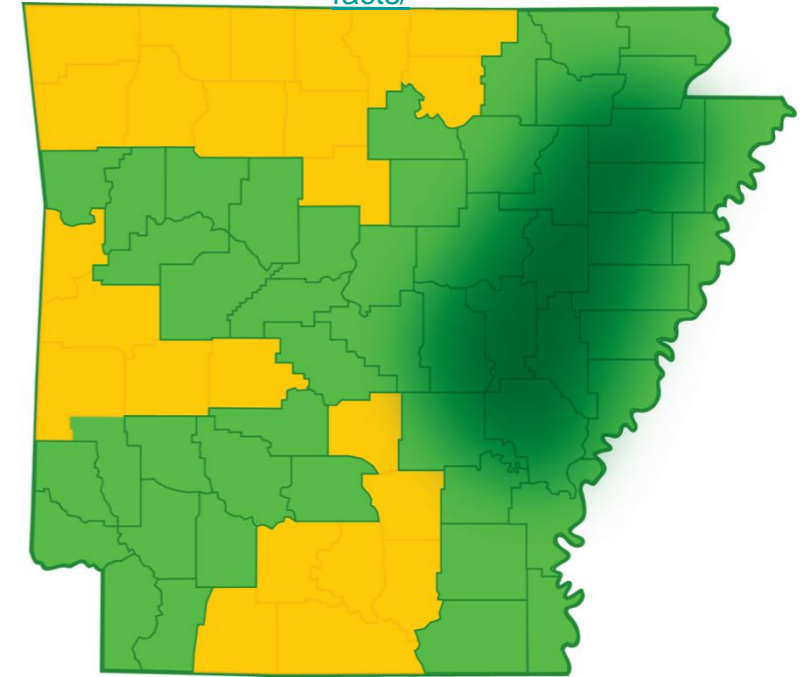
Ag. Chem. in Arkansas

Arkansas is the nation's leading producer of rice contributing 46% of the total national rice production.



<http://hyperphysics.phy-astr.gsu.edu/Nava/html/y94/newport94.html>

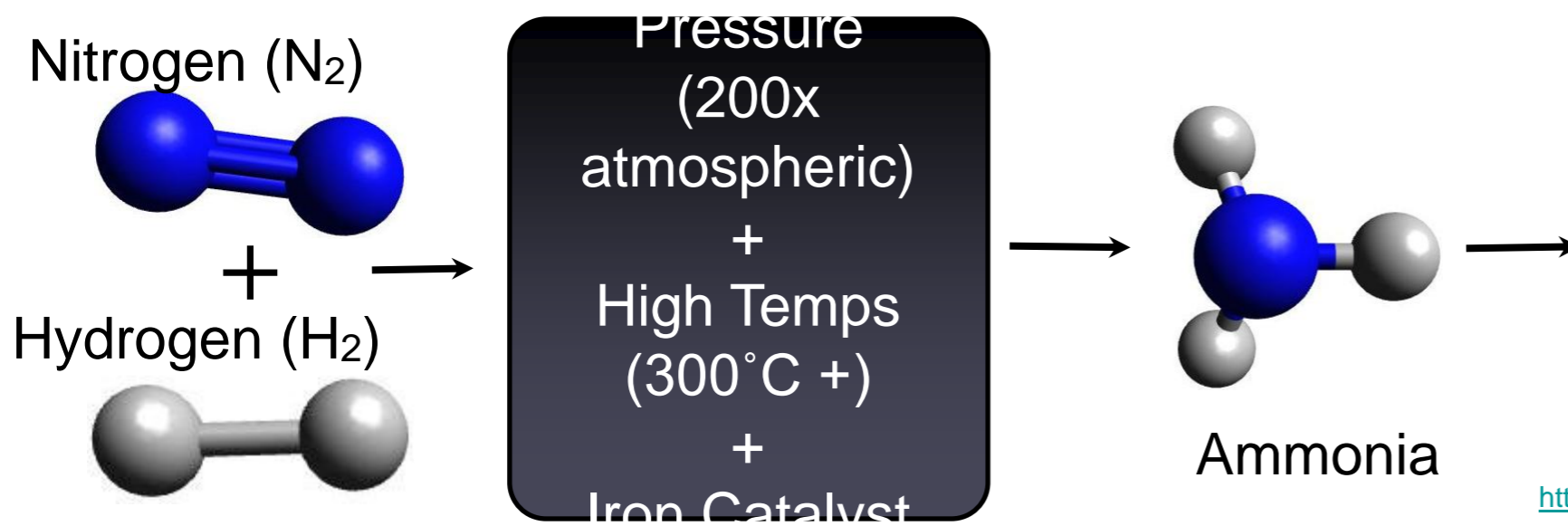
<http://www.arkansaricefarmers.org/arkansas-rice-facts/>



Rice farming adds over \$1 billion in revenue to the state economy and provides jobs to thousands in mostly rural communities. The counties in green show where rice farming commonly occurs.

