



## WVS Summer Intern

Abby Underhill from Ohio, pictured above, is our current summer intern. Her research project includes a study on calves treated with a microbial supplement.

## Stress, Microbiome and Dairy Cow Health

**By Dr. Ralph Stowell  
of Waupun Vet Services**

Stress events in dairy cattle — such as heat stress, freshening, transport, or social disruptions — can profoundly alter the gut microbiome and intestinal integrity.

Research led by Dr. Lance Baumgard at Iowa State University has highlighted how stress shifts nutrient partitioning and reduces blood flow to the gastrointestinal tract, contributing to compromised barrier function often referred to as “leaky gut.” When this occurs, microbial components like endotoxins can pass into circulation, triggering systemic inflammation and immune activation.

These inflammatory responses not only reduce feed efficiency and milk production but also further disrupt the microbiome, creating a negative feedback loop that challenges overall cow health and performance. Managing stress, therefore, is critical not just for welfare, but also for maintaining gut integrity and microbial balance in high-producing dairy herds.

## High Oleic Soybeans in Dairy Cattle Rations: *An Epiphany for Farm Produced Fat*

**By Dr. Al Martens  
of Waupun Vet Services**

The use of high oleic soybeans in dairy cattle rations has increased significantly as more farmers adopt on-farm feed production systems. These beans replace the linoleic acid structure of soybean oil with oleic acid, making the oil similar to that of olive oil. This is not a GMO genetic insertion. There is increased value in these beans from the human side of the marketing curve, but the beans have to be kept separate and marketed at selected mills. So, the beans are produced as grow your own beans, process them yourself, and feed them to your cows. The big draw is that unlike traditional beans that suppress rumen function beyond a cap, high oleic acid beans basically have no cap, allowing a less expensive higher energy dense ration.

The epiphany is that this will probably become common on most dairy farms in the next decade, changing the entire fat feeding structure of dairy cow rations.

Two leading high oleic soybean varieties used in dairy systems are Pioneer Plenish® and Bayer/Asgrow Vista Gold®. These varieties are genetically engineered with stacked herbicide-tolerant traits (such as glyphosate and dicamba resistance), allowing for more flexible weed control programs and higher yield reliability. From a production standpoint, seed costs for stacked trait soybeans typically range from \$55 to \$80 per bag (140,000–150,000 seeds/unit) depending on region and licensing agreements. High oleic soybean seed generally carries a \$5–\$15 per bag premium over conventional stacked soybeans due to trait royalties and identity-preserved production requirements.

And there is no yield drag from the oil change. I’m an organic chemistry nerd, so I had to look at the chemical structure. It’s a simple change, no work for the plant to produce the different oil.

## The Mail Service ...

This is an absolutely true story. We sent a bill to a farmer in Belgium, Wisconsin, with a Wisconsin zip code. It came back several months later. We learned that the post office in Belgium, the actual country of Belgium, in Europe, couldn’t find the address.

# Top 10 Things Dr. Al Learned from Farmers

The top 10 things I learned from farmers when I started work in 1978. With a special thank you to all the farmers that taught we these things

1. Get your ass out of bed. Sounds simple, but I can remember the first year in practice, driving around at 5 in the morning, and the successful farms all seemed to already have the barn lights on.
2. Diversify your day to be happy. The small family farms with maybe a couple cash crops on the side, that did their own field work, and raised their own youngstock, and maybe had pigs on the side. Variety makes the day.
3. Every morning you need more jobs to do than you can possibly accomplish in that day. If I ever get halfway through a day and think I have nothing to do I'll drop dead.
4. Be your own boss. It's true that the farmers directed what we did, but the challenge of deciding the order of your day, of your projects, which calls to run first, it's an endless joy if you recognize it as a blessing.
5. Stop for lunch. The Dutch farmers in the Waupun area had lunch when they got up, then after milking they ate breakfast. Then they had lunch midmorning, then dinner at noon. Lunch came again about three, followed by supper after milking, and then for the forth time of the day, in the evening, they had lunch. Might be part of why I take heartburn meds. But I sure loved a break midafternoon with some client for coffee and a sandwich. I really miss that.
6. Put cheese on your banana bread. The first week I was here, pulling pigs at 3:00 in the morning, I was invited in for lunch before there was any light in the east, and I was introduced to cheddar cheese on buttered banana bread. As good as it gets when it's homemade.
7. Expenses are just as important as sales, maybe more. There are a lot of systems on different farms to watch expenses, but when you can't charge more than your neighbor for your product, expenses are critical.
8. If you enjoy your job, then an 80-hour week isn't that bad. I hear about all these college professors talking about work life balance, but what if work and life are part of the same balance? My philosophy is you are doing three things in life, either making money, spending money, or sleeping. Enjoy.
9. Have empathy for the animals. There are three farmers that are gone but I want to mention. Warren Mouw, Roger Riedeman, and Wally Vis. Their standards for animal care I still strive to meet.
10. Wave when you pass someone on a not very busy road. They're your neighbors. It might make you smile.

## WVS Office Employees Tour Animal Health Distribution Center

By Carrie Kohn  
WVS Office Manager

Word of caution-giant meat sticks can be life threatening. About halfway through our three-hour journey to tour the Animal Health distribution warehouse in Manchester Iowa a casualty almost occurred. Savannah Hoffman, our new AHI rep and the chauffeur, was so startled by some flying debris, she nearly choked on her bite. This was just the first of many memorable moments with Savannah, Sharon, and Stacy. Spending all day with Savannah was a great way to get to know her. I am thrilled that she is our new AHI outside sales representative, and I think you will be too.

In my mind, I was expecting a humongous warehouse with people running around in a sort of controlled chaos. What I witnessed was a completely different scenario. The building itself was not that large considering the volume and variety of products housed within. The inventory was stacked 3 levels high with a mezzanine for smaller items and a pharmacy area for scripted products. The whole building is treated the same as a human pharmacy, so security is tight. Visitors are not allowed to bring phones into the facility since photos and videos are prohibited. All the products are scanned with bar codes upon entry and during picking which allows inventory to be constantly updated in real time. Areas of the warehouse are designated as zones and workers pick from their zone and pass the order along for continued fulfillment. Scripted products are only picked and labeled by pharmacy technicians overseen by a pharmacist. Overall, the process was extremely efficient, organized, and impressive. I saw so many items that I did not even know that AHI sold. Since this warehouse services swine facilities, it carries a vast array of items such as peanut butter, ketchup, toilet paper, bathmats, office supplies, batteries, cleaning supplies, boots, and clothes. If you need it, AHI might just have it. Don't be afraid to ask.

Another The delivery trucks are all sprayed down after leaving each delivery site for biosecurity reasons, washed upon returning to the warehouse, and then parked for three days before the next route. The truck route supervisor can see the location of any truck at any time.

I met some great people, gained a wealth of knowledge, and appreciate the accuracy and speediness of our AHI orders a whole lot more now. The car ride was full of laughs, and I tasted the best queso ever at a restaurant in Dyersville, Iowa!