

# Genetic Trends

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## REPRO *connections*



- Discover The Benefits Of The ReproConnections Program
- Genomics Q & A
- Manfred's Legacy
- Review Your A.I. Technique
- Prepare For Summer Heat Stress



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## ON THE COVER

*Developing your herd's reproductive program is an important part of your dairy operation! But it can be stressful to do by yourself. That's why Accelerated Genetics is here to help. Get the individual attention you and your herd deserve through the Accelerated Genetics ReproConnections Program. And ACCELERATE your herd! Find out more about this program on page 5. Cover photos by Kari Stanek*

### Accelerated Genetics®



#### Administrative Headquarters

E10890 Penny Lane • Baraboo, WI 53913

Phone: 1.800.451.9275 • 608.356.8357

Fax: 608.356.4387

Email: [info@accelgen.com](mailto:info@accelgen.com) • Website: [www.accelgen.com](http://www.accelgen.com)

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# MANAGING THROUGH CHALLENGING TIMES



BY: JOEL GROSCKREUTZ, PRESIDENT & CEO

The latest wild swings in the global agriculture economy have thrown all of us a little off balance. Experts are predicting that...whether producers or suppliers... we need to prepare for even more extreme 'highs' and 'lows' in the marketplace in the future. However, history has taught us that those that plan for 'rainy days' will weather the economic storms best. That is why we must all manage through challenging times. At Accelerated Genetics we have been optimizing our business and operational efficiencies while increasing the standard of products and services to you, our valued customers.

## POWER-PACKED SIRE LINEUP

The history-making sire lineup at Accelerated Genetics following the April Dairy Sire Summary is highlighted by numerous breed-leading sires that will be sure to have a global impact.

## INDUSTRY LEADER IN GENOMICS

The 20 years of genetic research at our wholly owned subsidiary, Genetic Visions, Inc., has been at the forefront of the new industry selection tool...genomics. This new commercially available data will assist the dairy industry in identifying sires and females that are more likely to transmit the desired traits. You can be proud that your cooperative leadership recognized and invested in the research and in a recent purchase of scanning equipment at Genetic Visions...making it one of only three bovine labs for this purpose in the nation.



## ACC-SS™ SEMEN MOVING OUT

We are excited with the launch of ACC-SS sexed semen to producers around the world. Sexing Technologies of Navasota, Texas, has an operational semen-sexing lab at our Westby Production Facility. Because YOU asked, we have chosen to focus on providing our high-end genetic sires in ACC-SS sexed semen.

## REPROCONNECTIONS OFFERS GREATER CUSTOMER SUPPORT

Whether you need an A.I. refresher course, help identifying the best timed A.I. protocol for your herd or need assistance in analyzing your herd's reproductive efficiency... Accelerated Genetics' resources are available to you through ReproConnections.

## INVESTMENTS IN QUALITY PRODUCT

Accelerated Genetics stands firm in our commitment to provide top quality semen products to all of our customers. Recently we have reviewed many of our procedures and policies and incorporated the latest science-based methods to achieve the best results. We have continued to reinvest in the core operations that add to production efficiencies and capacity of your bull stud.

Bull environment has been enhanced with the addition of rubber matting, more efficient air exchange and temperature control, and new

feed bunks for key facilities. Upgraded feed storage, ration balancing and body scoring have been implemented to be sure the sires are at optimal health and weight. This translates to maximum semen quality and quantity.

In January, Dr. Aziz Siddiqui joined Accelerated Genetics as the Director of Quality Control. He has created stringent semen processing guidelines utilizing the latest science and equipment to analyze every semen collection through all phases of production.

## MOST IMPORTANT SILVER LINING AT ACCELERATED GENETICS...THE PEOPLE!

Accelerated Genetics strives to be your choice as a reproductive partner. That means going above and beyond the status quo to provide unmatched genetics, products, research and service for our valuable customers. In recent months the employees of Accelerated Genetics have done just that by reinforcing some previous and adding many new resources and services. I can share with you that the silver lining to the current economic woes is the people at Accelerated Genetics. Their skills, knowledge, experience and dedication to provide breed-leading genetics, industry-leading research, solution-based products and value-added services are unmatched. At Accelerated Genetics...we have a passion for the industry and will manage with you through challenging times.



Photos by Angie Lindell

*A single straw of semen from Accelerated Genetics begins with proper bull nutrition and care, continues with proper lab techniques and quality control and it is further handled with care as it gets put into nitrogen tanks. Through this whole process, it takes a whole team of experienced people to work together for one common goal, producing the highest quality product they can for Accelerated Genetics customers around the world.*

# THE QUALITY OF ARTIFICIAL INSEMINATION: ARE YOU DOING A GOOD JOB?

BY: DR. ALEX SOUZA, PH.D., REPRODUCTION FIELD SPECIALIST

As we all know conception rates of high producing dairy cattle are decreasing throughout the years. Several complex physiological and environmental factors might be implicated in this multifaceted fertility problem. However, as described by several preliminary and very recent research articles, part of this lower fertility is probably related with basic human errors during the artificial insemination (A.I.) procedure.

Thus, in this report I am going to highlight a couple critical mistakes that our ReproConnections Team keeps seeing in A.I. practice conducted in the field. Interestingly, the mistakes that will be emphasized in this article are less frequent when a person is beginning to use A.I. Usually the mistakes are performed by people experienced in the A.I. technique. It is also worth mentioning that some of these mistakes or so to speak 'bad habits' during A.I. are caused by some limitations in the breeding facilities.

## PROBLEMS OR 'BAD HABITS' DURING A.I. PRACTICE COMMONLY ACQUIRED BY EXPERIENCED ON-FARM A.I. TECHNICIANS IN DAIRY FARMS THAT HAVE HEADLOCKS:



Headlocks can save a great deal of time when we need to find cows in the breeding pen of a free-stall facility – no question about that. However, one common 'bad habit' during the A.I. routine happens just because we can get all the cows locked up at the same time and that is loading excessive numbers of A.I. guns simultaneously. For instance, I've seen inexperienced farm employees loading several A.I. guns at once!

So why will loading too many A.I. guns at once reduce breeding fertility results? This

issue has been studied by several research groups and the most likely reasons are related with the inconsistent straw thawing and longer intervals from loading the A.I. gun until semen placement in the uterine tract of the cow. This problem is exacerbated in large herds using timed A.I. protocols, where several cows must be bred on the same day.

The inconsistency in semen thawing mostly occurs when multiple semen straws are thawed at the same time without the proper attention to details. Thus, if multiple semen straws touch each other (straw-to-straw contact) or if the temperature fluctuates during the thawing procedure due to the larger amount of straws being thawed at once, the increase in the thawing temperature curve inside the semen straw will almost certainly be inconsistent. This can damage the sperm cell and reduce percentage of viable sperm cells per straw (Brown et al., 1991), which will probably lower conception success. This is even more critical if you are dealing with sexed sorted semen straws. It is also a good idea to change the water at least twice a week and to check the water temperature in the thawing unit regularly using two different thermometers.

The second reason to this question is due to the excessive time it takes to place the semen in the uterine tract once the A.I. gun is loaded. This is a major concern in extreme weather conditions such as in cooler seasons in Northern states in U.S., where many times it can be difficult to maintain adequate thermal protection following A.I. gun assembly – poor thermal protection after thawing can decrease the number of viable sperm cells in the straw (Kaproth et al., 2002).