The use of inorganic fertilizers greatly increases crop yield by providing essential nutrients. One of the primary ingredients of fertilizers is **nitrogen**, a key component in the formation of plants. The Haber-Bosch process allows for mass production of **nitrogen** that is used to make fertilizers that are applied to rice fields across the state.

Haber-Bosch

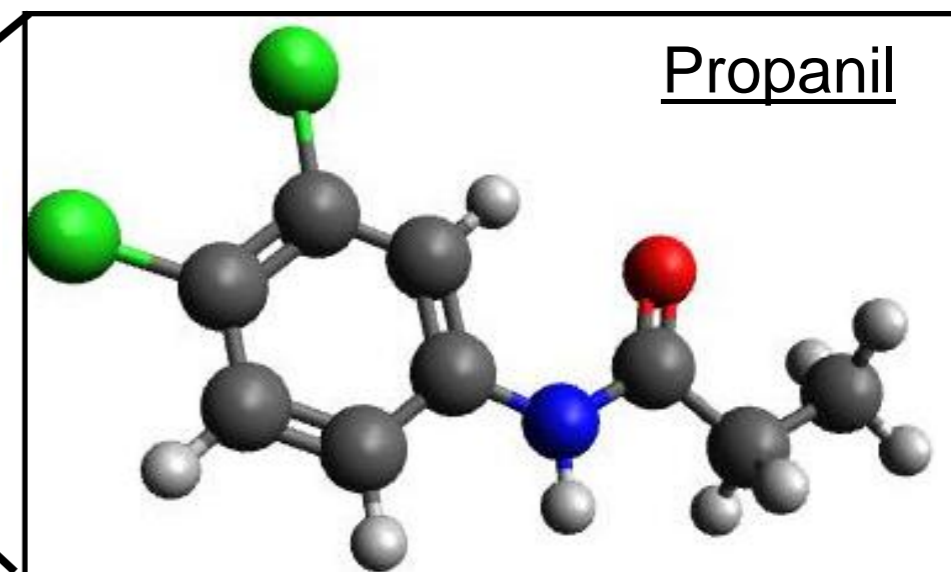


http://www.admrc.org/media/cms/Article_1_Flours_1_F7B45761BE890.jpg

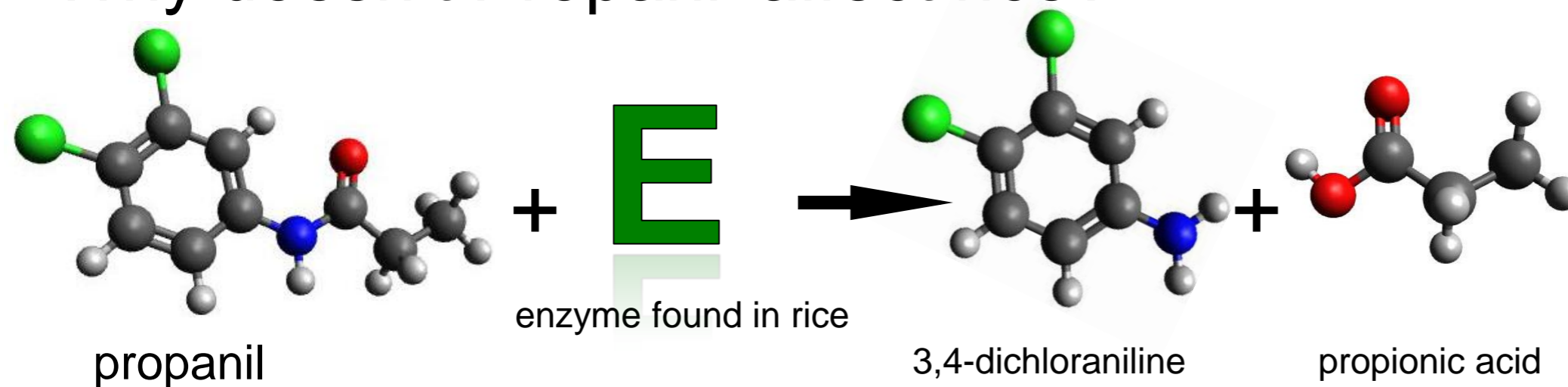
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Herbicide application is an integral part of ensuring high yields.

Propanil, a chemical that is a contact herbicide, has been used extensively in Arkansas for many years and is still in use today. Propanil can eliminate many of the weeds that are common to rice farms in Arkansas.



Why doesn't Propanil affect rice?



Rice contains an enzyme that can break down the herbicide propanil into two different molecules that aren't harmful to rice but will kill weeds that threaten the crop. This makes propanil an ideal herbicide for Arkansas rice farmers.