

Genetic Trends

June 2008

Vol. 60 No. 3



INSIDE SCOOP:

- **Onward & Grieves Sire Features**
- **Genomic Sire Selection**
- **Synchronization Protocols**
- **Connect With Your Community**



C-O-N-N-E-C-T Your Dairy To Your Community

Research shows that producers are the most believable source to tell the story of 'dairy'. With increasing land development bringing non-farm families into agricultural areas in many parts of the U.S., building relationships with both your farm's neighbors and your local community can mean the difference between thriving and going out of business. Also, consumers as a whole want to know more about how their food is produced and the lack of that information is having an impact on the way producers farm today.

Stacy Dohle, Midwest Dairy Association's industry relations coordinator shared with producers this spring at the Accelerated Genetics Young Producer Leadership Conference some of the issues and opportunities in the consumer marketplace relating to milk, dairy products. And then armed the producers with consumer research trends, key messages, and communication tools and techniques for them to use in their community, with the media and other influencers.

Communication outreach is a necessary aspect of the business plan for many dairy and beef operations these days. The Midwest Dairy Association along with other industry groups like PDPW (Professional Dairy Producers of Wisconsin), have developed programs to help train producers to connect with their local communities, empower producers to stand up, step out and speak for themselves and the industry!

To learn more about how you can get resources to help your dairy connect with your community, contact your state or regional dairy promotion organizations or check out www.dairycheckoff.com. Then take the opportunity to CONNECT!



Photos by Midwest Dairy Association and Kathy Skiba

These producers have taken the time to step out and speak up for dairy. The top photo is a producer talking to a local community group. The bottom photo is a producer media interview.



One way producers can open the doors of communication with their community is to offer tours of their farm or visit schools or day care centers providing an educational experience for the whole family to learn about the dairy industry, through telling how cows are raised and taken care of to explaining where milk comes from and the special diets cattle receive to help them produce one of nature's most perfect food.

GET TO KNOW YOUR NEIGHBORS:

- This may be the most important and simplest step to minimize potential conflicts. Be friendly; don't come across as secluded or protective. Simple gestures, such as smiling and waving, are important habits.
- Create an atmosphere of dialogue. Initiate conversation with neighbors and be an exceptional listener. Before long, you will have important insight into their perceptions about dairy farming. You may discover that the cranky neighbor next door just wants to sleep past 5 am and can't because of that loose granary door you've been meaning to fix.
- Host a summer picnic or winter ice skating party, invite local schools and groups to the farm for an educational tour-the possibilities are endless!

GOOD LUCK AND HAVE FUN!

Editor: Kari A. Stanek

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Accelerated Genetics Vision Statement

We are a global provider of bovine genetics and research, reproductive services and solution-based animal health products. Our vision is to be the forerunner in developing innovative technologies and exceptional services that will aid our customers in achieving their ultimate herd goals.

Features and News

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On The Cover

Summer is here and with it many youth across the United States are preparing their cattle for the show season. With each show, brings an opportunity for both youth and adults to directly educate consumers about how well producers care for their animals, how milk is produced, and how nutritious, delicious and SAFE dairy products are for people. So take the time this summer and connect your dairy to your community!

Photo by: Kari Stanek

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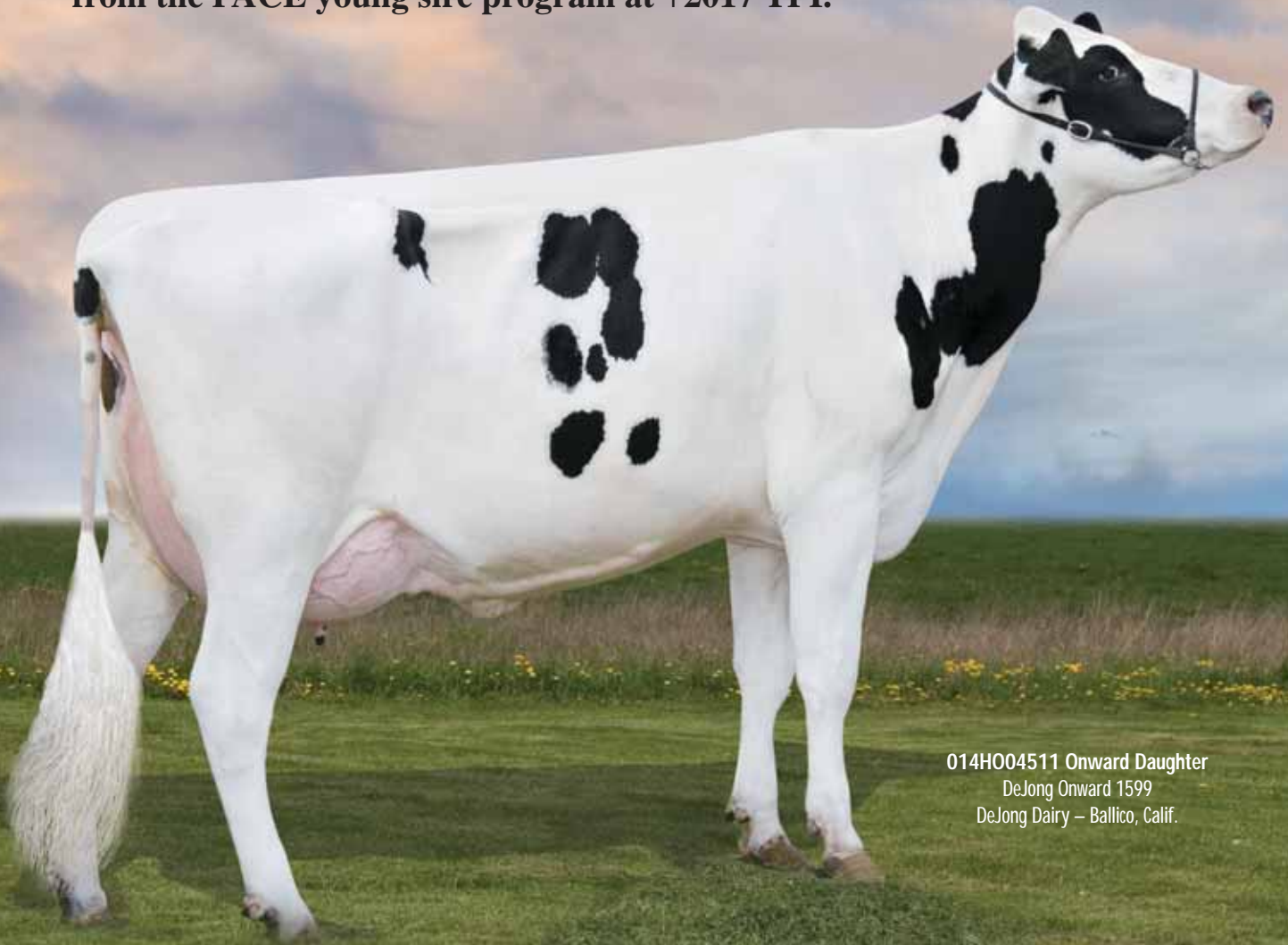
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Onward Leads The Way