Even though there is some contradictory findings about the number of straws that can be thawed at once (Lee et al., 1997; Goodell et al., 2000; Kaproth et al., 2002; Dalton et al., 2004), most of the research groups agree that the maximum time elapsed from loading the A.I. gun until placing the semen in the uterine tract of the cow should not be more than 10 minutes - if adequate thermal protection is provided. Thus, to

avoid inconsistent conception outcomes, make sure that all A.I. guns are being loaded and the semen is being hygienically placed in all cows, with no rush, with adequate thermal protection and within 10 minutes after thawing. Using an A.I. gun warmer is an effective tool to avoid cold shock and will keep the semen loaded in the guns the appropriate temperature prior to it being placed in a cow.

Large A.I. herds are encouraged to use adapted carts or vehicles containing a water bath and all the materials required to perform A.I. in order to decrease the interval from loading A.I. gun to the actual breeding, as shown below.



John Merrill, District Sales Manager, stands by one of his customer's A.I. carts that he regularly fills with semen. A.I. carts like this one assist larger herds in being able to get the thawed semen into cows quickly.

## CHALLENGES FOR ON-FARM A.I. TECHNICIANS ON DAIRY FARMS THAT DO NOT HAVE HEADLOCKS:

Some positive aspects of not having headlocks on a well managed dairy are associated with cow comfort and time budget issues such as improved laying time, etc. However, have you tried to breed a cow that is running loose? I have and I can tell you that it can be really frustrating sometimes! Particularly if the pen is lacking end gates – it might take forever to make a cow stand in the bed and get her bred. It can be even worse if the cow that you need to breed is in the first lactation cow pen – they are generally more nervous and definitely faster than us!

Therefore, it is highly recommended that the person breeding cows seek help from a

# WHAT THE REPROCONNECTIONS PROGRAM IS ALL ABOUT

second person when required to make sure that the semen dose will be entirely placed in the right area in the uterus, at the right time after loading A.I. gun, and in a safe manner for both technician and cow.

Preliminary studies have shown that even people fairly experienced in the A.I. technique may not place the semen in the uterine body as frequently as 20 to 25% of the attempted uterine body depositions (Peters et al., 1984). In fact, Peters et al. 1984, working with uterine tracts, described that only 39% of the A.I. gun placements were done in the body of the uterus and that nearly 20% of the liquid radiopaque inseminate was actually misplaced into the cervix, regardless of the straw volume (0.5 or 0.25 ml straws) and size of the uterine structure – probably because the A.I. gun was being pulled back during radiopaque liquid delivery in the uterus.

These authors also reported a fairly large variation in accuracy of semen placement by both herdsman and professional A.I. technicians. Thus, it is logical to conclude that if you need to breed a cow 'hanging onto her back and trying to stop her from running lose at the same time,' that your odds of placing the semen in the correct uterine site will be lower and overall the quality of the A.I. will be compromised.

In conclusion, the person responsible for A.I. on the farm must avoid wrong semen placement in the uterine tract and delays in the breeding time (no more than 10 minutes) when multiple A.I. guns are assembled particularly in dairies with inadequate cow constrain facilities. Also, be aware that the cow must be well positioned (controlled) during A.I. procedures for achieving highest fertility results.

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Developing your herd's reproductive program is an important part of your dairy's operation! But it can be stressful to do by yourself. That's why Accelerated Genetics is here to help. Get the individual attention you and your herd deserve through the Accelerated Genetics ReproConnections Program. And ACCELERATE your herd!

#### WHAT IS THE REPROCONNECTIONS PROGRAM?

The ReproConnections program is Accelerated Genetics reproduction support program that was developed with the goal of providing quality support service and consulting for customers and potential new customers. Reproduction analysis is more than just looking at a bredsum command in your computer. This is a multidisciplinary task that requires attention to details in many areas, and that's exactly what ReproConnections can do for you!

#### WHAT IS INVOLVED?

The ReproConnections program will involve the following:

- Preliminary evaluation of computer records prior to on-farm visit, if possible.
- Complete on-farm reproduction evaluation and further data collection.
- The ReproConnections Team member will work side by side with each farm's employees and consultant team and conduct a walk-through of the facilities, pens, review management practices.
- If on-farm training is needed, it can and will be provided.
- Samples will be collected if further evaluation is needed.
- If further industry professionals are needed to assist with improving a herd's reproduction program, the ReproConnections Team will help get them involved.
- An Action Plan will be provided to each herd, which will contain a complete summary of the visit, all findings and reproduction program recommendations.
- Follow up visits will be scheduled as needed for more assistance.

#### WHAT ARE THE GOALS OF THE REPROCONNECTIONS PROGRAM?

The rationale of the program is to assist producers in being proactive rather than reactive. Producers shouldn't wait until a fertility fire starts. Rather, they should do regular reviews on reproduction programs trying to detect early situations before they end up in fertility outbreaks. The goal of ReproConnections is not to create a problem if it doesn't exist. If after the evaluation the program is acceptable, there will be no changes suggested. In either case, the producer will receive a written report with evaluation findings and general recommendations.

For more information about the resources available through ReproConnections go to the Accelerated Genetics website at: [www.accelgen.com](http://www.accelgen.com).

*The power packed ReproConnections Team at Accelerated Genetics is led by: Humberto Rivera, M.S., Reproductive Specialist and Dr. Alex Souza, Ph.D., Reproduction Field Specialist. Both have many years of practical experience in the field of dairy cattle reproduction and in consulting. Further, Humberto and Alex have published numerous articles in scientific and popular press publications.*



HUMBERTO RIVERA

*Humberto holds a Master of Science degree in Dairy Science from the University of Wisconsin-Madison, a degree in Bovine Production from the University of Caldas, Colombia and a Doctor of Veterinary Medicine from the University of Caldas, Colombia.*



DR. ALEX SOUZA

*Alex has a Ph.D. in Animal Reproduction from the University of Sao Paulo, Brazil, a Master of Science degree in Reproductive Physiology from the University of Wisconsin-Madison and a Doctor of Veterinary Medicine from the São Paulo State University, Brazil.*

# MANFRED'S LEGACY, O MAN, LEADS TO NEW PACE SUCCESS



BY: GREGG TOPP, DAIRY SIRE ANALYST

014HO02090 Ha-Ho Cubby Manfred-ET has long been respected for his ability to sire long-lasting, durable, and trouble-free cows. He is one of the pioneers of the health trait revolution. In May 2003, an early Manfred son, O-Bee Manfred Justice-ET, commonly known as O Man, burst onto the genetic scene specializing in health traits and elite components. He, along with 014HO03597 Keystone Potter, his paternal brother, ushered in a group of bulls that were bred for improved health traits along with type, just at the time when producers became more interested in Productive Life (PL), Somatic Cell Score (SCS) and Daughter Pregnancy Rating (DPR).

Accelerated Genetics made complimentary matings with O Man and multiple maternal grand sires sampling 36 O Man sons through the PACE young sire program. In January 2009, the PACE program graduated five high-end O Man sons – all with unique sire stacks and specialties in many traits. These O Man sons all rank high for TPI®, Net Merit (NMS), Foot and Leg Composite (FLC) and Calving Ease (CE). They are bred for all markets. Further, all are being used as sires of sons for future PACE sires.

## 014HO04929 LONG-LANGS OMAN OMAN-ET (MAN-O-MAN)

Bred by Anthony Crothers of Rising Sun, Md. and Frederick Lang of Marathon, Wis. and from a family bred by Randall Blodgett of Bensalem, Pa. 014HO04929 Man-O-Man is the highest TPI bull of the group at +2217 TPI, ranking at the top of the list. He

is an O Man from a Very Good-89 Aaron daughter with three elite components records. The next dam is a Very Good Bellwood. Man-O-Man is one of breeds best at +.11% protein and +89 PTAP; and excels in type by being +2.67 PTAT, +2.27 Udder Composite (UDC), +1.90 FLC and 5% calving ease.

