

Don't Sell Foliar Fertilization Short

If you grow soybeans, put Allied Chemical's Folian on your list of "promising new products to test this year." Despite what you've read and heard lately, foliar fertilization — if you use a quality product and apply it right — is alive and well.

In fact, you may even want to do some "behind the barn" experimenting with foliar feeding of corn. A handful of Indiana corn growers who tried it last year with Allied Chemical's Folian are convinced they've got a real yield-boosting tiger by the tail.

FARM SHOW, along with editors from other farm magazines, learned about this and other latest new developments on foliar feeding two weeks ago at a press conference sponsored by Allied Chemical Corp. Here's the picture on foliar feeding, presented by crop researchers who appeared on the conference program:

Dr. John Hanway, Iowa State University Research Agronomist. Dr. Hanway focused nationwide interest in foliar fertilization in January, 1976, with his announcement of a whopping 23 bu. yield increase with foliar fertilization of soybeans. Working with an experimental material supplied by Allied Chemical, he applied high doses (up to 20 lbs. of actual N,P,K and S per acre) of a complete nutrient solution on the leaves without damaging the crop.

Dr. Hanway hasn't been able to duplicate his first year's spectacular results. Nonetheless, he remains optimistic: "Foliar seems to have real potential for increasing yields during the seed filling period. We know we need to put on four elements (N-P-K-S) in the same ratio as they occur in the seed. We have had success and failure but the potential is so great that we don't dare drop our effort for consistently successful results."

Dr. Y. V. Subbarao, Agronomist for Ed's Supplies, Shipshewana, Ind. In preliminary on-farm trials last year with local farmers producing hybrid seed corn, foliar fertilization with Folian boosted yields 9.6%, resulting in \$15 to \$20 extra net profit per acre. Treated plots also averaged 4 points drier, leading to earlier harvest and less drying costs. Folian was applied at the rate of 5 gal. per acre one to two weeks before tassel emergence.

"We are not ready to make recommendations and emphasize that the use of Folian on corn is strictly experimental. Nonetheless, preliminary results are exciting and corn growers who tried it last year are anxious to repeat the practice on a bigger scale this year," says Dr. Subbarao.

Dr. George Ham, University of Minnesota Agronomist. "Soybean foliar fertilization has shown potential from the very beginning. Dr. Hanway originally observed a 23 bu. yield increase and the following year we observed a 9 bu. increase. A lot of people jumped on the bandwagon and tried to use the formulation like a finished product. Now, Allied Chem-

ical has a more practical formulation. It's simply a question of following up on a promising concept. We can't give up."

Dr. Ham warns that some companies have attempted to jump on the foliar fertilization bandwagon with low analysis products. "Be sure you're using a quality product that contains high amounts of N,P,K and S. We're talking about 10 to 12 lbs. of actual material applied per acre."

Don Johnson, Allied Chemical Agronomist, stationed at Omaha, Neb. He notes that in 1976 following Dr. Hanway's announcement of the 23 bu. yield increase with foliar fertilization, "everybody wanted to get into the act. Growers across the U.S. soybean belt were clamoring for a foliar product, and various firms were trying to make it. Many new researchers wandered in, and growers demanded that their state agricultural university test the foliar material.

"TVA, which has traditionally supplied fertilizer materials for independent research, announced in 1976 that it would supply a limited amount of foliar fertilization material (potassium polyphosphate) to industry and university researchers for formulation of foliar solutions. TVA also offered quantities of its product for sale to fertilizer manufacturers and fertilizer dealers. With soybeans at about \$8 per bu., farmers were eager to try the new concept for increasing yields. Foliar solutions were applied to soybeans with a wide variety of materials and methods of application. Some shocking results occurred. Many of the people who applied foliar materials reported serious damage and, in many cases, even reduced yields," explains Johnson.

He cites two general reasons for the 1976 failures — formulation and application. "Most of the agronomists, dealers and growers had never applied foliar fertilizer on soybeans before so they took whatever type of formulated product they could obtain and put it on with whatever type of equipment they had.

"In contrast to the experience of other's, Allied Chemical trial results with Folian — both in the U.S. and Brazil — were successful. And, as a result, we announced the commercial availability of Folian for the 1977 season. We continued to work with researchers at various leading universities and independent research organizations and believe we opened the threshold to a new era in fertilization for soybeans and a broad spectrum of other crops."

What were the results with Folian on soybeans last season?

"Essentially, 1977 Folian data confirmed previous yield increases, and phytotoxicity problems were virtually nil," says Johnson. He notes that Folian was supplied in experimental quantities to many researchers outside Allied Chemical. "As a group, these researchers report that tissue damage or leaf burn was not a prob-

lem in most 1977 experiments. Foliar product quality, adjusted rates of application, smaller spray droplets, and early morning or late evening applications all contributed to the elimination of the severe burn problem reported by several of the same researchers in 1976. Where Folian was applied in direct comparison with foliar sprays formulated from TVA base nutrient sources, researchers reported that Folian was less phytotoxic. Sixteen researchers obtained yield increases of 3 bu. or more from Folian application in 1977. The highest response was 7.3 bu. per acre and the average response for the 16 was 4.8 bu. per acre."

Steps to follow: If you'd like to experiment on your own with Folian, Allied researchers suggest experimenting on soybeans.

1. Apply Folian at the rate of 10 gal. per acre when the plants are in the early pod stage (about 1/4 in. long pods).

2. Do not treat if the crop is under severe moisture stress and is not actively growing.

3. Walk the field to determine when it's in the early pod stage. From this stage, you have about 10 days to get the material on.

Cost of the material is right at \$1 per gal. Applied at the recommended rate of 10 gal. per acre, you'd have \$10 tied up in material costs, plus another \$3 to \$5 to have it custom applied.

With beans at \$5, you'd thus need about a 3 bu. increase to break even. Allied researchers say you should treat solid-seeded soybeans the same as you would beans planted in rows.

"Until very recently, there was no practical way to put high doses of a complete nutrient solution on leaves without damaging the crop. We feel we have opened a new era with foliar fertilization and we are committed to it," says Dr. Ramon Garcia, Allied Chemical agronomist.

Dr. John Clapp, Allied agronomist headquartered in Greensboro, N.C., notes that, "We have seen enough responses through several years of testing in this country and Brazil to know that application of Folian will increase yields when applied at the seed development stage, using recommended rates and timing."

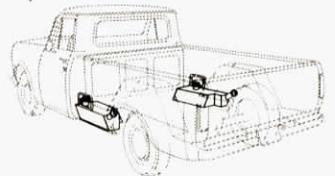
For more details on Folian and its availability in your area, contact: FARM SHOW Followup, Allied Chemical Corp., Box 2120, Houston, Tex. 77001 (ph 713 960-7935).

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For more details, contact: FARM SHOW Followup, Eaton Metal Products Co., 4800 York Street, Denver, Colo. 80216 (ph. 303-825-7205).