April 1, 2008 marked a historic day for Accelerated Genetics when 014HO04511 Andacres Morty Onward graduated into the active lineup from the PACE young sire program at +2017 TPI.



014HO04511 Onward Daughter
DeJong Onward 1599
DeJong Dairy – Ballico, Calif.

ONWARD

014HO04511 Andacres Morty Onward excels in milk (+2378 PTAM) with elite butterfat (+.04% +98 PTAF) and protein (+56 PTAP), and breed leading Net Merit (+\$577). He also is impressive in Type (+3.23 PTAT, Udder Composite (+2.47 UDC) and Foot and Leg Composite (+1.34 FLC).

HIS DAUGHTERS

The Onward daughters are above average for stature with angularity and dairy strength. He also adds width at both ends and some slope to the rump while straightening the rear leg with a steep foot angle. Udders are shallow with phenomenal rear udders, snug fore udders with excellent teat placement and ideal teat length.

HIS BREEDERS



Allen and Lorraine Andrews of Gillett, Pennsylvania

Onward was bred by Allen and Lorraine Andrews of Gillett, Pennsylvania which is located in the north central part of Pennsylvania a few miles from the New York border. They milked around 90 cows until March 2006 when they sold the milking herd in small groups. They recently sold the last of the heifers which included a group of Onward daughters.

The Andrews continue to farm nearly 700 acres following their retirement from dairying. The herd was an impressive group of good typed cows that also excelled in production with high components and they sold lots of excess bred heifers due to the strength of their reproductive program. In visiting with the herds that have purchased their cows and bred heifers they are very pleased with how they have developed.

One such breeder is Brian Mauer of Anna, Ohio. He purchased six animals three years ago from Andacres and was pleasantly

surprised by the quality and kind of animals they had. The cows he took home were all two to three year olds.

Brian says, "The Andacres cows were wonderful with much eye appeal. The Andrews took very good care of their cows. Before I purchased any cows from them, they wanted to know about my farm as they were genuinely concerned about the well-being of the animals. They even called me a few weeks later to see how the cows traveled and adjusted to my farm,"

"I have never met people that took better care of their animals and I am pleased to say that all six of the cows I bought are still on my farm. Also they all rank right at the top of relative value of my herd, which says a lot about the caliber of cows they were breeding," adds Brian.

HIS FAMILY

A solid sire stack and a deep maternal line outline the cow family that produced Onward. His mother is an early second crop daughter of Comestar Outside that classified Very Good-86 being Very Good in all categories as a two-year old.

Shortly after her classification the agreement to contract mate her to her current service sire Morty was made. It was an easy choice as Morty then ranked in the top 5 TPI as a new release and Outside was an emerging high-ranking highly reliable second crop sire that was gaining in popularity around the world. Outside Oprah completed two lactations with the second one over 31,000 milk, but had some stomach disorders and was lost after her second calving.

The grandam of Onward was a very impressive cow as well. She was an Excellent-90 (Excellent Foot and Leg and Excellent Mammary System) Leadman daughter that completed six impressive lactations all over 4.2% fat and had lifetime totals of 147,900 milk. She is recognized as a Dam of Merit but her most recognizable attribute is her son, Andacres Hunter Orion, who ranks #16 on the current Top 100 TPI list with 97% U.S. Reliabilities for Milk and Type list from the Holstein Association at +1611.

Orion is well known around the world for siring high fat with good udders, and good feet and legs. He has over 9200 daughters

and is the sire of four current members of the Accelerated Genetics active lineup (014HO04110 Scoop, 014HO04239 Travel, 014HO04244 Glasgow, and 014HO04013 Darksy).

The great grandam of Onward is a Very Good-89 Excellent Mammary System Belltone daughter who had four elite records and lifetime totals over 116,000 milk. Blending the high milk and type of Morty with the components, type and longevity of this great cow family has created a genetic giant that can move any herd Onward.

One of Onward's most appealing traits and strongest asset may be his unrelated pedigree. He is an outcross which makes him a nice mating for popular bloodlines and is a great mating on daughters of Ito, Potter, Ramos, Boliver, Titanic, Mr Sam, Magical, Die-Hard, Champion, Stormatic and Zenith.

HIS TESTIMONIALS

The daughters of Onward are just started to make their impact on herds and many breeders are already talking about them.

Joe Garber of Lancaster, Pennsylvania comments, "I was very excited when our first Onward daughter calved. She is a very well-balanced cow. I am also looking forward to watching more of our Onward daughters develop."

Jerry Zander of Barneveld, Wisconsin says, "She is a pretty good cow that is very easy to work with, to milk and is NOT excitable. She has a very nice udder and is in the top of the herd for production."

HIS SAMPLING

Sampled through the PACE young sire program in the fall of 2004, Onward is still adding daughters to his production and type proof and will have enough reliability to qualify for the Top 100 TPI list beginning in August of 2008.

And Onward will have sons entering the PACE program beginning in a little over a year to continue his and his family's positive impact on many Holstein herds.



Gregg Topp
Dairy Sire Analyst

WILL GENOMIC SELECTION CHANGE THE WAY SIRES ARE CHOSEN, EVALUATED, SAMPLED AND MARKETED?

Genomics is a technology that could be THE new cornerstone in the cattle breeding industry. Accelerated Genetics along with other members of the CDDR (Cooperative Dairy DNA Repository) provided critical DNA samples for the foundation studies of the USDA's bovine genome selection research and future samples will only strengthen the USDA's accuracy of genomic predictions. Accelerated Genetics is currently using the new genomic testing technology to screen young sires. HOW the technology will impact other aspects of the industry and customers is under review.

