



*Each SoliDoser gun is individually tested before it is put to use. Designed for the cattlemen and field tested the SoliDoser gun is a fast and effective way to deliver herd specific vaccines.*



*The SoliDoser clip was designed for ease of use and to prevent malfunctions known with traditional implanting devices." Pellets or implants are coated with a moisture barrier to prevent guns from clogging up.*

# Herd Specific Advantage

## Dual-dose technology promotes consumer friendly beef production

by Clifford Mitchell

Animal health programs have grabbed the spotlight in the beef industry for at least the past 15 years. The race to improve the industry and capture lost performance has sent millions (if not more) of dollars in search of products that will help ranchers build a better end product.

Regional nuances and differing conditions sometimes dictate a different health protocol. Vaccinating for diseases specific to a location or herd could be the wave of the future, to improve vaccine efficacy and decrease sickness within beef herds.

SolidTech Animal Health, the first and only USDA-licensed vaccine manufacturer in the state of Oklahoma, along with its strategic alliance partner Newport Labs in Minnesota, set out to design animal health products that could fit in today's low cost production system.

"We have the ability to isolate pathogens and build a bacterin to fit a herd specific need," says Dr. L.D. Barker, Newcastle, Oklahoma.

"When we create a herd specific product it can also work for neighbors where there is nose-to-nose contact or flies that can be vectors of disease," says SolidTech COO, Dr. Rick Hansen. SolidTech also supplies a

commercial pinkeye bacterin distributed by Pfizer.

SolidTech products are all designed with two things in mind, to be user friendly and good for the beef business. The new protocol depends on delivering the desired protocol to fight things like pinkeye or respiratory disease through an implant.

"All of our products are killed vaccines which means they are very safe. The dual-dose technology allows the product to both prime and boost the immune system to develop immunity with one dose, eliminating the need for a second time through the chute for a booster," Hansen says. "Some of your standard vaccines also contain high levels of endotoxin, which can cause an anaphylactic reaction, sometimes resulting in death. The dual-dose technology is safer than a standard injection so you can give more vaccines at the same time. Each vaccine is color coded and the guns are individually tested to make sure they work in the field."

As with any new technology growing pains exist when the product is actually put to work in a real world situation. Most beef producers have experienced this with record keeping technology on their laptops or even glitches in trucks.

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“Our product is kind of a cross between a vaccine and a pharmaceutical because it’s a solid dosage vaccine tablet (implant) with a moisture barrier coating. The initial product was not coated so when stored in the refrigerator and removed on a hot humid day, the product started to melt and plugged up the guns,” Hansen says. “The coating doesn’t affect product performance; it protects the refrigerated vaccine between getting it out of the package and into the animal.”



“The guns are really easy to use. I have given all the implants here at the ranch myself and the only problem we’ve had is when we worked calves on a day it was humid and misting, the guns were clogging,” says Terry Forst, Stuart Ranch, Waurika, Oklahoma. Stuart Ranch is an Oklahoma Centennial Ranch.

According to Hansen and Barker, the real test is when producers use the product in the field and provide feedback. Keeping the lines of communication open will allow SolidTech to keep improving their product. The new coating was developed to keep the guns from clogging so ranchers like Forst will not experience this problem in the future.

Like any other animal health product, injection site and reading the label are very important parts of the process. Finding products that will be safe and not cause any post-vaccination stress like abscesses or other problems is important to most producers.

“Our products are designed to be given under the skin in the triangle of the neck or at the base of the ear, not in the hormonal ear implant site,” Hansen says. “We want to practice good medicine by giving both a priming dose and a booster dose. There is a convenience factor in this product because BOTH are given at the same time.”

“I like the needle on the gun and I can usually clean it after every one or two head with alcohol. This was a little tough at branding we were running two crews and I was the only one giving shots and implanting,” Forst says. “We have had no injection site blemishes from the implant gun. We started a protocol with our calves where we implanted them at branding and eliminated our pre-weaning vaccinations. It was a little more work at branding, but it was worth it because we eliminated

*SolidTech Animal Health vaccines are best given under the skin in the triangle of the neck area or at the base of the ear, not in the normal hormonal site. This process does not slow down the crew working cattle. With proper sanitation few, if any, injection site blemishes are detected. Implanting with herd specific vaccines that feature a priming dose and booster dose given at the same time eliminates the need for handling cattle pre-weaning.*

handling those cattle again until we wean them. ”

“I have found the protocol at branding then boosting at weaning works well for most producers,” Barker says. “Most producers will worm those calves at weaning, which is a spark plug for a healthy immune system.”