His daughters are tall, well-balanced and stylish; perfectly combining the strengths of both O Man and Aaron. They have adequate width at both ends with a slight slope to the rump, and a slightly straighter leg with a steep foot angle. Udders are snugly attached and rear udders are high, wide and fancy. Man-O-Man also improves teat placement, both front and rear, and sires tremendous udder cleft.

Due to his elite status he is being used to make future sons for the PACE program and is being bred to the top end of many herds on daughters of Shottle, Goldwyn, Ramos, Boliver, Form Bret, Marion, Boss Iron, Jet Stream, Toystory, Damion, Billion, Die Hard, Zenith, FBI, and Garrison.

## 014HO004956 TOMLU OMAN DOTSON-ET (DOTSON)

Acquired from Thomas Bunkoske of Horicon, Wis., 014HO04956 Dotson is for producers looking for high milk (+2444 PTAM) along with PL (+2.0), DPR (+.4) and 6% calving ease. An O Man from a 2E Excellent-92 Durham and then an Excellent-91 Storm, Dotson has the sire combination that would elicit attention,

but his daughters' performance is even more appealing.

His daughters are tall, dairy, strong and deep bodied with wide, slightly sloped rumps. He is a foot and leg specialist siring a straighter rear leg that is also straight from the rear with a very deep heel. Rear udders are extremely wide, teats are short and udder depth is above average considering he is a top PTA milk bull.

Dotson makes an ideal mating on daughters of Boliver, Lon, Boss Iron, Titanic, Teamster, Champion, Sailor, Damion, Marion, Ito, Galleon and Roy. Bred with balance that is a good fit in today's market and with huge worldwide demand, Dotson is a fast paced vehicle for your genetic future.

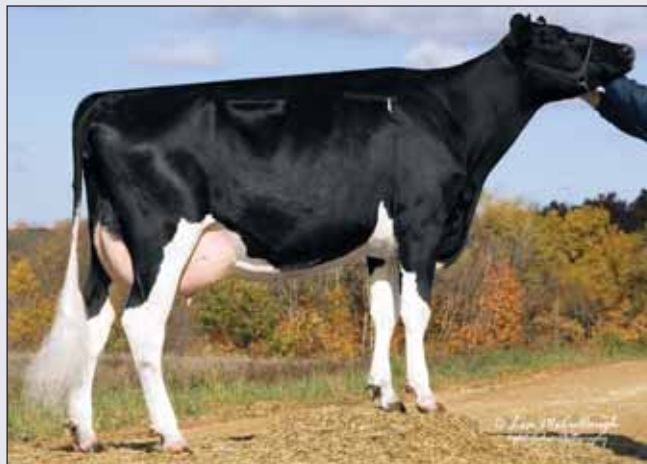
## 014HO04916 LOT-O-ROK OMAN JAKE-ET (JAKE)

Leading the breed with butterfat improvement at +.13% fat, +104 PTAF and originating from Chamberlain Dairy Inc. in Moses Lake, Wash., 014HO04916 Jake adds a huge offering from the PACE program. With a sire stack of O Man, Bellwood Marshall, Aaron, and Aerostar, and from a deep maternal line, Jake's heritage is impressive.

Jake's dam has completed a pair of 30,000 milk records, is classified Excellent-90 being Excellent in both Feet and Legs and Mammary System, and is recognized as a Gold Medal Dam. His daughters are tall and powerful with adequate width at both ends. As his



014HO04929 Man-O-Man Daughter:  
Burnside Man-O-Man 3055 GP83 VGMS, Burnside Dairy, Durand, Wis.



014HO04956 Dotson Daughter:  
Ocooch Dotson Angelina, Ocooch Dairy, Hillsboro, Wis.



014HO04916 Jake Daughter:  
Dairylane Jake 17  
Dairylane Farm, Wisconsin Dells, Wis.



014HO04876 Paxton Daughter:  
Donamara Paxton Berry GP-80  
Bears Grass Dairy, Inc. Augusta, Wis.



014HO04924 Kramer Daughter:  
Bomaz Kramer 3805 GP-85  
Bomaz, Inc., Hammond, Wis.

pedigree would dictate, Jake is a phenomenal foot and leg improver. He also sires snugly attached, shallow udders with high, wide rear udders and close teat placement.

At 6% calving ease, Jake is extremely popular and makes a great mating sire for virgin heifers and milking daughters of Ramos, Boliver, Zenith, Mr Sam, Fortune, Advent, Garrison, Kane, Champion, Advent-Red and FBI.

#### 014HO04924 BOMAZ OMAN KRAMER 561-ET (KRAMER)

Bred for high milk (+2138 PTAM), Net Merit (+624) and TPI (+2034), from a strong maternal line loaded with longevity, 014HO04924 Kramer is a unique O Man son. His daughters are tall and well balanced, with phenomenal feet and legs and snugly attached udders. Kramer is one of the best at improving foot angle (+4.01), straightening rear leg legs both from the side and the rear and is great at shortening teat length.

Kramer was bred by Bomaz, Inc. of Hammond, Wis. His dam is a Dam Of

Merit and Gold Medal Dam Hershel daughter who is a sister to another high ranking PACE graduate 014HO04878 Kalahari. His calving ease of 7% along with an outcross pedigree make him a great choice for your Shottle, Goldwyn, Ramos, Boliver, Marion, Die-Hard, Airraid, Billion, Toystory and Damion virgin heifers as well as cows.

#### 014HO04876 ALL-RIEHL PAXTON-ET (PAXTON)

Combining O Man and Rudolph, 014HO04876 Paxton has a pedigree loaded with health traits and is bred more like his father than any of the other O Man sons. His dam is Excellent-93 being Excellent in both Feet and Legs and Mammary System. Further, she has completed five elite production records with the best record over 36,000 milk. His grandam is Excellent-90 as well.

Paxton daughters are above average in stature with strength and sloped rumps. They also have tremendous feet and legs

with high wide rear udders that are shallow with short teats. He mates best with daughters of Ito, Zenith, Mr Sam, Goldwyn, Boliver, Die-Hard, Titanic, Garrison, Stormatic, Advent-Red and Toystory.

With a pleasing sire combination, a deep maternal line and strong traditional proof information that shows extraordinary PL, SCS and DPR, Paxton is the bull to use if your breeding goals include longevity, durability and reproductive success.

#### SUMMARY

Manfred's legacy is carried on through 014HO4929 Man-O-Man, 014HO04956 Dotson, 014HO04916 Jake, 014HO04924 Kramer and 014HO04876 Paxton, in a way he would be proud of! These bulls were bred by herds from across the country, offer a variety of sire combinations and provide unique traits – Protein, Milk, Butterfat, Productive Life, Somatic Cell Score, Daughter Pregnancy Rate, Calving Ease and Type – all that will help improve your herd.

## SIRE CLASSIFICATION RESULTS

BY: DR. OLE MELAND, VICE PRESIDENT OF GENETICS

The bulls at Accelerated Genetics look great and their classification scores reflect how great they look and feel. There are many new and outstanding classification scores.

014HO04026 Airraid at 8 years of age went EX-94.

014HO03913 Harry is EX-94.

014HO03217 Lon went EX-94 at 11 and a half years old.

014HO03831 Marion went EX-91.

014HO04916 Jake had a big day, he went EX-91 on his first score.

014HO04148 Nifty went EX-90.

014HO03597 Potter went VG-88.

014HO04511 Onward went VG-88.

014HO04099 Billion went VG-88.

014HO03738 Matt went VG-88.