Using DNA and genetic marker data is not new to Accelerated Genetics. For the past 20 years through Genetic Visions, Inc, a wholly owned research subsidiary, Accelerated Genetics has been able to utilize genetic marker data in addition to traditional pedigree selection to advance sire selection. Accelerated Genetics was the first to use DNA research in the A.I. Industry and has always been a visionary company, incorporating new technologies quickly, like the new genomic research.

Dr. Gary W. Rogers
Professor of Animal Science
University of Tennessee

Curt P. Van Tassel
Research Geneticist (Animals)
USDA-ARS

Paul M. Van Raden
Research Geneticist (Animals)
USDA-ARS

George R. Wiggins
Research Geneticist (Animals)
USDA-ARS

Get ready for the new and improved 'black box,' as genomic selection is here! Genetic evaluations (i.e., predicted transmitting abilities or PTAs) for sires and cows will soon be enhanced by direct information from DNA.

The addition of this DNA information in the calculation of PTAs will have an important impact on breeding programs and will influence decision making at the dairy farm level, so producers need to be ready for these upcoming changes. Official USDA Predicted Transmitting Abilities that contain genomic information may be available in the U.S. as early as January 2009.

What Will Genomic Selection Do For Our Populations?

If the industry readily accepts genomic selection and we properly apply genomic selection, then we can expect to see faster rates of genetic progress for all important traits in dairy cattle. We expect that annual genetic trend in most important traits will increase by at least 30 percent and maybe as much as 50 percent. The actual increase will depend on the industry uptake of the new information and the actual average increase in reliability for the primary animals used for selection decisions.

Currently, as an example, the genetic trend for milk yield is almost 200 pounds per year.

This means that the average heifer born this year is expected to produce approximately 200 pounds more per lactation than the average heifer born last year, just due to improved genetics. With genomic selection, we expect annual rates of genetic improvement to increase, perhaps to more than 300 pounds per year.

For traits like Daughter Pregnancy Rate and Productive Life, the expected improvement in genetics may be relatively more substantial. More dramatic improvement in Productive Life and Daughter Pregnancy Rate is likely because genomic selection substantially increases reliability for young animals, so we will not be required to wait

as long for daughter information on Productive Life and Daughter Pregnancy Rate to have PTAs with acceptable accuracies. With the proper emphasis and the use of genomic selection, Daughter Pregnancy Rate will actually improve and this will reverse an undesirable trend seen during the last three decades.

The bottom line is that we will be able to have more reliable proofs at a very early age and can use these younger animals, especially younger bulls and younger females, in our breeding programs.

What About The Costs Of Genomic Selection?

Since the DNA testing for each animal for genomic selection is

still at the experimental level the fee is not what it will be in the future, as there will be other costs associated with the prediction. Right now it is cost prohibitive to test the entire cattle population. Initially, DNA testing will be done on prospective young bulls and on heifers and cows that are likely to be important contributors of bulls and heifers for breeding programs.

Furthermore, better assays will continue to be developed so animals may be tested more than once. No, DNA does not change, but the way it is tested will.

This still involves a large number of animals because not all the animals DNA tested will be used for breeding. As a specific example, we will likely DNA test many young bulls and eliminate most of them from breeding based on DNA results, much like we do currently with progeny tests.

As far as cost savings for genetic improvement, significant savings in the cost of progeny testing programs may result from genomic selection because the number of bulls that go through formal progeny test programs may be reduced.

Of course, all of the young bulls that were selected with PTAs based on pedigree information and genomic information will eventually get PTAs with offspring information just like they would if they had gone through a progeny test

program. At this point, it is too early to know exactly how progeny testing programs costs will change or adapt to the new opportunities that are provided by genomic selection.

Will There Be Any Changes In The Policies Or Decisions On The Use Of A.I. Bulls Within Our Herds And At The A.I. Company Level?

Yes, the A.I. industry and the herd owners and managers will need to change their thinking on how to use bulls with PTAs that include genomic information. Very young bulls (at approximately 1 to 3 years old) will likely become a much larger share of the A.I. bulls used in our herds.

As indicated earlier, reliabilities for PTAs for these yearling bulls will be considerably higher than reliabilities with just pedigree information (current situation). The increase in reliability will be substantial but will vary from one trait to another. At this point, reliabilities for PTAs on yearling bulls with genomic information will not get to the level of reliabilities for well-proven bulls, but the reliabilities for yearling bulls will be high enough to justify widespread use of these yearling bulls without waiting for PTAs that include progeny information.

It looks like reliabilities for these yearling bulls with genomic information will average about 70 percent across all traits with genetic evaluations

calculated by the USDA. This is considerably higher than the average current reliabilities of yearling bulls across these same traits (essentially double current reliabilities, which are about 35 percent). Reliabilities of yearling bulls with genomic information will likely be about 75 percent for production traits and 60 to 70 percent for traits like Somatic Cell Score, Daughter Pregnancy Rate and Productive Life.

As you can see, these reliabilities are slightly lower than the reliabilities of proven bulls with their first-crop progeny. (Reliabilities for progeny tested bulls with first-crop progeny are in the 70 to 85 percent range, depending on the trait.) We expect that A.I. companies will likely still offer well-proven progeny tested bulls but that breeding companies will shift much of their emphasis to supplying semen from yearling, 2-year-old and 3-year-old bulls for major use within herds. These yearling bulls will have moderately reliable PTAs, which will be based on pedigree information and on genomic information. Ultimately, we expect to see a major shift in the age of the A.I. bulls used in our herds to where much, if not most, of the semen used in herds will be from bulls that are less than 3 years old.

