

# SoySoap: New, ecologically friendly yield enhancer

In 2003, a small American research firm doing business as Biobased USA developed an ecologically friendly, biobased cleansing wash for fresh fruit and vegetable packers.

It's formulated entirely from items on the Food and Drug Administration's list of approved food ingredients in the United States (the EAFUS list). Its research name: *SoySoap*.

After two years of successful use as a fresh-crop wash, the developers discovered that when young *growing* crops were sprayed with a very diluted solution of SoySoap in water, plants developed large, deep roots.

In tests on more than 10,000 acres of tomatoes, peppers, squash, grains and a wide variety of specialty crops, these super-sized roots energized 20% to 100% higher yields. Fruit and vegetables had higher sugar content. Grain had heavier test weights.

But SoySoap didn't fit any U.S. regulatory category as a fertilizer, pesticide or plant growth regulator for application on growing crops.

Environmental Protection Agency officials advised that federal registration procedures would take several years and several hundred thousand dollars — especially since none of the researchers involved could explain

*why* plants respond so dramatically.

So the product's inventor invited overseas crop scientists to test it.

**When farmers and governments** in Vietnam, India and China saw their own test results on rice and other crops, they eagerly sought to use SoySoap on millions of acres.

The developer has cooperated with testing at more than 20 universities worldwide. Trials are currently underway at Ohio State University, the University of Florida, University of Georgia, North Carolina State University and the Ag Research Division of Alberta (Canada) Agriculture and Rural Development.

**Soaring food costs worldwide** are creating critical needs for higher yields and higher nutritional quality.

Also, rising energy costs and strict environmental standards are imposing obstacles to applying more fertilizer and pesticides to step up yields.

SoySoap trials worldwide indicate it's an ecologically friendly product. It requires very little energy to manufacture. Any spray material reaching the soil is biodegraded in 28 days.

Since it's made entirely with FDA-approved food ingredients, it's non-

toxic to people, livestock and wildlife. It's "just food" in a unique form.

**Scientists studying SoySoap have several theories** on why young plants respond by intensifying root growth first, then fruit, vegetable or seed production later.

Most of these theories rely on the science of nanotechnology. Particles in SoySoap that can be seen under a scanning electron microscope are less than one nanometer in size — less than a *billionth* of one meter.

Thus the effect on plants is not from a chemical reaction. It's a "message" to plant cell communication, intensifying root growth. With huge roots and healthy root-soil interaction, the plant can extract more moisture and nutrition from soil. This is why early application — soon after emergence — is especially effective.

**The U.S. government will soon establish** a "National Sustainable Agriculture Standard."

Producers who use technology that qualifies under this environmental standard could gain a *substantial marketing advantage*. Since SoySoap is eco-friendly, it should easily qualify for this new standard.

## The only difference in these two soybean fields: SoySoap

The Yadkin County, N.C. farmer who does the spraying work for his farming partnership didn't tell his two partners that he had sprayed the soybean field (far right) with SoySoap this spring.

Both fields were planted on the same day with the same seed variety. The bottomland soils are nearly identical in both fields.

By July, neighbors were asking the other brothers, "Why such a big difference between those two fields?"

Finally, the partner revealed his secret: He had applied SoySoap on only one field, soon after the beans emerged. The other two partners told him, "You best go back there and spray the other field too, so it can try to catch up!"



Once farmers see the crop response to SoySoap, we find it hard to convince them to leave unsprayed check strips so we can quantify any differences. One North Carolina farmer says, "I tell the sprayer operator: "If it's green, spray it with SoySoap!"

These three farmers learned a lot from this side-by-side test.

"The root systems in the SoySoap



field are just a whole lot bigger than where we didn't spray," says one of the partners. "Those roots go out and get extra moisture and nutrients. Also, the pod count in the treated field is a lot higher."

These brothers asked us to not use their full names for this reason: "If our landlords learn what big yields we're getting with SoySoap, they'll want more rent."

## On-farm reports from growers in North Carolina (see videos at [www.fd-ag.com](http://www.fd-ag.com))

### 80% higher soybean yield

In spring 2007, a farmer in Yadkin County, North Carolina whom we'll call F.D. heard about our SoySoap results on rice in Asia. He has tried many approaches in 40 years of raising beans, and asked to test SoySoap on his soybeans. He applied 8 oz. per acre when the plants were about four inches high, adding SoySoap when he sprayed glyphosate herbicide.

