

By Jerry Carlson, financial Editor



Save \$25 an acre on nitrogen

By renewing more life in your soil

Just as planting time arrives, another surge in energy prices is threatening to raise your nitrogen costs. But this time, farmers have more know how than ever to conserve nitrogen expense:

1. New on-farm nitrogen research trials in Iowa in 2001 confirm that you can pare back N below the old "yield goal" recommendations with no loss in profitability.
2. This report brings you fresh data from 9 years of field trials in 14 locations, showing how you can save about \$25 per acre of purchased N by accelerating conversion of crop residue and

releasing nutrients for the following year's crop. Most N research today is focused on predicting N needs, and applying the optimum amount. **But we're aiming at replacing 100 units of costly N by using biological life to "grow more of your own" N.**

Before the age of commercial N, corn typically followed legume forages like alfalfa or clover. Microbes quickly converted those legume residues into humus, which readily mineralized back to nitrate and exchangeable ammonium as corn roots called for it.

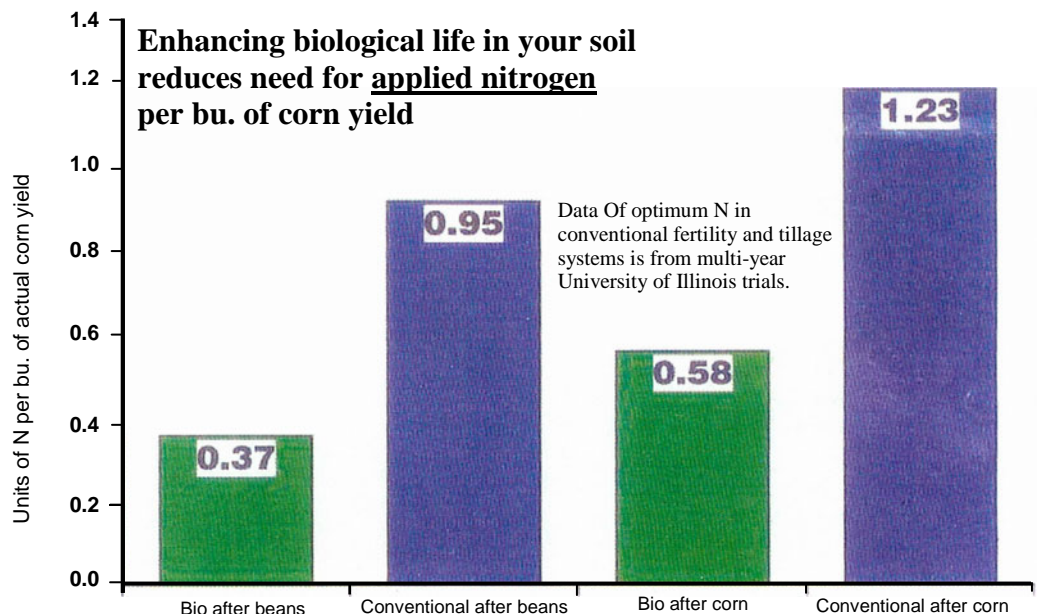
But corn residue is tougher to break down. With today's high

Corn may still need 1.2 lbs. of N per bushel of yield, but that doesn't mean you have to buy it all.

You can "grow" more of it by enlisting soil microlife to accelerate conversion of last year's crop residue for this year's nitrate N release. The objective is to raise humus levels.

The research data at right from AgriEnergy Resources shows that the optimum profit rate of applied N under "biological farming" technology averaged 0.37 units of N for corn following soybeans; 0.58 units for corn after corn.

In 2001 nitrogen trials across Iowa managed by agronomist Tracy Blackmer for the Iowa Soybean Association, "One thing that came through loud and clear was that higher organic matter soils generally need less applied N per bushel of corn yield," says Blackmer. Surface application of raw liquid hog manure did not consistently replace the need for applied N. Apparently much of the nitrogen in the manure was lost to the atmosphere and to leaching.



"Bio" means biological enhancement of soil life with Renewable Farming systems... encouraging residue breakdown and avoiding toxic chemicals which impair soil microbial and fungal action.