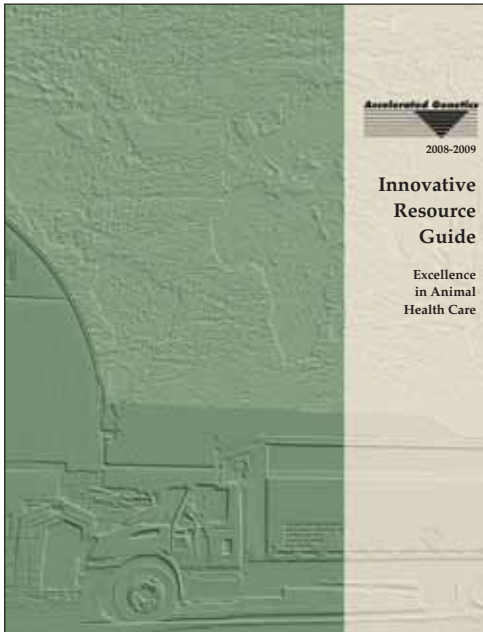
Whether or not some of the changes happen and how fast they change will depend on the customer acceptance. We can expect producers to change

their strategy at different rates with some producers adopting the use of these moderate reliability young bulls (with PTAs based on pedigree and genomic information) for their entire herd; to a more limited use of these moderate reliability young bulls with PTAs based on pedigree and genomic information; and a continuation of the use of well-proven bulls in some herds.

There will be slightly more risk for the PTAs of these moderate reliability young bulls with PTAs based on pedigree and genomic information to change compared with the PTAs of well-proven bulls, but the increased level of risk can be easily managed by using a group of these young bulls. (We should probably avoid just using semen from one or two bulls.) Over time we expect that the industry confidence in these young bulls will grow because all these young bulls will eventually have PTAs with daughter information. As we see more proof that the PTAs for these young bulls are much more reliable than PTAs with just pedigree information, producer and industry acceptance is likely to grow.

Reliabilities for PTAs on young heifers and cows will also increase substantially. These much higher reliabilities on females will boost genetic

*Article Continued on
Page 8.*



10 Reasons To Read The Innovative Resource Guide

- 8 - Learn When To Replace Your Old Semen Tank
- 7 - Accelerated Calf Technology - Calf Raising Tips
- 6 - Avoid Problems with Silage Quality
- 5 - Cleaning Recommendations for Milk Quality
- 4 - Udder Health Care Prevention Tips
- 3 - Bio-Hygienization Benefits
- 2 - Fresh Zone Technology - Microbial Protocols
- 1 - It's NOT a Product Catalog,
It's the **ULTIMATE** Resource Guide!

GENOMIC SELECTION

Article Continued from Page 7.

progress considerably because we will be able to more accurately identify the genetically elite females to use for young bull production. Breeder herds involved in intense embryo transfer programs to try to produce elite females and elite bulls for A.I. companies will have much more accurate information to use in decision-making. Higher reliability PTAs on females for traits like Productive Life, Daughter Calving Ease and Daughter Pregnancy Rate will especially be noticeable.

Currently, accurate selection in females for traits with low heritabilities and traits that take considerable time to measure like Productive Life and Daughter Pregnancy Rate is not possible. However, the incorporation of genomic information into PTAs (or parent averages) for heifers and cows will substantially increase reliabilities for these traits in cows. This should lead to effective selection of females for these lowly heritable traits

and provide breeders with much more accurate PTAs for use within their herds.

What About Any Other Concerns With The Use Of These Young Bulls With PTAs Based On Pedigree Data And Genomic Data?

The largest somewhat unknown consequence of genomic selection is the impact that genomic selection will have on inbreeding. It is possible that genomic selection could hasten inbreeding; however, genomic selection may also allow us to better handle inbreeding concerns by allowing us to choose more animals with outcross pedigrees.

For sure, producers will need to have to plan to manage inbreeding within their herds. Herd mating programs that limit inbreeding may become more important to producers. In addition, the development of strategic line mating programs or the use of crossbreeding may increase to help avoid inbreeding at the farm level. Of

course, inbreeding levels will be closely monitored as we adopt genomic selection, and actions to mitigate increased inbreeding will be implemented at the A.I. company level, if needed.

Also, there will most likely continue to be unique individual breeding philosophies for producers as well as for each A.I. company, like currently exist. Everyone is NOT selecting for the same combination of trait emphasis.

The bottom line is that producers should be aware of the current potential for inbreeding in their herds and the possibility that this could be a more important issue in the future.

Conclusion

You will hear more and more about genomic selection in the near future, but be assured that genomic selection is not something that should startle you. Genomic selection is just a new tool to help the dairy industry breed better cattle in a shorter time period.

Current genomic predictions are a significant advancement over pedigree estimates, but it assumes additive genetic variance only and continues the 'black box' approach of the past, one where the specific gene impacting the trait are still unknown. Future estimates one day will take in account both additive and non-additive genetic variance. DNA studies will help to determine how genes interact with each other, this will add to the predictive power and will enhance genomic predictions.

Genomic selection is not a replacement for our current procedures and programs, but it will enhance our current programs by providing more reliable PTAs for young animals (especially bulls). This will lead to more use of younger A.I. bulls with moderately reliable PTAs and increase genetic progress for production traits as well as for health traits, reproductive traits and longevity.



Fire Extinguisher 101



The Evansville Community Fire District crew that educated producers and their families about fire safety during the Young Producer Summer Meltdown Celebration at Larson Acres, Inc. on June 7, 2008.

In early June, Fire Safety on the Farm was included as a hands-on experience for many producers and their families during the Young Producer Summer Meltdown Celebration hosted by Larson Acres, Inc. in Evansville, Wisconsin. During the day producers toured Larson Acres along with learning about fire safety and how to properly put out fires directly from some experts, the Evansville Community Fire District crew. This experience prompted the idea to share what was learned at this event with all producers through Accelerated Genetics Farm Safety Tips section in Genetic Trends.

Fire safety is an important topic and one that many producers may not think about, and with so many potential fire hazards on a farm, its one for which everyone should be prepared. And a good place to start is to have fire extinguishers located around the farm and on farm equipment. Then make sure to read the instructions on the fire extinguishers and become familiarized with its parts. Although there are many different types of fire extinguishers, all of them operate in a very similar manner. A typical

PASS

Use this acronym as a quick reference. It is a good idea to print this reference and pin it next to your fire extinguisher:

Pull the pin at the top of the extinguisher. The pin releases a locking mechanism and will allow you to discharge the extinguisher.

Aim at the base of the fire, not the flames. This is important – in order to put out the fire, you must extinguish the fuel.

Squeeze the lever slowly. This will release the extinguishing agent in the extinguisher. If the handle is released, the discharge will stop.