014HO04956 Dotson's 1<sup>st</sup> score is VG-88.

014HO04784 Monument's 1<sup>st</sup> score is VG-88.

014HO04625 Topeka-Red-P's 1<sup>st</sup> score is VG-88.

014HO04878 Kalahari's 1<sup>st</sup> score is VG-87.

014HO04953 Rod's 1<sup>st</sup> score is VG-86

014HO04670 Phil G's 1<sup>st</sup> score is VG-85.

014HO04816 Stellar's 1<sup>st</sup> score is VG-85

014HO04924 Kramer's 1<sup>st</sup> score is VG-85.

014HO04929 Man-O-Man's 1<sup>st</sup> score is VG-85.

014HO05434 Trump, a GeneFORCE bull, also had a big day. At 3 years and 1 month old, he scored EX-91. He is a Shottle out of Lou and Toystory's full sister.



014HO04026 AIRRAID EX-94



014HO03913 HARRY EX-94

# LOW MILK PRICES CALL FOR POSITIVE MOVES



BY: GARY SIIORSKI, DAIRY DEVELOPMENT MANAGER FOR VITAPLUS

Now is the time for all dairy producers to become very realistic about milk prices. It is the same reality that the world economies have been facing since September 2008. Unfortunately, the economic waves have now reached the barnyard. There will not be any economic stimulus package or bailout for the dairy industry. It is a time to keep a calm business head about you. Now is the time to gather your key financial information; openly talk with your lender, suppliers, trusted consultants, partners, other dairy producers, and, of course, your family.

All businesses have now felt the reality of huge price swings that no one would have imagined just a few years ago. Oil prices from \$140 a barrel to less than \$40. Corn prices from \$7 a bushel to \$3. Milk prices from \$20 per hundred to under \$11. You get the picture. Now we all have to train ourselves to expect the unexpected.

The business of milking cows truly has been and will continue to be a satisfying and financially rewarding enterprise for many. However, more than ever, you must brace yourself to withstand massive negative cash flow months. An immediate action plan is a must. Here is where to start if you haven't already:

1. Complete your current financial statement. It is hard to believe how few dairy producers have a fresh statement and how many times many lenders only ask for collateral information without completed financial statements. If you do not have a

## FARM FINANCIAL STATEMENT

	ASSETS:	LIABILITIES:
<b>Current:</b>	Cash Feed Stored	Bills over 30 days Principle due in the next 12 months Lines of credit due in the next 12 months Credit cards
<b>Intermediate:</b>	Cattle Machinery Vehicles	Loans on cattle Loans on machinery Other personal property loans
<b>Long Term:</b>	Buildings Land	Loans on real estate
<b>Total Value:</b>	\$_____	\$_____

**Total Assets \$\_\_\_\_\_ - Total Liabilities \$\_\_\_\_\_ = Net Worth \$\_\_\_\_\_**

form, ask your lender for a blank copy. Fill it out completely and with realistic values.

The financial statement falls into six key areas bolded in the table. For discussion purposes, I have simplified the financial statement; yours must be more detailed. Please note that Farm Financial Standards groups Intermediate and Long Term values together under Other Assets and Other Liabilities. I like to break them apart for a better understanding. You may want to work with your accountant or a financial advisor to complete your financial statement.

2. Now make an appointment with your lender. Bring in your financial statement, 2008 cash flow and your projected 2009 cash flow. If you have negative months, find out how much operating money you can get. Ask if lower payments, interest only payments, or deferred payments are

possible. Ask about Farm Service Agency loan guarantees or direct loans.

3. Then visit with your key suppliers. If you will need extended credit from them, find out how much they will extend you, at what interest rate, and terms.

4. Next, discuss your meetings with your business partners and family. Fill them in on how your visits went and what options exist.

5. When you come up with a plan, verify it with partners, family, suppliers, and your lender. Then update those involved regularly.

6. Now, the toughest statement to make! If monthly numbers are really negative, you have to decide when enough is enough. Those with the higher-equity positions will fair the best. If you are seeing your equity start disappearing, it may be time to gather your equity before it is gone. Do not wait for your creditors to force you to liquidate.

7. Last, but most important – don't panic. People have to eat; they do like the taste and nutrition of dairy products. The dairy industry will get through this totally unknown period. The sooner you make a plan and don't bury your head in the sand, the better off you will be.

Gary Sipiorski is the Dairy Development Manager for VitaPlus of Madison, Wis. He is also a member of the Board of Directors with Citizens State Bank of Loyal, Wis. Gary has been a presenter for some of Accelerated Genetics Young Producer Program events, most recently speaking during the January 2009 Winter Get-Away in Wisconsin Dells, Wis.



Accelerated Genetics has a bimonthly newsletter called **REPROconnections**. It is designed for producers interested in the latest reproductive specific information. If you haven't received this highly technical and free newsletter yet, but would like to, please send an email to: [reproconnections@accelgen.com](mailto:reproconnections@accelgen.com) or call 800.451.9275. Also, you can check out [www.accelgen.com](http://www.accelgen.com) for past **REPROconnections** issues.

# HISTORIC SUCCESS FOR PACE PROGRAM



BY: DAVE ERF, DAIRY SIRE ANALYST

The Accelerated Genetics PACE program has enjoyed much success from the time it began. Many breed leaders – 014HO02090 Manfred, 014HO01114 Roebuck, 014HO03597 Potter, 014HO02736 Ito, 014HO03831 Marion – have proven their superiority through this system. However, the results received in April with the new sire summary truly mark a landmark occasion for Accelerated Genetics. The PACE program now boasts 5 graduates among the Top 12 TPI® bulls in the Holstein breed.

Four of these bulls, 014HO04876 Paxton, 014HO04916 Jake, 014HO04924 Kramer and 014HO04956 Dotson, are featured in an article by Gregg Topp on pages 6-7 in this issue. Also in the article is the breeds #1 Net Merit (NMS) sire, 014HO04929 Man-O-Man, who just missed qualifying to join this elite group.

The fifth bull on the high TPI list is a January PACE graduate who made nice increases across the board, 014HO04766 Champ. He improved on production, health traits and type, all of which translated into an increase of over +200 TPI points to +2022 TPI and a lofty rating of +657 NMS. Champ is a Champion from a Very Good Formation dam. He combines high production, outstanding shallow udders and great longevity in one exciting package.

Another sire making nice increases across the board is the elite type improver 014HO04878 Kalahari. This Finley son from three Excellent dams comes by his great type honestly. At over +3.00 for type and udders, combined with high fat (+.08% fat and +66 PTAF) and +1874 TPI, Kalahari is truly an elite sire.

Ten new graduates were released from the PACE program. The top new Net Merit graduate is 014HO05016 Wilk. His pedigree has an Accelerated Genetics accent as he is a son of Tredway, a former active sire. His dam is a Very Good Rudolph backed by a Very Good Roebuck. Wilk excels in health traits (+5.2 PL and +1.8 DPR), and he is 5% Calving Ease. His daughters have outstanding feet and legs along with shallow udders with great support and teat placement.

Two new O Man sons joined the active ranks in 014HO05010 Columbia and 014HO05020 Elbey. Columbia's dam is a Very Good Taboo daughter, while Elbey is from a Very Good Emerson. Both bulls rank high for Net Merit and are health trait improvers. In addition, both are attractive to use on heifers as they are 5% for calving ease.

Great udders and high fat components can be found in new graduates 014HO05042 Sizzle and 014HO05021 Target. Sizzle is a Sosa from an Excellent Storm and is +.14% fat and +77 PTAF. He is +2.12 UDC and is 8% calving ease. Target is a Titanic son from a Very Good BW Marshall. He is +.10% fat, +60 PTAF, and is one of Accelerated Genetics' highest udder bulls at +3.16 UDC. He is also 5% calving ease.