A few weeks later he phoned to say: "Soybeans I sprayed with your product are growing well, even though we're suffering extremely dry weather.

"Soybean plants on the control fields are 30% smaller and yellowed."

In November 2007, he called with yield results: "The treated beans had about 80% more pods per plant than the control, and yielded 80% more.

"During the season, control plots had holes in the leaves from insects as usual. But treated plants had no holes in leaves or pods: It looked like they didn't attract insects."

When he delivered his 2007-harvest soybeans to the elevator, untreated beans had test weights of 54 to 55 lbs. per bushel. Soybeans from the SoySoap treated field tested 57 to 58 pounds.

Word of F.D.'s 2007 soybean trials spread rapidly around the county. This season, more than 100 farmers are testing SoySoap in the region. At right are just a few of their comments.

You can see video interviews made on their farms and others at [www.fd-ag.com](http://www.fd-ag.com)



### 100-bu. wheat

**W.S.** — We're having the best yields we've ever had. The heads are filled. It's beautiful grain. Yields are 90-plus bushels; test weights 63 to 64 pounds. I'm tickled to death.

It was not overdone with fertilizer or nitrogen. It's about as economical as we could do it. My wheat had cow manure and just a little nitrogen.

We applied one spray of SoySoap, put in with the top-dressed liquid nitrogen. Now I tell my sprayer operator, if it's green — spray it!

**F.D.** — Here in the Piedmont of North Carolina, we've seen wheat before, but we're not used to seeing wheat like this with a 5-inch long head on it, and four rows of grain in most of the heads. It's amazing. We didn't use pesticides — and had no noticeable insect damage.

And the wheat straw yield was about double what we're used to.

**B.M.** — Until now, my best ever was 70 bushels. I've never seen my

wheat average 100 bu. until this summer! Sometimes my combine yield monitor hit 160 bu. an acre. No insects in the wheat, and I used no pesticides — saved about \$20 an acre.

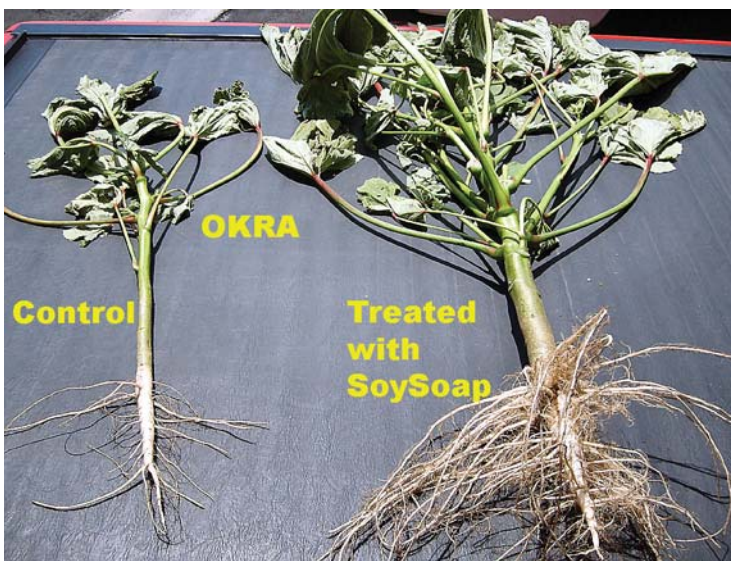


### 133-bu. oats

**F.D.** — This oat crop is striking me almost chest high. I had never grown oats this tall until I used this SoySoap on them. I've raised oats about all my life, and I've never had them get this tall and this big and look this good — and not fall down.

They're standing well and we've had a whole lot of wind. In late June we had a day with 40-mph winds, and I thought surely they were all going to be flat.

When we harvested these oats, we got 133 bu. an acre. Test weight averaged 38.8 lbs. per bushel. The oats were clean because they weren't lodged. The oat stalks were big and strong. Some were big enough to put a pencil inside the shafts.