Sweep from side to side. Using a sweeping motion, move the fire extinguisher back and forth until the fire is completely out. Operate the extinguisher from a safe distance, several feet away, and then move towards the fire once it starts to diminish. Be sure to read the instructions on your fire extinguisher – different fire extinguishers recommend operating them from different distances. **Remember:** Aim at the base of the fire, not at the flames!!!!

fire extinguisher contains 10 seconds of extinguishing power. This could be less if it has already been partially discharged. It is highly recommended by fire prevention experts that you get hands-on training before operating a fire extinguisher. Most local fire departments offer this service. Just like what the Evansville crew did.

The best way to use a fire extinguisher is to remember the PASS acronym (above). And remember, once the fire is out, don't walk

away! Watch the area for a few minutes in case it re-ignites. Then recharge the extinguisher immediately after use.

Inspect fire extinguishers at least once a month. You must ensure that:

- The extinguisher is not blocked by equipment or other objects that could interfere with access in an emergency.
- The pressure is at the recommended level on extinguishers with a gauge.
- The nozzle or other parts are not hindered in any way.
- The pin and tamper seal are intact.
- There are no dents, leaks, rust, chemical deposits and/or other signs of wear.
- Some manufacturers recommend shaking your dry chemical extinguishers once a month to prevent the powder from packing. And if you keep them on a tractor, this is very important!
- Fire extinguishers should be pressure tested (a process called hydrostatic testing) after a number of years to ensure that the cylinder is safe to use. Consult your owner's manual, extinguisher label or the manufacturer to see when yours may need such testing.
- If the extinguisher is damaged or needs recharging, replace it immediately!

IMPORTANT: Recharge all extinguishers immediately after use regardless of how much they were used.



Dairy producer Yogi Brown is given instructions on how to hold and use a fire extinguisher by an Evansville, Wisconsin fireman.




Notice the proper location of this fire extinguisher on a tractor.

GRIEVES

Milk, Protein, Type & More

In January 2008, Accelerated Genetics released a new production leader for the Jersey breed – 014JE00431 Oomsdale Jace Grat GRIEVES-ET. But if you think production is all Grievés offers, then you may be pleasantly surprised when you examine his pedigree and information further.



014JE00431 Grievés Daughter
Dupat Grievés 3107
Wickstrom Jersey Farm, Hilmar, Calif.



014JE00431 Grieves Daughter
Genesis Grieves 1836
Rasmussen Dairy, Turlock, Calif.

014JE00431 Grieves has a unique twist to his pedigree. Yes, he is a Jace son and there will be many other Jace sons coming with proofs within the next year. However, it is Grieves' maternal line that makes him something more special.

His dam Oomsdale Gordo Goldie Gratitude is scored Excellent-90%, but is sired by a little used Bold Daniel son, Bold D Gem Gordo. Gratitude has many sons in A.I. with great results to date of which Grieves is a part. She also has daughters in many different herds in the United States which are also excelling. Gratitude is setting herself apart as a true source of elite genetics among U.S. Jerseys. The next dam was a high-testing Alf daughter, Oomsdale Alf Gloria Goldie Excellent-92%, that helps to add strength and power to the pedigree.

When looking at Grieves' production information, he ranks among the top milk bulls at +1932 and is tied for second in protein with +59. But examining his type information unveils the truly unique opportunity he provides.

The top of the Jersey index list is full of sires that transmit solid production and lots of dairyness. However, if you are looking



014JE00431 Grieves Daughter
Dupat Grieves 3107
Wickstrom Jersey Farm, Hilmar, Calif.

to add strength, power and width to your cows, which very few bulls can do with consistency, then Grieves is bull that you want. He is +1.80 for type in the U.S. and he sires plenty of strength with a proof of +2.10 for strength. It is truly rare to find a bull that combines the elite production that Grieves does while also adding frame and body. This is further confirmed by his thurl width rating of +1.40, which again places him near the best of the breed.

The Grieves daughters also walk on very correct feet and legs, being especially deep in the heel as his foot angle rating of +1.00 attests. In addition they have very correct slope to the rump and high and wide rear udders.

Accelerated Genetics is pleased to have Grieves in our active lineup. We have further hope that this family will produce other elite bulls for use in the future. Accelerated is currently sampling a Lexington brother to Grieves, 014JE00509 LIAM, as well as a Rebel son from Grieves full sister in waiting, 014JE00481 GROVER.



Dave Eirf
Dairy Sire
Analyst

'Our Grieves daughters are really tall will a lot of rib and overall they are very sound cows. They are also milking very well, above average on production over herd mates as 2 year olds.'

Kristy Hansen
Sar-Ben Farm – Canby, Oreg.
115 Jerseys

'Currently we are using Grieves in our breeding program. We have one Grieves daughter milking that is a huge improvement over dam. She is pretty correct overall with a nice udder and good feet and legs along with being one of our tallest Jerseys.'

Susan Pierson
Far-Den Farms – St. Paul, Oreg.
425 Cows (40% Jerseys)

Move In Day is Close For New Buildings at the Westby Production Facility

Even with the wet spring that Wisconsin has been experiencing, Accelerated Genetics has continued with the building process at the Production Facility located in Westby, Wisconsin. Completion on all projects is scheduled for mid to late summer.



Feed Station

The new feeding station has begun to take shape with its roof structure being set in late April and its permanent sides going up in May, making it ready for hay storage in June. This building will be viable for storing and mixing feed for all of the sires housed at the Production Facility.



Isolation Barn

This structure will be designated as the new isolation barn which help grow the population of potential sires and be EU qualified. It is close to completion.



West View 4

This EU qualified building will house 60 sires 'in-waiting'. The outside of the West View 4 is almost finished. Installation of gates and panels has begun.

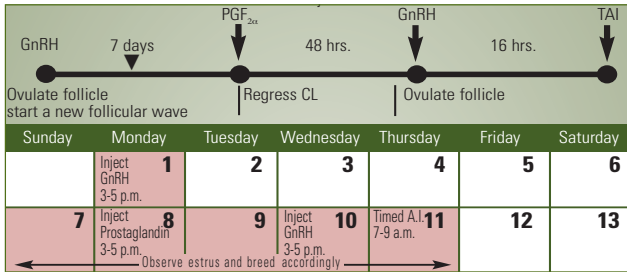
ESTRUS SYNCHRONIZATION GUIDE

OVSYNCH

Ovsynch uses PGF_{2α} and GnRH to synchronize ovulation in lactating dairy cows. Ovsynch was the first synchronization protocol developed that allowed for timed A.I. (TAI) resulting in conception rates similar to that of A.I. after a detected estrus.