High production releases 014HO04928 Lafayette and 014HO04968 Goliath join the active lineup. Lafayette is a Finley from a Very Good Dutch Boy. He offers high milk (+1822 PTAM), great type (+2.51 PTAT), super feet and legs (+2.62 FLC) and is 7% calving ease. Goliath is a Titanic from a Very Good Addison and specializes in high milk (+2155 PTAM), great feet and legs (+2.62 FLC) and is 7% calving ease.

Rounding out the new Holstein releases is 014HO04955 Silverstone-Red. He is a Paradox out of an Excellent Addison. Silverstone-Red is +1.64 for type and makes a logical cross on the predominant red and white bloodlines such as Talents and September Storms.

A new Brown Swiss bull was released this summary as well. 014BS00318 Freedom is a Dalton son from an Excellent Rhythm and then an Excellent Emory. He offers a different pedigree and is an outstanding component sire (+.14% F and +.03% P). Freedom sires shallow udders and has a great longevity rating of +3.1 PL. He joins a strong Brown Swiss lineup highlighted by 014BS00314 Driver, 206BS00021 Prodigio and 206BS00019 Scipio.

Whether your goals include high Net Merit, TPI, milk, components, health traits or type, Accelerated Genetics has an abundant list of bulls waiting to fit your needs. Also, don't forget to check out page 15 in this issue for the Jersey sire summary results. In today's tight economy, you need to know that you are getting the BEST genetics for your dollar. Rest assured that no one can match the superior genetics available at Accelerated Genetics.



014HO04766 Champ Daughter: Valley-View Champ 2197  
Valley View Dairy, Richland Center, Wis.

# PACE AND GENOMICS: Q & A

BY: KARI STANEK, COMMUNICATIONS & PUBLIC RELATIONS COORDINATOR

Since the official release of Genomic proofs in January, there have been numerous questions floating around about how Accelerated Genetics will handle our PACE young sire proving program and how genomics really affects the A.I. business. I thought it would be a good idea to address some of these questions and provide the solid answers from Dr. Ole Meland, Vice President of Genetics at Accelerated Genetics and Dr. Mike Cowan, Vice President of Research at Accelerated Genetics and General Manager of Genetic Visions, Inc.

**Q: Is Accelerated Genetics going to continue having PACE young sire herds?**



MELAND

**A:** Our PACE program is the backbone of our company and it will continue to be an important program in proving our genetic strength. Putting our 'PACE Proven' logo on sires that graduate from our program is a standard at this time...we plan to continue to offer our high standard of reliable proven sires for our customers.



**Q: What is different about the PACE program today?**



MELAND

**A:** Today, the PACE program is better than it was a year ago, as more value has been added to it through our genomic testing of all Holstein and Jersey young sires before they enter the program. Thirty-four percent of the young sires have already been culled prior to sampling due to low genomic proofs. Thereby increasing the overall genetic value of all PACE young sires. PACE herds are reaping the benefits and Accelerated Genetics will have an even greater return to active

service. Accelerated Genetics firmly believes in validating what the genomic research has shown, by continuing our PACE young sire program. Young sires will continue to go through our PACE program, randomly sampled by herds all over the United States.

Further, Accelerated Genetics genomically tested all proven sires in the Holstein and Jersey breeds. This policy was initiated so that our sire's evaluations would be more accurate and to help better manage our bull populations. PACE customers are already benefiting from genomic testing and selection.

**Q: What do customers receive if they are in the PACE program?**



MELAND

**A:** Customers involved in the PACE program receive many benefits. First they get the best future genetics today, thus accelerating the genetic levels in their herds. And they receive credits for the information they provide for the program. Further, with Accelerated Genetics having one of the best young sire graduation rates in industry, these customers have the satisfaction of knowing they contribute to this success by participating in the program.

**Q: Are PACE young sires being selected differently?**



MELAND

**A:** We have also incorporated the use of genomic scanning for acquiring young bulls for our PACE program. Meaning we are selecting sires with the highest quality genomic proofs while keeping a diversified pedigree. Overall the PACE herds will have the advantage of much better genetics due to removal of bottom end bulls prior to sampling.

Further, the PACE program is being advanced with help from the genomic

testing of young bulls. We culled the bottom 30-40% of our PACE lineup last year. And with the help of genomic testing we will continue to be selective when we bring in sires. It is another tool that we use in sourcing the best genetics of the future.

**Q: What is the difference between PACE young sires and GeneFORCE™ sires?**



MELAND

**A:** GeneFORCE is a group of genomically superior young sires. The GeneFORCE sires are an elite group of young sires that have already been sampled through our PACE program. Producers can use GeneFORCE sires with confidence. The young sires' information now includes a combination of genomic and traditional summary data. This increases the reliability of the young sires information and gives a more accurate estimation of each sire's true transmitting ability.

**Q: What is the approximate reliability for bulls with a genomic only proof?**



COWAN

**A:** Expect most young Holstein bulls with genomic proofs to range between 62 and 72 percent reliability for all traits. Jersey young bulls will be a bit lower in reliability.

**Q: Are GeneFORCE bulls being used as sires of sons?**



MELAND

**A:** Yes, Accelerated Genetics is currently using GeneFORCE sires as sires of sons for a small percentage of our matings. Our sire selection program incorporates many traits combined together in a customized selection index which includes production, type and management traits.

# GeneFORCE



**Q:** Where does Accelerated Genetics conduct their genomic scanning?



**A:** All of our sires are genomically scanned through Genetic Visions, Inc., Accelerated Genetics research subsidiary, located in Middleton, Wis. Once the genomic scan data is complete, the raw data is forwarded to the USDA where they transform the information into genotypes using their reference populations. The USDA then uses a subset of genotypes to calculate a Genomic PTA for each of the 29 traits presently listed.

Genetic Visions, Inc. has been leading the industry in bovine research since 1988. Genetic Visions recently achieved Illumina's CPro Certification for Infinium Whole-Genome Genotyping. While this certification is not required for a lab to conduct genomic scans, the certification demonstrates that additional steps are in place to maintain quality assurances. At present there are three commercial labs in the United States conducting bovine genomic scans.

Further, Genetic Visions is the only research lab with extensive records and blood work of bull dams existing prior to 1996. This crucial information helped the USDA complete the genomics evaluations now adopted by the rest of the industry!

**Q:** Can producer's get there own Holstein or Jersey animals genomically tested?



**A:** Currently, only NAAB members can receive Genomic PTAs for males, but dairy producers can test and receive Genomic PTAs for all females. Most females are tested through the Holstein Association USA or the American Jersey Cattle Association. At present the Holstein and Jersey breeds are the only dairy breeds with genomically scanned reference populations large enough to provide Genomic PTAs. Once DNA from a cow or heifer has been scanned, information converted into genotypes and Genomic PTAs calculated, the breed association provides the owner with the results and publishes the results on an official pedigree.

In closing, further research at the USDA and Genetic Visions will increase the reliabilities of futuresire evaluations and further uncover the bovine genetic map, continuing genetic progress at an increasing rate. Accelerated Genetics and Genetic Visions are dedicated to continuing research dedicated to the discovery of genetic selection or omission tools to advance genetic progress for cattle producers around the world. Accelerated Genetics will continue providing the best genetics available through our PACE young sire sampling program and GeneFORCE elite genomic young sire groups.