### Overwhelmed by Okra

These two root systems of Okra, a popular Southern vegetable, show how crops are able to stand stronger and yield more when treated with SoySoap. The product's effect begins with roots.

Both plants were dug 40 days after planting on a Florida farm. The Okra plant on the right was sprayed with SoySoap weekly, starting soon after emergence. The treated crop developed deep, vigorous roots, which allowed abundant uptake of water and nutrients for a tasty, high-yielding crop.

Control plants show growth typical of 40-day-old Okra in Florida. Treated plants had a stem diameter of more than one inch. No pesticides were used.

Yields on treated fields were so high that the farm's main challenge in 2008 was keeping up with harvest before pods outgrew the ideal length of three inches.

# Asian farmers start the new Green Revolution

In 2006, SoySoap was introduced to over 5,000 farmers in Thailand, Australia, India, and the Philippines. Through an associate in Hong Kong, product use was also expanded into China, Malaysia, Indonesia, Taiwan, and Vietnam.

A cooperating firm in Vietnam reports results typical of others we've seen throughout Asia. The firm worked with farmers to run trials.

**On average, yields of treated fields in Vietnam were 35% higher** than non-treated fields. In some instances, rice yields rose as much as 1.9 metric tons per hectare (37 bu. per acre) over control fields.

In side-by-side plots, flowering of treated rice was 14 days earlier than on plants treated conventionally. Treated plants also showed 90% flowering, compared with 70% for conventional treatment.



**Side-by-side plots of rice** in Vietnam show how the treated side is greener, with fuller heads a few weeks from harvest. At current U.S. rice prices, yield increases in Vietnam would raise the value of rice production by up to \$375 per acre.

In untreated rice fields, infestations of Rice Blight, Blast and Sheath typically ranged from 35% to 90% of the plants. In SoySoap treated fields, those diseases dropped to just 5% of the plants.

Observers attribute this to overall health and vigor of the crop. Although brix levels (sugar content in plant sap) of the growing crop were not studied, testing of harvested rice showed higher sugar content.

It's well-known agronomically that plants with high brix tend to have greater System Acquired Resistance (SAR) against disease.

Farmers using SoySoap harvested treated plots two weeks earlier, paid off their loans earlier, and got a 5% premium for higher quality rice.

The Vietnamese government also reported that with this product, they now expect to grow rice on 750,000 acres of acidic (pH 3.0), high-sulfate soil that typically has supported only forest. The expanded root systems and profuse microbial activity in the root rhizosphere show signs of mellowing and buffering those soils.

The cooperating Vietnamese company reports: "Our farmers just love this environmentally friendly product." Many small growers spray with a backpack pump, and they don't

have to worry about toxicity when applying it.

The company adds: "The strong features of SoySoap are to give the high yield, to improve soil (the very important factor) and not to cause environmental pollution. SoySoap gives good results not only on rice but also on pepper and other crops."

We expect Vietnamese agricultural authorities will soon approve its widespread use.

## SoySoap is for *all* of America's crops

This includes crops as diverse as: Alfalfa, Barley, Beans, Canola, Corn, Cotton, Flaxseed, Hay, Oats, Peas, Potatoes, Rice, Rye, Sorghum, Soybeans, Sugarbeets, Sunflowers, Tobacco, Tomatoes, Squash, Peppers and Wheat.

You can see and hear a wide range of current results directly from farmers and scientists. Please visit the website

[www.fd-ag.com](http://www.fd-ag.com)

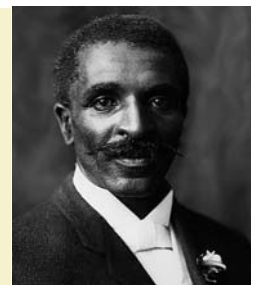
and browse through the wide array of video clips and first-hand reports directly from experienced farmers.

**"SoySoap" worked a miracle** for a North Carolina soybean grower who tried an all-natural foliar-spray developed by Biobased USA. The Biobased USA licensee, a friend of his, already had 5,000 customers world-wide for his products and talked of astounding success on various crops. So he mixed Biobased USA's "SoySoap" as an additive when he sprayed a soybean test plot with Round-Up and was dumbstruck when the beans didn't yellow and kept right on growing. Then, as drought struck, he was further amazed when the treated beans thrived on almost no rain and yields were double what he got on untreated beans. This spring he's using the product on all of his 2,000 acres. Contact [soysoap@biobased.us](mailto:soysoap@biobased.us) for further information.