PROCEDURE:

- DAY 0: Inject GnRH to ovulate follicle and start a new follicular wave (ie: 3-5 pm)
- DAY 7: Inject PGF_{2α} to regress CL (ie: 3-5 pm)
- DAY 9: Inject GnRH to ovulate follicle (ie: 3-5 pm)
- DAY 10: Timed AI 12-16 hours after second GnRH - (ie: 7-9 am)

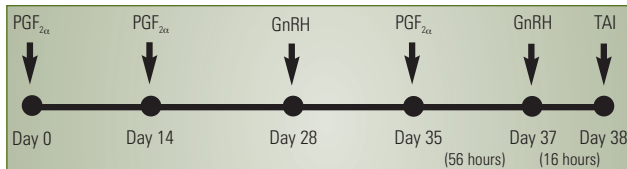


FEATURES:

- GnRH causes ovulation and initiation of a new follicular wave. Prostaglandin causes regression of the corpora lutea.
- The second GnRH synchronizes the time of ovulation of the dominant follicle of the follicular wave that began growing after the first GnRH injection.
- Cows don't necessarily need to respond to the first GnRH injection to synchronize to the second GnRH injection.

OVSYNCH-56

Ovsynch-56 is a new modification of the original protocol that gives the second GnRH injection 56 hours after PGF_{2α} and TAI 16 hours later (72 hours after the PGF_{2α}). Ovsynch-56 improved conception rates in almost 10 percent compared to Ovsynch.

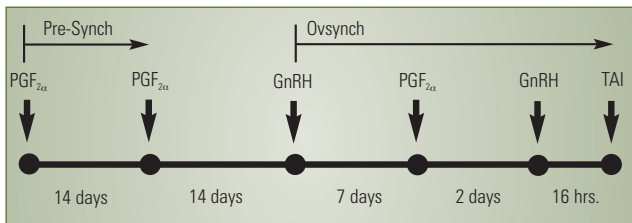


FEATURES:

- Should be used in conjunction with PreSynch.
- Ovsynch-56 improved conception rates in almost 10 percent points compared to Ovsynch.
- Cows detected in estrus should be bred accordingly.
- Allows more time for follicular maturation compared to Ovsynch.

PRESYNCH

PreSynch is a modification of Ovsynch in which two PGF_{2α} injections 14 days apart are administered 14 days before initiation of the first GnRH injection of Ovsynch. PreSynch improves first service conception rate compared to Ovsynch and is a good strategy for programming cows to receive their first postpartum timed A.I.



FEATURES:

- This system requires a long duration and timing. It is good for dairy cows that will receive their first postpartum timed A.I. The figure above shows a time line of DIM, thus a cow receiving TAI at 68 DIM, should receive her first PGF_{2α} injection at 30 DIM.
- Not a good resynchronization tool because of the long duration.
- Studies have shown that conception rate was greater for cows receiving PreSynch vs. Ovsynch.

CO-SYNCH-48

Co-Synch is a specific form of Ovsynch in which the timed AI occurs at the time of the second GnRH injection 48 hrs after prostaglandin injection. The advantage of Co-Synch 48 is that one less handling is required for each cow compared to Ovsynch. The disadvantage of Co-Synch is that conception rates may not be optimized compared to timed A.I. at 12-16 hrs after Ovsynch.

PROCEDURE:

- DAY 0: Inject GnRH to ovulate follicle and start a new follicular wave
- DAY 7: Inject PGF_{2α} to regress CL (ie: 8 am)
- DAY 9: Inject GnRH to ovulate

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	Inject GnRH 1	2	3	4	5	6
7	Inject Prostaglandin 8 a.m. 8	9	Inject GnRH & Time A.I. 8 a.m. 10	11	12	13

FEATURES:

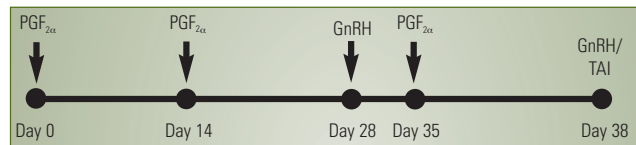
- Pregnancy loss is less for the Co-Synch System as compared to the other systems.
- Breeding too late (+/- 32 hours post second GnRH injection) decreases conception rate.
- Due to reduced pregnancy loss with Co-Synch, the calving rate is comparable to the Ovsynch System.

CO-SYNCH-72

Co-Synch-72 is another form of Ovsynch in which the timed A.I. and second GnRH injection occur simultaneously 72 hours after PGF_{2α}. In research trials, Co-Synch-72 has showed to increase conception rates as compared to Co-Synch-48 and Ovsynch. This increase in fertility, however, has been demonstrated only in conjunction with the PreSynch program.

PROCEDURE:

- DAY 0: Inject PGF_{2α} to regress CL.
- DAY 14: Inject PGF_{2α} to regress CL.
- DAY 28: Inject GnRH to ovulate follicle and start a new follicular wave (ie: 8 am)
- DAY 35: Inject PGF_{2α} to regress CL (ie: 8 am)
- DAY 38: Inject GnRH to ovulate follicle and Timed AI (ie: 8 am)



FEATURES:

- Conception rates increased by one more day of follicular maturation before GnRH injection.
- PreSynch enhances a higher proportion of cows ovulating to the first GnRH injection, thus, most cows will start a new wave, and will have a follicle capable to hold up to 72 hours after PGF_{2α} without premature estrus or ovulation.
- * It is not recommended to administer Co-Synch-72 without PreSynch.
- * Enhanced fertility when estrus detection is conducted after PGF_{2α} on day 35.



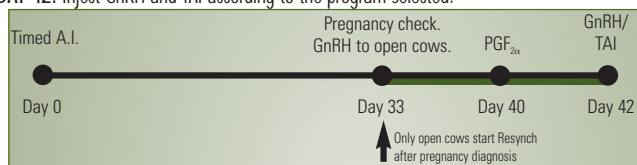
ESTRUS SYNCHRONIZATION GUIDE

RESYNCH-0

Based on 35% average conception rate in the U.S., you will have around 65% non-pregnant cows after a single insemination. Since your goal is to get them all pregnant, it makes sense to identify open cows as early as possible and resubmit them for a second A.I. service in a reduced period of time. Resynchronization is a strategy by which non pregnant cows are resubmitted for a second A.I. service quickly after pregnancy diagnosis using Ovsynch type protocols. In this program, the first GnRH for the resynchronization is given to open cows at herd check (day 0), which should be day 26-33 after first insemination. It is not recommended to start resynchronization before day 26 because of low fertility experienced in research trials.