Timing is everything in the beef industry and the word patience does not sit well with most producers. After all, the beef business is about results not what could have been. According to Dr. Hansen this could be one of the biggest obstacles SolidTech faces when trying to help first time clients.

“One of the biggest challenges we have is if a producer has a problem, they want something right now to help. We can develop a herd specific vaccine within 90 days and have it ready for the rancher when it’s time to vaccinate,” Hansen says. “If one producer is experiencing death loss or has an outbreak, we can try to establish common pathogen links among several herds so we can help all at the same time. Depending on exposure, sometimes the dual-dose vaccine will also produce a therapeutic response, but instead of producers relying solely on that, Dr. Barker recommends giving the vaccine plus an antibiotic when an outbreak happens.”

Commercial products have served most beef producers well, but in some cases problems keep re-occurring and costing producers precious dollars when profit margins are already tight. Herd specific products allow each producer to meet the problem head on.

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“Many commercial products were approved for pathogens isolated 20 years ago. Disease causing pathogens can mutate and change over the years,” Barker says. “We’re always rolling with the punches if we need to change because the pathogens change. Eye-swabs, nasal swabs, lung tissue are all good tools to isolate pathogens. Hopefully, we can create a product that will help build an immune response for the pathogens affecting that herd.”

“We were having a lot of trouble with pinkeye. Pinkeye problems and the drought were on the verge of eliminating our fall calving herd,” Forst says. “They created a vaccine that has worked here. It’s not a cure all, we still get pinkeye, but we swab to try and identify what Dr. Barker calls rogue strains. It’s an ongoing battle, but at least we have a way to fight it.”

As with any health program, whether it involves traditional injections or new technology, good management must be applied to see results. The tools of the trade, even the new and improved ones, will not provide expected results if cattle do not have a functioning immune system.

“Just because a vaccine didn’t work, it’s not necessarily the vaccine’s fault. We have to look at things like water quality, mineral deficiencies and immuno-suppressors such as PI cattle,” Barker says. “It’s not always that you’re vaccinating for the wrong thing. Environmental factors like temperature can also complicate things. It takes good management to build immunity.”

All natural or hormone free programs mean more to producers than they have in the past because consumers are demanding this type of product. In certain areas of the country, this has not been an option in the past because of things like pink eye or foot rot.

“Pinkeye and hoof rot kills all possibility of all natural premiums for producers. If we can get a vaccination protocol back at the cow/calf level then we can prevent the disease and minimize antibiotic use,” Barker says.

“If you address building immunity in the calf crop, it will prevent costs and give you the option to enter a premium market.”

“Natural programs have really never been an option for us. We don’t have sick cattle, but hoof rot and pinkeye problems take me out of that market,” Forst says. “I am not necessarily going to through all my cards into a natural market, but I want that option. Today, market flexibility is a big thing when it’s time to sell.”

Recent supply shortages, drought conditions and higher costs of production have placed an emphasis on efficiency. Beef industry opponents have also made sure to let the buying public know about things like antibiotic use and handling practices. Today, the animal health program demands results. Finding the right answers not only helps profits, but it also provides a safe healthy product to a demanding consumer.

“We have to minimize handling because of labor shortages. They used to say it would take 30 days to get that original weight back, our studies show calves gaining 2.2 pounds per day right out of the gate. We have to get good gains, hormone free,” Barker says. “Antibiotics cost money and give our opponents ammunition. When a calf gets sick he has little chance of grading Choice which can cost the industry lots of money when more people are demanding the Choice product. We have tried to develop this technology chute side to answer critic questions and meet the needs of the producer.”

“As producers we have to prove we are committed to raising a better product. It is important to us that our calves perform better and more efficiently. By taking the safe beef production efforts of Dr. Hansen and Dr. Barker back to the cow/calf level, hopefully we can take away our critics ammunition,” Forst says. “I am going to use the best technology I can and do everything in my power to ensure we’re raising the safest product we can. It’s important to me.”

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