## GENETIC VISIONS RECEIVES NEW CERTIFICATION

Recently, Genetic Visions, Inc. passed their final lab audit for Illumina's CPro Certification Process for Infinium® Whole-Genome Genotyping. This was the final phase in the certification process. The entire certification process involved written exams, data generation, demonstration of lab proficiency, data analysis and quality control.

"Ultimately, we went through this certification process to better utilize Illumina's genotyping technologies," says Dr. Mike Cowan, General Manager of Genetic Visions, Inc. "We have met the standards that Illumina requires in-house to use its equipment, procedures and data analysis. Our lab's certification ensures that our genomic scans will be of the highest quality."

## TOP SIRES AVAILABLE IN



ACC-SS sexed semen is available from breed-leading sires like: 014HO04876 Paxton, 014HO4924 Kramer, 014HO03597 Potter, 014JE00473 Louie, 014JE00472 Alexander and 014BS00314 Driver. Accelerated Genetics is excited to offer its top genetics to customers interested in increasing their heifer ratios through the use of sexed semen.

For a complete listing of ACC-SS sires available, contact your local representative or go to [www.accelgen.com](http://www.accelgen.com) for the most current listing.



## TAKE PHOTOS, WIN A DIGITAL CAMERA

Do you enjoy taking photos? Well if so, have you ever thought about entering a photo contest? This year Accelerated Genetics' Annual Photo Contest is giving away a digital camera to the winning entry along with some other great prizes. The themes for this year's contest are: 'Favorite Cows' and 'Picturesque Pastures'.

For full contest details check out the January 2009 Genetic Trends or go to [www.accelgen.com](http://www.accelgen.com).



# WARNING: TRAIN WRECK AHEAD

## PREPARE YOUR ANIMALS TO DEAL WITH SUMMER HEAT



BY: DAN SCHREINER, PRODUCT SPECIALIST

If someone told you one morning that you would get into an accident that day driving to town to get parts for your tractor, you probably would do everything in your power to try and avoid any collisions...wouldn't you? The same applies to your farm: If you knew there was a large section of your bunker that had mold that could make your cows sick you would keep that feed out of the TMR. Yet many producers, year after year, are aware that their cows will lose production every year due to heat stress but do very little if anything to avoid the situation.

Heat stress can have a major impact on production and herd health. Reproduction efficiency can be drastically lowered, with some research indicating that only 10 to 20 percent of inseminations result in pregnancies when animals are under stress during periods of high heat. The effect of heat stress on animals is also a factor that can affect milk quality. By being proactive this spring and summer, heat stress can have minimal impact on your herd and bottom line.



Dehydration of cattle may occur from a multitude of challenges – such as shipping stress, movement, heat stress, calving, water quality and availability, ration changes, and stress from medical treatments and vaccinations. Bovine Accelyte II is a unique electrolyte designed to combat the losses due to dehydration. It can be used for both pre-hydrating (prior to stress) and re-hydrating (post stress) cattle. It is also very versatile and can be fed using a drench, in water tanks or dry-mixed into feeds for whole herd application.

One of the first things to be aware of is that temperature levels that may be comfortable to people can be stressful on high producing cattle. Ideal temperatures for a dairy cow can be between 41° and 80° F and high humidity (90%) can drop the comfort zone down to 72° F.

One of the most commonly used methods to monitor heat stress is the temperature-humidity index (THI). THI is a calculation resulting from the temperature and relative humidity. Dairy cattle suffer heat stress when the THI reaches 72. Symptoms are further exaggerated when the THI remains high for long periods without a chance to cool down at night. Table 1 lists symptoms at different levels of THI.

There are ways to be proactive to reduce the impact of heat stress on cattle throughout the summer months. Water intake is the first key to a successful heat abatement program. At least one water source is needed for every twenty cows at all times. Keeping the water clean and fresh is also important. Studies have shown that cattle will drink more water when a cool, clean source is available. When walking past a waterer you should ask yourself: Would I take a drink from that? If the answer is no, it needs to be cleaned. The use of electrolytes on cattle experiencing heat stress can be a good way of maintaining higher water intakes and increase absorption of the water that is used.

Along with the need for additional water, nutritional needs still need to be met. Heat stress depresses feed intake, so it is important to adjust the ration to meet the same requirements as it would in cooler

periods. Increasing nutrient density, such as feeding higher quality forage, feeding more grain and adding supplemental fat can help the cow meet its needs with less feed. Mineral requirements will also change during periods of hot weather. Anytime a cow increases perspiration and respiration, water is released from the body taking with it needed minerals. Lower intakes and a higher concentrated diet will also increase the need for a buffer to be added to the diet to maintain rumen pH.

Barn design and management can reduce heat stress as well. Regardless of what type of barn you have or how many animals are housed in the barn, there are three key points to keep in mind when making changes to a ventilation system:

- 1) AIR EXCHANGE:** Whether the barn has mechanical or natural ventilation, either type of system must have the ability to remove warm, humid air from the inside and replace it with air from the outside.
- 2) CONTROL:** Ventilation systems must have the ability to adjust according to the inside and outside conditions. Ventilation rates can be changed by turning the fans on and off and adjusting air exchange openings. Automatic control devices provide the best response to control conditions inside the barn.
- 3) FLEXIBILITY:** Ventilation systems must be designed with the entire year in mind.

A sprinkler system can also reduce heat stress if it is set up correctly. A properly working cooling system soaks the backs of the animals to allow evaporation to cool

TABLE 1. TEMPERATURE-HUMIDITY INDEX (THI) IMPACT ON DAIRY CATTLE.

THI:	SYMPTOMS:
72	Cattle start to feel heat stress. Reduced feed intake and increased respiration rate make occur.
77	Begin losing milk production. Symptoms become more apparent.
80	Rapid shallow breathing, profuse sweating and a 10% decrease in milk production.
90	Severe loss in milk yield (>25%), decreased feed intake, and panting. Risk of death if animal is ill or calving.

## YOUNG PRODUCERS ARE FIRED UP FOR AG ADVOCACY

During the weekend of March 28-29, 2009, seventy young dairy and beef producers from across Accelerated Genetics cooperative membership area acquired communication, leadership and advocacy skills at the Young Producer Leadership Conference.

The first presenter was Jolene Brown



known as 'Farmer Brown' of West Branch, Iowa. Her keynote titled 'Let go of the Rope' encouraged the attendees that agriculture needs them launched and ready to soar. Overall, Brown's messages were clear and truthful and the producer's loved her for it. One producer commented, "Jolene was very motivating and encouraging to get things organized. And her sessions helped me to seriously think about the future of my farm."

Brian Brown, Chair of the Board of Directors of Accelerated Genetics and Joel Groskreutz, President and CEO of Accelerated Genetics, fired up the crowd Saturday night. Joel shared, "It is our priority to develop strong leaders for the dairy and beef industries and the Accelerated Genetics cooperative."



Donna Moening, Vice President of Industry Relations for Midwest Dairy Association taught the group how to put their OWN

face on the product they produce and she provided industry key messages, resources and tools that the producers can utilize when they are communicating with consumers.

Next Tom Jadin, a mental health counselor and speaker from Shioton, Wisconsin, shared a humorous session and taught the producers how to deal with problems and challenges that come up in life and in the farm business.

The conference concluded with Kari Stanek, Communications and Public Relations Coordinator for Accelerated Genetics. She had one final challenge for the producers, "This weekend Accelerated Genetics provided you with some tools, enhanced your communication skills, and encouraged you to set goals. I further challenge to you is to stand up, step out and lead this industry we all love - AGRICULTURE."