PROCEDURE:

- DAY 0: Timed AI
- DAY 33: Pregnancy check, and Inject GnRH only to open cows.
- DAY 40: Inject PGF_{2α} to resynchronized cows on day 33.
- DAY 42: Inject GnRH and TAI according to the program selected.



FEATURES:

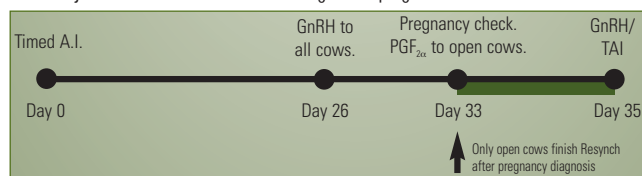
- Resynchronization is an aggressive strategy that should be combined with early pregnancy diagnosis (ideally ultrasound) to get the greatest advantage. If you are not using ultrasound go to day 33-40 for pregnancy diagnosis.
- If using HeatSynch, give ECP on Day 8 instead of GnRH on Day 9 and TAI on Day 10.

RESYNCH -7

ReSynch-7 is an even more aggressive resynchronization strategy in which the first GnRH injection for the second synchronization (resynchronization) is given 7 days before the pregnancy diagnosis (day 0). Although cows receive a GnRH at unknown pregnancy status, GnRH does not have negative impact on pregnant cows. By using Resynch-7 open cows receive PGF_{2α} immediately after pregnancy diagnosis, and are inseminated 2 (Co-Synch) or 3 (Ovsynch) days after pregnancy check. With this program you will resubmit all open cows for a second A.I. one week earlier compared to ReSynch-0.

PROCEDURE:

- DAY 0: Timed A.I.
- DAY 26: Inject GnRH to all cows (unknown pregnancy status).
- DAY 33: Pregnancy check. INJECT PGF_{2α} ONLY TO OPEN COWS.
- DAY 35: Inject GnRH and Timed A.I. according to the program selected.



FEATURES:

- Do not conduct ultrasound before day 33 post breeding, since you would be giving GnRH earlier than Day 26. Administration of GnRH before Day 26 post TAI may reduce your possibilities of success.
- Rapid ReSynch, a modification of ReSynch, gives PGF_{2α} to open cows at the time of pregnancy diagnosis, but does not administer the first GnRH. This program might yield inconsistent results because no follicular wave is synchronized, thus stage of follicular development at Timed A.I. is unknown.

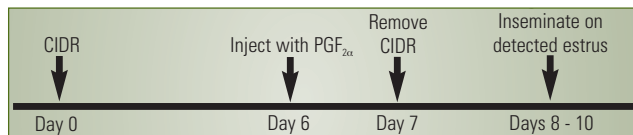


CIDR (Controlled Intravaginal Drug-Releasing Device)

It is a short term progesterone treatment that allows synchronization of estrus with acceptable conception rates. It is especially useful to synchronize estrus in dairy heifers and beef cows and heifers.

PROCEDURE:

- DAY 0: Insert CIDR
- DAY 6: Inject with PGF_{2α}
- DAY 7: Remove CIDR
- DAYS 7-11: Inseminate on detected estrus



FEATURES:

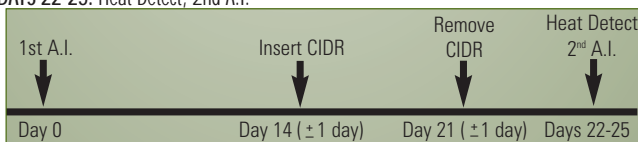
- Progesterone release through controlled diffusion within the insert.
- PGF_{2α} allows for regression of the CL, follicular maturation, therefore, estrus behavior, and ovulation.
- Progesterone induces anestrus/prepubertal animals to cycle.

FAST BACKSM with CIDR

Use a CIDR device to synchronize return to estrus for animals failing to conceive to the first A.I. Although CIDR is approved for use on all dairy and beef animals, this program is suggested only for beef and dairy heifers due to management issues.

PROCEDURE:

- DAY 0: - First A.I.
- DAY 14: Insert CIDR
- DAY 21: Remove CIDR. DO NOT USE PGF_{2α}
- DAYS 22-25: Heat Detect, 2nd A.I.



FEATURES:

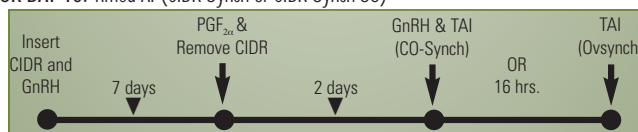
- Create a second synchronized heat and gain a better opportunity for heat detection, resulting in a higher pregnancy rate.

CIDR SYNCH

CIDR Synch is an Ovsynch program with the addition of a CIDR inserted for 7 days (inserted at the time of first GnRH and removed at the time of PGF_{2α} injection). It can be also used in conjunction with Co-Synch programs as follows. Dairy cattle: Use CIDR with Co-Synch-48 or Co-Synch-72. Beef cattle: second GnRH and TAI should be conducted 54 h after CIDR removal in heifers (CIDR Synch-54) and 60 h in cows (CIDR Synch-60). When using this program in Dairy or Beef heifers, the first GnRH shot may not be given, achieving similar results. Two days after CIDR removal, administer GnRH and TAI 16 hours later (CIDR Synch). For Co-Synch options, administer GnRH and TAI simultaneously as described above.

PROCEDURE:

- DAY 0: Insert CIDR and inject GnRH
- DAY 7: Remove CIDR and Inject with PGF_{2α}
- DAY 9: Inject GnRH and Timed AI (CIDR Synch-48 or CIDR Synch-54)
- OR DAY 10: Timed AI (CIDR Synch or CIDR Synch-60)



FEATURES:

- CIDRs provide progesterone as a means to deal with variation in stage of the estrus cycle.
- CIDRs induces cyclicity in anestrus females increasing their probability of a fertile ovulation.
- CIDRs is the most reliable strategy for TAI in dairy heifers.

