

applications will start the decomposition process before flooding and planting. These factors will serve to maximize productivity and efficiency.

Decomposition is a function of time, nutrients, microbial activity, and moisture. *Stubble Recycler* augments the microbial population of your soil while raising the nitrogen to carbon ratio to fuel microbial decomposition. You can increase moisture by facilitating soil contact through incorporation or rolling. By controlling these variables you will reduce the time it takes to make the straw less of a problem and more of a value.

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"Our technology is a billion years old"

Stubble Recycler



"Stubble Recycler augments the microbial population of your soil while raising the nitrogen to carbon ratio of crop residues to fuel microbial decomposition."



THE PROBLEM

If we can recycle our garbage why can't we recycle more of our rice straw? The answer is: "it is easier to recycle garbage!"

The reason for this is four fold: First, varietal improvements in dwarf and anti-lodging varieties of rice have built in short, hard, high silica (33%) stems, that don't break down. Secondly, these hard and woody stems have a low carbon to nitrogen ration that makes them harder to microbial degrade into available nutrients. Similarly, at the end of the season, after crop removal the available nitrogen content of the soil has been depleted and tied up in crop residue, thus decreasing the efficiency by which organic matter is converted to humus and nutrients. Third, is the sheer volume of rice stubble/straw per

acre, some three tons on average make for a nuisance in ground preparation operations. And fourth, un-burnt straw provides a host for the saprophytic over-wintering stage of Stem and Root rot.

THE SOLUTION

BioScientific, Inc. has developed a product to assist in recycling nutrients in rice straw called *Stubble Recycler*, an affordable nitrogen based fertilizer and microbial inoculant used to stimulate the microbial decay of the cellulolytic and lignin based (polysaccharides) carbon in incorporated rice straw. "We all know that our grandfathers put some nitrogen on crop stubble before incorporation." Likewise, *Stubble Recycler* closes the gap between the carbon and nitrogen ratio making the rice stubble more suitable for microbial decomposition. *Stubble Recycler* also contains a

highly active microbial population that serves as an inoculant to activate microbial decay, by increasing the viable microbial population in the soil. This serves to increase competition for the nutrients contained in the stubble.

The use of this product does not change the amount of fertilizer you use, but allocates some of the fertilizer budget for the fall and early spring at the time of stubble incorporation. This application will serve as a fuel source for microbial decomposition. The fertilizer value in *Stubble Recycler* will contribute to your total fertilizer budget some 0.92 pounds per gallon. More importantly you will receive the additional value of the nutrients that will be released from the rice straw. By applying 10-20 gallons of *Stubble Recycler* in the fall you will enhance microbial decomposition over the fall and winter, and early spring