

North Carolina farmers are leading us toward a SECOND GREEN REVOLUTION

An open letter by Dr. Leon Hesser, "Uncle of the Green Revolution," who spent more than three decades in 20 countries introducing new crops developed by his close friend, Dr. Norman Borlaug. Dr. Hesser's biography of Norman Borlaug was honored as the American Farm Bureau Foundation's "Book of the Year" for 2008.



Borlaug **Hesser**
Dr. Borlaug developed rust-resistant cereal grains; Dr. Hesser helped introduce them to farmers worldwide.

For more than three decades, I've worked with farmers and crops in 20 countries to advance the first Green Revolution.

But I've never seen crops respond with such big gains in yield and quality like those I saw in Yadkin County, NC, last summer. I visited at the invitation of Biobased USA of East Bend, NC, the developer of a surfactant-like product with the research name *SoySoap*. I arrived as a scientific skeptic.

But what I saw in those farmers' fields, and what I've seen in Asia and elsewhere since, convinces me that growers of virtually every crop, not just cereal grains, could be seeing the dawn of a new Green Revolution. Some quick examples:

Soybeans: Farmers showed me fields with clear differences in early growth, like the two below. The treated field had deeper roots than the untreated one across the road.



After harvest, I learned this treated field yielded 17 bu. more. Among some 300 Southeastern farmers using *SoySoap* in 2008, treated soybeans yielded 10 to 25 bu. more per acre. Several treated fields had bean yields over 67 bu. per acre.

Oats: Yadkin County farmer Freddie Doub and I walked into his field of oats, which were nearly chest-high, but not lodged. Later, Freddie told me his oats stood up in a 40-mph. wind, yielded 133 bu. per acre, and tested 38.8 lbs. per bushel. They matured early, so Freddie drilled double-crop soybeans that made 50 bu. despite a dry summer. One season, one field: 133-bu. oats and 50-bu. beans!



Wheat: I've worked more than 20 years with short-stawed, high-yielding wheat from Norman Borlaug's breeding program in Mexico. But until last summer I had never seen heads of wheat up to five inches long, with four rows of kernels. The wheat had thick straw, and roots so profuse we could barely pull up a thickly tillered wheat plant.

I've learned that other farmers saw similar responses with

SoySoap-treated wheat in 2008. A Red Lake County, MN grower saw his combine yield monitor climb from 70 bu. in untreated wheat to over 100 bu. when he entered a 90-foot treated strip of spring wheat. Treated wheat had heads over four inches long. And the grower saw something else: As he looked closely at straw cut by the combine header, he found mostly *solid stems*. Also, the roots of treated wheat were thick and deep, while untreated wheat had shallow roots which he could easily pull out.



Early-sprayed crops develop higher plant sugars, and typically mature up to two weeks early.

Corn: I live in Florida, and earlier this year I visited sweet corn growers testing *SoySoap*. They started as skeptics, like I had. Now they're treating all their fields. Reason: More yield, plus 20% higher sugar content for extra taste appeal and longer retail shelf life. Many stalks had two ears, and many ears had 18 rows of kernels, not the usual 14 or 16. Amazingly, that increase in kernel rows is the same response which North Carolina farmers saw in their corn last fall. It indicates that when a young corn plant is determining row number, it's sensing adequate nutrition from strong, early root growth.



I've just presented a scientific paper on *Soysoap* at a crop science meeting in Korea, where I said this new technology can increase crop yields and quality worldwide. In March, Dr. Borlaug and I discussed it at a conference in Mexico. I'm also heading for the Philippines. *And I personally will introduce this product to farmers in Eastern Europe.*

It's already used in China, Thailand, India and Vietnam, where it increases rice yields 35%. And this year, U.S. farmers in 26 states will apply it on as much as a million acres.

I believe *Soysoap* technology is the start of the Second Green Revolution. It's formulated entirely from non-toxic, FDA-approved foods and food additives. It's based on nano-scale colloids that affect plants physically, not chemically.

I'm excited to have a part of *another* great adventure in feeding a hungry, malnourished world that can end poverty!

Biobased USA reserves the name *SoySoap* for its research formulation and does not sell direct to the public. Licensed distributors in each state private-label the product for their markets. For more information: www.biobased.us donwilshe@biobased.us 800-995-9203