**FIGURE 1. TEMPERATURE HUMIDITY INDEX (THI)** - Several factors impact a dairy cows tolerance to heat stress, including the amount of sun exposure, access to shade, air exchange, air velocity, access to water, and general management practices. Dairy cows will generally start to show a sharp decline in milk production after the THI reaches 77. At this point, environmental changes should be implemented to reduce negative impacts on health, production and reproduction.

Temp "F"	Temperature Humidity Index (THI)																			Stress Level	
	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95		100
70	53	54	54	54	55	55	55	56	56	57	57	57	58	58	58	59	59	59	60	60	No Stress
71	54	54	55	55	56	56	56	57	57	57	58	58	58	59	59	60	60	60	61	61	
72	54	55	55	56	56	57	57	57	58	58	59	59	60	60	61	61	61	62	62	62	
73	55	55	56	56	57	57	58	58	59	59	60	60	61	61	62	62	62	63	63	63	
74	55	56	56	57	57	58	58	59	59	60	60	61	61	62	62	63	63	64	64	64	
75	56	56	57	57	58	58	59	60	60	61	61	62	62	63	63	64	64	65	65	65	
76	56	57	57	58	58	59	60	60	61	61	62	62	63	63	64	64	65	65	66	66	
77	57	57	58	58	59	60	60	61	61	62	62	63	63	64	64	65	65	66	66	67	
78	57	58	58	59	60	60	61	61	62	62	63	63	64	64	65	65	66	66	67	67	
79	57	58	59	59	60	60	61	61	62	62	63	63	64	64	65	65	66	66	67	67	
80	58	58	59	60	60	61	61	62	62	63	63	64	64	65	65	66	66	67	67	68	
81	58	59	60	60	61	61	62	62	63	63	64	64	65	65	66	66	67	67	68	68	
82	58	59	60	60	61	61	62	62	63	63	64	64	65	65	66	66	67	67	68	68	
83	59	60	60	61	61	62	62	63	63	64	64	65	65	66	66	67	67	68	68	69	
84	60	60	61	61	62	62	63	63	64	64	65	65	66	66	67	67	68	68	69	69	
85	60	61	61	62	62	63	63	64	64	65	65	66	66	67	67	68	68	69	69	70	
86	61	61	62	62	63	63	64	64	65	65	66	66	67	67	68	68	69	69	70	70	
87	61	62	62	63	63	64	64	65	65	66	66	67	67	68	68	69	69	70	70	71	
88	62	62	63	63	64	64	65	65	66	66	67	67	68	68	69	69	70	70	71	71	
89	62	63	63	64	64	65	65	66	66	67	67	68	68	69	69	70	70	71	71	72	
90	63	63	64	64	65	65	66	66	67	67	68	68	69	69	70	70	71	71	72	72	
91	63	64	64	65	65	66	66	67	67	68	68	69	69	70	70	71	71	72	72	73	
92	64	64	65	65	66	66	67	67	68	68	69	69	70	70	71	71	72	72	73	73	
93	64	65	65	66	66	67	67	68	68	69	69	70	70	71	71	72	72	73	73	74	
94	65	65	66	66	67	67	68	68	69	69	70	70	71	71	72	72	73	73	74	74	
95	65	66	66	67	67	68	68	69	69	70	70	71	71	72	72	73	73	74	74	75	
96	66	66	67	67	68	68	69	69	70	70	71	71	72	72	73	73	74	74	75	75	
97	66	67	67	68	68	69	69	70	70	71	71	72	72	73	73	74	74	75	75	76	
98	67	67	68	68	69	69	70	70	71	71	72	72	73	73	74	74	75	75	76	76	
99	67	68	68	69	69	70	70	71	71	72	72	73	73	74	74	75	75	76	76	77	
100	68	68	69	69	70	70	71	71	72	72	73	73	74	74	75	75	76	76	77	77	
101	68	69	69	70	70	71	71	72	72	73	73	74	74	75	75	76	76	77	77	78	
102	69	69	70	70	71	71	72	72	73	73	74	74	75	75	76	76	77	77	78	78	
103	69	70	70	71	71	72	72	73	73	74	74	75	75	76	76	77	77	78	78	79	
104	70	70	71	71	72	72	73	73	74	74	75	75	76	76	77	77	78	78	79	79	
105	70	71	71	72	72	73	73	74	74	75	75	76	76	77	77	78	78	79	79	80	
106	71	71	72	72	73	73	74	74	75	75	76	76	77	77	78	78	79	79	80	80	
107	71	72	72	73	73	74	74	75	75	76	76	77	77	78	78	79	79	80	80	81	
108	72	72	73	73	74	74	75	75	76	76	77	77	78	78	79	79	80	80	81	81	
109	72	73	73	74	74	75	75	76	76	77	77	78	78	79	79	80	80	81	81	82	
110	73	73	74	74	75	75	76	76	77	77	78	78	79	79	80	80	81	81	82	82	
111	73	74	74	75	75	76	76	77	77	78	78	79	79	80	80	81	81	82	82	83	
112	74	74	75	75	76	76	77	77	78	78	79	79	80	80	81	81	82	82	83	83	
113	74	75	75	76	76	77	77	78	78	79	79	80	80	81	81	82	82	83	83	84	
114	75	75	76	76	77	77	78	78	79	79	80	80	81	81	82	82	83	83	84	84	
115	75	76	76	77	77	78	78	79	79	80	80	81	81	82	82	83	83	84	84	85	
116	76	76	77	77	78	78	79	79	80	80	81	81	82	82	83	83	84	84	85	85	
117	76	77	77	78	78	79	79	80	80	81	81	82	82	83	83	84	84	85	85	86	
118	77	77	78	78	79	79	80	80	81	81	82	82	83	83	84	84	85	85	86	86	
119	77	78	78	79	79	80	80	81	81	82	82	83	83	84	84	85	85	86	86	87	
120	78	78	79	79	80	80	81	81	82	82	83	83	84	84	85	85	86	86	87	87	
121	78	79	79	80	80	81	81	82	82	83	83	84	84	85	85	86	86	87	87	88	
122	79	79	80	80	81	81	82	82	83	83	84	84	85	85	86	86	87	87	88	88	
123	79	80	80	81	81	82	82	83	83	84	84	85	85	86	86	87	87	88	88	89	
124	80	80	81	81	82	82	83	83	84	84	85	85	86	86	87	87	88	88	89	90	
125	80	81	81	82	82	83	83	84	84	85	85	86	86	87	87	88	88	89	90	90	
126	81	81	82	82	83	83	84	84	85	85	86	86	87	87	88	88	89	89	90	91	
127	81	82	82	83	83	84	84	85	85	86	86	87	87	88	88	89	89	90	91	91	
128	81	82	83	83	84	84	85	85	86	86	87	87	88	88	89	89	90	90	91	92	
129	82	82	83	83	84	84	85	85	86	86	87	87	88	88	89	89	90	90	91	92	
130	82	83	83	84	84	85	85	86	86	87	87	88	88	89	89	90	90	91	92	92	

Prepared by Vinton E. Smith, Penn State Dairy Management Agent. References for figure: Heat Stress and Feeding Management; Michael Westendorf & David Lee, Rutgers Cooperative Extension; <http://www.rcr.rutgers.edu/pubs/pdfs/fs884.pdf> and Coping with Summer Weather, Dairy Management Strategies to Control Heat Stress; John Smith, et al; Kansas State Univ. <http://www.oznet.ksu.edu/library/lvstkt2/mf2319.pdf>.

the animal. Having a fine mist that only covers the top of the coat will actually act as insulation and do more harm than good by trapping the heat on the cow. The misters need to be run intermittently to allow the water to actually evaporate before the animals are soaked again. The amount of time needed between misting periods needs to change depending on the temperature and humidity.

