



# **The Rising Sun**

News & views from a leader in private brand forages

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**Our customer commitment...***The ABI rising sun symbol represents our constant commitment to you. For consistent performance from a line of high quality alfalfa varieties, bank on ABI Alfalfa to provide your customers with better seed for better feeds. As consistent as tomorrow's sunrise. Call Hank Bendorf, director of private brands, Shawnee Mission, KS, 913/384-4940, to find out more.*

## **No shortcuts allowed**

Livestock producers across the country are making the decision to graze alfalfa. University research and producer trials have shown that grazing alfalfa can lower input costs, increase profits and improve animal health.

But deciding to graze alfalfa is only part of the conversion process. Finding an alfalfa variety that withstands intense grazing is critical to grazing success. Only recently have researchers refined a selection and breeding technique to develop true high-yielding, persistent grazing alfalfa varieties.

"To develop a true grazing variety, it must be selected under actual grazing conditions," says Dr. Jim Moutray, director of forage research at ABI Alfalfa in Napier, Iowa. "Animals are very destructive to alfalfa plants during grazing," he adds. "They trample it, tear it, and even smother it with manure. You can't simulate those grueling conditions in a lab or by cutting plots."

Researchers at ABI are using this selection process to develop new grazing varieties. "We put our best germplasm in grazing trials at six different locations across the country," Moutray explains. "After 2 to 3 years of hard, continuous grazing during the growing season, we select what survives. Out of 10 million plants, we have about 3,000 survivors to date. These are the parent plants for our new ABI grazing-tolerant varieties."

If a grazing alfalfa variety is in your future, be sure to check out the history of its development. Shortcuts in breeding research can result in a shorter stand life for any alfalfa variety.

## **Zoospores give researchers edge**

A researcher's work is never done. That is certainly true of the hard-working, dedicated research team at ABI. Researchers at ABI continually work to refine and perfect

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techniques to select the **best possible** alfalfa varieties to offer higher yields, increased stand persistence, and improved disease and pest resistance.

The Zoospore Five-Day Inoculation Technique is a process recently adopted and refined by ABI. This now enables researchers to more accurately select plants for improved resistance against *Phytophthora* root rot in the seedling stage by inoculating seedlings with a virulent, more aggressive form of *Phytophthora* early in their growth.

"In conditions of excess moisture, *Phytophthora* can severely damage seeding stands before plants are fully developed," explains Dr. Jim Moutray, director of forage research at ABI Alfalfa. "Now, with the zoospore inoculation technique, we can challenge our seedlings when they are just five days old." Methods used in the past required waiting until seedlings were between 6 and 8 weeks old. Moutray adds that the zoospore inoculation technique also is used to select for plants resistant to *Aphanomyces* root rot.

The plants that survive the highly stressful ABI Zoospore Five-day Inoculation test show extremely high resistance to *Phytophthora* and *Aphanomyces* root rot. These plants are then used to develop new ABI varieties that better withstand wet growing conditions.

The work continues . . .

## The true test of survival

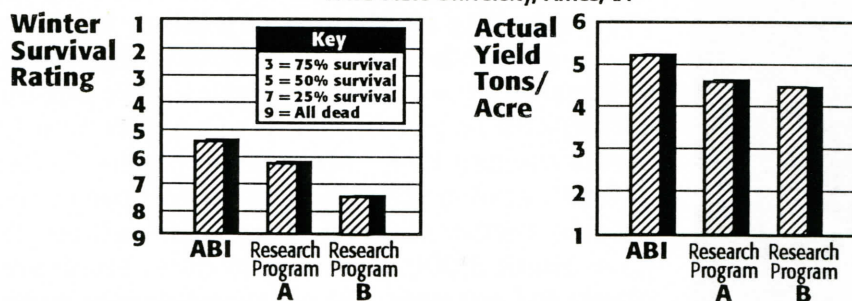
Alfalfa growers are sometimes caught in the middle when selecting varieties for both winterhardiness and high yields. While the severity of the weather and management practices have an effect on stand survivability, one key factor is variety selection, according to Dr. Dan Undersander, University of Wisconsin forage specialist.

"Many growers don't select the most winterhardy varieties because, traditionally, the hardiest alfalfas haven't produced yields equal to other, less-winterhardy varieties," he says.

Now, with varieties developed through aggressive research at ABI, growers no longer have to choose between winter survival or yield potential. During the harsh winters of '91 and '92, Iowa State University field trials proved varieties with lower winter injury still produced top yields. The chart below clearly shows that ABI varieties have the best combined winterhardiness and yield performance over varieties from research program A and research program B.

### 1993 Average Winter Survival and Yield Comparisons

Iowa State University, Ames, IA



Choosing ABI varieties with documented winterhardiness and industry leading yields can be the first step toward beating old man winter.

## More about alfalfa

The National Alfalfa Symposium will be in session February 24th in Springfield, Ill. A leadership forum on the 24th will discuss the role of alfalfa in animal nutrition, proposed national forage quality testing and autotoxicity. The 25th will be devoted to alfalfa production with discussions on manure management, energy conservation, packaging alfalfa for market and managing alfalfa for feeding. For information, contact Dr. Darrell Miller (217-333-9485) or Jerry Johnson (916-752-0572).

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