Man and Bull Celebrate Career Milestones Together



Photo by Amber Elliott

Accelerated Genetics Herdsman Ron Amann, who recently celebrated his 35th year with the cooperative, feeds 014HO02586 Sailor an orange. Healthy eating helped Sailor reach his 14th Birthday!

It has often been said, 'an apple a day keeps the doctor away,' the same can now be said for bulls. 014HO02586 Paradise-R Sailor 95-ET EX-95 has been on the apple and orange a day diet for the past several years. On June 19, 2008 Sailor celebrated his 14th birthday, which is quite uncommon among dairy breeds, especially for bulls.

For the past nine years, since Sailor was a proven sire, Ron Amann, Accelerated Genetics Herdsman, has been working

with Sailor two to three times a week. Every morning Ron brings in a goodie bag and sets it close to Sailor's pen. After a few minutes of doing other chores, Ron returns to an anxious Sailor ready and excited to be taken to collection because he knows he will be getting the treats. "I really enjoy working with Sailor, after all these years we know each other," Ron commented.

Ron lives in Westby, Wisconsin, and recently celebrated his 35th year with

Accelerated Genetics. Throughout all those years his job has remained fairly consistent; when he arrives to work in the morning he works the bulls for collection, then returns to the main barn for bedding, cleaning and feeding of the bulls. Throughout all his years with Accelerated Genetics, Ron enjoys working with the people the most, "Everyone is good to work with and I am real thankful to have this job."

Careers with Accelerated Genetics seem to run in Ron's family. His twin brother bred cows in the Winona, Minnesota area for 40 years before retiring a year ago. Ron's half brother has worked for Accelerated Genetics for 37 years breeding cows and also worked in the products warehouse. Finally, Ron's brother-in-law bred cows then became a regional supervisor; he was also with the company 37 years.

Sailor continues to be in demand. His daughters are producer favorites as they stand the test of time and stay in the herd, just like Sailor himself has stood the test of time.

Whether it is Ron's consistency or the healthy treats that have kept Sailor going all these years we will never know, but one thing is for sure it will be difficult to find another combination quite like Ron and Sailor.



Amber Elliott
Public Relations &
Advertising Intern

Review of Essential Semen Handling Techniques



Reproduction represents a big challenge for managers and farm employees in all sizes of dairy operations. A specific reproductive problem may be consequence of failures in different areas including: management, nutrition, facilities, heat detection, A.I. technique, etc.

Accelerated Genetics invests a great deal into providing the highest quality semen, but our fertile semen will only get cows to conceive when the correct management procedures are followed especially when it comes to the handling of semen and the technique of breeding a cow.

There are a few main standards that we teach and demand from our A.I. technician force at Accelerated Genetics they involve the areas of semen handling, technique and procedure.

ACTION SHOTS NEEDED

The 2008 Photo contest theme is 'Caught In The Act'. We want photos of producers, employees or their families caught in the act of farm work. Whether they are milking cows, feeding animals, pushing animals through a chute, rounding up the herd or any other farm labor activity it is fair game for this year's contest. We want the photos to include both people and beef or dairy cattle conducting 'farm business' throughout the various months of the year.

Multiple photos can be entered in the contest, but we want you to send in your best, so before you send them think about these things:

- Is the photo clear and crisp, not foggy or cloudy.
- Do the animals look healthy and reasonably clean.
- Are the people in the photos clearly captured at work, not posed. And is their clothing suitable for farm work, yet relatively clean.

All photos entered should be color. **Digital Images** are preferred and need to be sent as a high resolution (300 dpi) JPEG image with photo size at 8" x 10" or larger. Digital images can be sent via email or on a CD. If you send a **Printed Photograph**, please make sure the image is printed from a photo center, as home printers do not print high enough quality photographs that can be utilized in print. Printed photographs will ONLY be accepted at the sizes of 5" x 7" or 8" x 10". Other photo sizes will not be considered for the contest.

The entry deadline is **SEPTEMBER 1, 2008!** For each photo entered, please write on the back of each photograph or include in the email : your name, address, phone number and the photo's title. Then send your entries to: Accelerated Genetics, Kari Stanek-Editor, E10890 Penny Lane, Baraboo, WI 53913 or email kstanek@accelgen.com. If you have any questions, please call 800.451.9275 ext. 222. Photographs will NOT be returned, so remember to make a copy for yourself.

World Wide Sires, Ltd. Distributor's Conference 2008



World Wide Sires, Ltd. was proud to host its 2008 Distributor's Conference in Rome, Italy, May 12-14. More than 170 distributors and salesmen from 45 different countries attended the event. Topics of discussion included company and supplier updates, bull and product updates, new technologies, as well as sales, marketing and reproduction training.

John Schouten, Chief Executive Officer of World Wide Sires, commented, "In Rome, World Wide Sires hosted distributors and friends from 45 countries. This was the biggest meeting of its kind ever in the history of WWS. This event was very important for the future planning and success of World Wide Sires. The venue provided a great opportunity for the WWS family from around the world to meet and learn about the latest happenings in the industry."

World Wide Sires, Ltd. remains at the forefront in providing exceptional genetics for outstanding type and phenomenal production. A leading exporter of U.S. livestock semen, World Wide Sires represents Accelerated Genetics and Select Sires in Europe, Africa, Asia, the Middle East and Oceania.

Photo and article supplied by World Wide Sires, Ltd.

Typically when producers are having conception problems it is because they do not utilize proper technique. Here are some tips:

✓ Allow the semen to be thawed for at least 45 seconds in a water bath that is 95°F to 98°F. Time and temperature are extremely important when breeding large number of cows with Timed A.I.

✓ Accelerated Genetics recommends to thaw semen in a water bath to achieve the highest conception rate possible.

✓ Don't touch the semen straw with your fingers. Use tweezers to grab the semen straw. Your semen straw will not thaw uniformly when touched by your fingers, plus you may damage or kill sperm cells in the surrounding straws that you touched trying to retrieve the one you use.

✓ Regularly review the water temperature of the thaw unit with an alternative thermometer. This practice is important when thawing several semen units simultaneously.

✓ Put the semen in the cow or heifer as quickly as possible. Accelerated Genetics recommends within eight minutes after thawing the semen.

✓ Properly maintain your semen tank and measure the liquid nitrogen levels to ensure semen viability.

Producers need to follow all management protocols when it comes to breeding a cow – semen handling, technique, and procedures – to expect great conception results.



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