



Modern Ag Product

BIOBASE with PLUS E

A WISE CHOICE

BY Norman Wilson Ph. D.

The management of crop residue has been a dilemma for farmers since the origin of agriculture. Farmers generally know that crop residue is good for their soil but they need to quickly reduce the volume of residue in order to prepare for the next crop and control insects and disease.

A residue management decision too often involves burning, grazing, caustic fertilizers or other methods of removing large portion of the residue. These methods address the problem but are not a wise choice to sustain the long term productivity of the soil. Fortunately, farmers and agricultural advisors now have a new tool to make a wise residue management choice.

BioBase with Plus E are liquid probiotic fertilizers specifically designed to promote the aerobic decomposition of crop residue intensive cropping system. BioBase with Plus E are biologically active formulations with enzymes and nutrients necessary to facilitate a complete transformation of organic matter to humus.

Modern farming depends upon frequent cultivations, chemical pest control, and heavy use of acid or alkaline forming fertilizers to achieve production. These practices tend to reduce populations of aerobic soil microbes. Some species of organisms may be entirely eliminated. Frequent

And continued use of these practices can result in soils that are poorly aerated, biologically deficient, and in no condition to decompose large volumes of high carbon to nitrogen ratio residue produced from intensive cropping systems.

Burning and heavy applications of caustic fertilizer can reduce residue to manageable levels, but do nothing to help maintain or regain their biological health and structure. BioBase with Plus E on the other hand, helps flocculate the soil, which increases aeration and begins the systematic reduction of residue to humus. The complete biological conversion of residue require a sequential process involving many species of soil organisms. Simple carbohydrates and proteins released by enzymatic activity provide energy for other microbes which break down complex carbohydrates such a cellulose and lignin into humus. This process efficiently recycles mineral nutrients and maintains them in an available form.

The resulting humus ids extremely important to agricultural soils and has significant economic impact. Humus increases exchange capacity by organically complexing mineral nutrients to keep them in an available form. Humus improves soil structure, increases buffer capacity, and the dark color improves heat absorption. Humus also increases water penetration, retention and release.

In several states, crops such as cotton have a requirement of early plow down for insect control. The plow down requirement is designed to reduce over wintering of insects. Bio-Base with Plus E is and excellent choice in this situation to enhance decomposition, and reduce insect problems. The application of 1 quart of Bio-Base with 6 ounces of Plus E per acre crop residue immediately after harvest is recommended. The crop residue should be incorporated into the soil but not deeply buried. Soil should be kept moist but not saturated. The rate of decomposition will somewhat depend upon soil temperature and moisture.