*Doane's Agricultural Report, 01/04/08* 1

**Only a few brave U.S. ag publications** (like Doane's Agricultural Report and the Kiplinger Ag Letter) which don't depend on ag chemical advertising have reported SoySoap results on U.S. farms. Overseas, Internet blogs are spreading the word so rapidly that Asian producers are adopting this yield-and-quality enhancing technology on far more acres than in the United States.

**"I believe the Great Creator** has put ores and oil on this earth to give us a breathing spell ... As we exhaust them, we must be prepared to fall back on our farms, which are God's true storehouse and can never be exhausted. For we can learn to synthesize materials for every human need from the things that grow."  
*George Washington Carver (1864 - 1943)*



*This special research update can lead your farm to a new, higher yield level — before many other growers get ahead of you!*

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## How farmers are starting a **New Green Revolution!**

*In the photo at right, you'll recognize Dr. Norman Borlaug, known as the "Father of the Green Revolution." His friend, Dr. Leon Hesser, is often called the "Uncle" of the Green Revolution because he spent much of his career helping farmers expand high-yielding grains and improved technology worldwide. Now, Dr. Hesser brings you news of a high-yield, low-cost crop technology widely used in Asia, but little known in America. Dr. Hesser says:*

"I helped introduce Dr. Borlaug's high-yielding grains to hungry millions. And I wrote Dr. Borlaug's biographical book: *The man who fed the world*. **But I've never experienced anything like what I've seen this summer** in the fields of a dozen farmers in North Carolina! I saw wheat yielding 95 to 120 bu. where the best yield had been 70 bushels. A grower who used this spray-applied product in 2007 said his soybean yield jumped 80%. I encourage you to read this four-page report to see how *your* farm can benefit from a New Green Revolution."



**Two of the world's most dedicated** grain-raising experts: Dr. Norman Borlaug (left) with Dr. Leon Hesser. After a career of helping increase food production worldwide, Dr. Hesser retired to Florida. In early summer 2008, he investigated harvest results on wheat, oats, soybeans and other crops on the farms of eight North Carolina producers who are testing a unique, biologically benign spray material. Its research name: "SoySoap." See evidence of its effectiveness in this report, then view detailed information and videos at the website: [www.fd-ag.com](http://www.fd-ag.com)

### **Dr. Hesser adds this update in an August 2008 interview**

"I've worked with crops in 20 countries to help advance the Green Revolution, but I've never seen crops respond to a product like this.

"The dozen or so farmers I met in North Carolina are ecstatic. Typically, they're getting 35% to 40% higher yields on soybeans, oats and wheat because of this product.

"Somehow it causes plants to generate a larger root structure, which leads to improved plant health and larger yields. It's reasonable to assume the improved health and larger rooting allows plants to draw more nutrition from soil.

"I've studied wheat all over the world. Normally, heads of ripe wheat  
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are about three inches long. But over 80% of the heads on treated wheat I saw in North Carolina were four inches long or more.

"Also, wheat heads normally have three rows of kernels. Nearly all of those North Carolina growers had wheat with *four* rows of kernels.

"One more observation: Normal test weight per bushel for wheat runs 53 to 54 pounds. The North Carolina growers had wheat with test weights around 60 pounds, sometimes higher.

**"Let me express my confidence** in the product this way: I have a signed agreement with the developer that authorizes me to introduce this new technology to several countries in Eastern Europe. I'm planning a trip to

those countries so I can talk with their farmers and leaders, explain the product, and start customs and regulatory proceedings to provide it to their farmers. It may be a big hurdle. But I'm going to try it.

"I have experience in those countries. From 1995 to 2001, I made 23 trips to Ukraine to help their government transform state-owned collective farms to private ownership.

"There was so much enthusiasm in the countryside that the central government finally said, 'Okay, show us how to do it!'

"I expect there'll be even more enthusiasm among farmers in those nations when they see how they and their citizens can benefit from this inexpensive, effective new product."