Further, if cows are kept outside, there needs to be adequate shade to allow animals relief from the sun. Cows left a tremendous amount of heat, so if shade is limited, cows will bunch together and cause additional heat stress on each other.

Overall, to properly manage heat stress on your operation, it is always best to be prepared for the worst. Many animals, especially those in later lactation, will have a hard time recovering from a high level of heat stress and will continue to produce at a lower level for the rest of the lactation.

By being prepared before the 'train wreck,' you can reduce your losses during periods of heat stress. Further, you'll save money in the long run by maintaining a high level of production, minimizing the number of days open (because of breeding issues), and reducing labor and treatment costs - all by keeping your animals healthy and comfortable.

# SAFETY AROUND SILAGE

Many producers, employees and family members become complacent with regards toward safety when working with silage in bunkers, trenches and drive-over piles. It's time to bring awareness to your dairy regarding safety with silage filling, packing and feeding.

Use these precautions during packing and feed removal to protect your family, employees and yourself around silage:

## DON'T OVERFILL SILAGE

To prevent accidents, don't pile forage any higher than what your unloading equipment can reach safely. Typically, an unloader can reach a height of 12 to 16 feet. Thus, if the walls of your bunker stand 16 feet high, don't try to pack 40 feet of forage into the structure. If you have excess forage to store, consider using plastic silage bags or several small, covered silage piles to store the excess forage.

## TAKE PRECAUTIONS DURING SILAGE PACKING

Tractor rollover is one of the main things to be concerned about during silage packing. To prevent a tractor turnover, or to protect yourself if one occurs, here are some guidelines:

- Always use a packing tractor which has a rollover protective structure (ROPS).



**PACK SILAGE SAFELY IN A BUNKER:** To fill a bunker or trench silo, use the "drainage channel" method, says Brian Holmes, extension agricultural engineer at the University of Wisconsin. The "drainage channel" method slopes the forage surface away from the walls – a safety concern during packing – and it creates a drainage channel which directs water away from the walls. Use these steps to help you fill a bunker using this method: **Step 1.** Shape the top portion of the forage into a "V" with the lowest point of the "V" positioned at the center of the bunker. This slopes the forage and the packing tractor away from the walls — thereby reducing the risk of the tractor tipping over the sides during packing. **Step 2.** Fill in the "V" with a mound of forage so that the bottom edges of the mound extend about 2 to 4 feet from the walls of the bunker. This creates a drainage channel which directs water off the ends of the bunker.

- Wear your seat belt at all times.
- Allow only experienced operators to drive the packing tractor.
- Set the tractor's wheels as wide apart as possible, or use dual wheels to increase the tractor's stability.
- Use a four-wheel drive or front-wheel assist tractor for better control.
- Pack the forage at a maximum slope of 3:1 – pack 3 feet of silage horizontally for each foot that you pack vertically – to prevent the slope from becoming too steep.
- When packing on steep slopes, back the tractor up the slope of the forage instead of driving forward up the slope or parallel with the slope.
- During packing, slope the forage away from the walls. (For a complete description of this process, see description and at the bottom of this page.)
- In a trench silo, pack forage evenly in both directions so that you can drive off the wall onto the ground.
- When two tractors pack one bunker, establish a driving procedure which prevents the tractors from colliding.

In addition, keep people from walking around the bunker, trench or pile during filling and packing, as the equipment operators may not be aware of them and they could get run over.

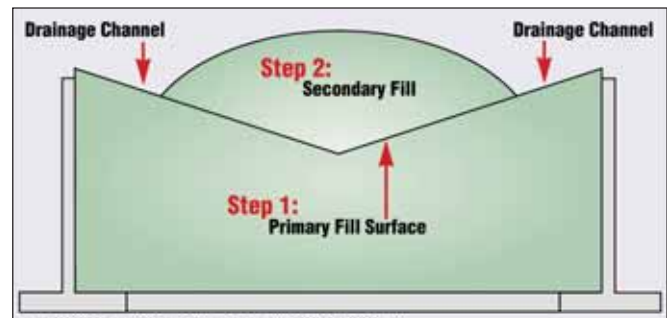
## COVER SILAGE WITH CARE

When you cover the bunker, trench or pile, it's easy to slip on the plastic and tumble off the edge of the bunker – especially during wet weather. To prevent this, face the walls of the bunker. Then, work your way from the edge toward the center of the bunker as you cover the silage. Furthermore, use an unloader bucket to carry tires up the slope of the silage instead of tossing them over the wall onto the silage.

## AVERT AVALANCHES

Do your employees or family members refuse to remove silage from an overfilled bunker or silage pile? If so, they have good reason if it is an unsafe height of the silage pile. In fact, those employees had good reason to avoid a feedout face that could easily 'avalanche' and bury them beneath tons of silage. Avalanches can and do occur, here are some ways how to avoid them:

**Don't undercut.** Undercutting occurs when you dig the unloader bucket into the bottom of the silage instead of shaving it down the face of the bunker – a situation that is quite common when the unloader



# JERSEY SIRES CONTINUE TO ACCELERATE

BY: DAVE ERF, DAIRY SIRE ANALYST

bucket can't reach the top of an overfilled bunker or pile. Undercutting creates an overhang of silage which can quickly loosen and tumble to the floor of the bunker. To avoid a silage avalanche, don't undercut the silage. Instead, shave the silage down the feedout face. Use these additional precautions when you feedout silage from a bunker, trench or silage pile:

- Use caution when removing the tires and plastic prior to feedout, especially during wet conditions which can cause the plastic to become slippery.
- Don't stand on top of a silage overhang. Your weight can cause it to collapse.
- To prevent a rollover, don't carry silage in an elevated bucket. Instead, push silage in front of the unloader blade or bucket.

**Stay away from the face.** The face of a bunker silo should not be a gathering place for tours of your dairy or a place where your nutritionist takes a feed sample. To discourage these situations, fence off the area and post a sign which reads 'Danger: Do Not Enter! Authorized Personnel Only' at the entrance of the bunker, trench or silage pile. If you need to take a feed sample, take it from the unloader bucket after the silage is removed from the face of the bunker or pile.

Use these precautions to prevent injury or death when working with silage in bunkers, trenches or drive-over silage piles.



Forage inoculants, like AccelEnsile, contain multiple strains of acid-producing bacteria, which act as an aid in the fermentation process of forages. AccelEnsile has a patented process of stabilization and packaging which insures that the inoculant contains live and viable bacteria specifically selected for the crop being ensiled.

New excitement for the Accelerated Genetics Jersey sire lineup came with the April Sire Summary. PACE graduates from previous summaries continue to rank well within the breed and offer a variety of pedigrees along with high production, strong components, outstanding type and high JPI.

Making impressive gains for production and health traits, 014JE00473 Louie moved into the Top Five JPI sires at +267. He is a high milk sire (+1739 PTAM) who is positive for fat test (+.02% fat). Health traits are a strength for Louie as he is +3.8 PL and +0.9 DPR. Louie provides the rare combination of high production genetics while offering outcross with a low 5.4% EFI. He sires tall, strong daughters that have correct feet and legs, and very desirable udders.

014JE00472 Alexander continues to offer high component outcross genetics. He is an Artist from a Very Good Bold and possesses a rather low 5.6% EFI rating. Alexander sires high components (+.19% fat and +.05% protein) along with great health trait ratings (+5.4 PL and +1.0 DPR). Look for Alexander to sire shallow udders with strong fore udder attachments.

Another pair of high JPI PACE graduates include 014JE00446 Triumph and 014JE00437 Russell. Both bulls have identical rankings of +202 JPI. Triumph sires outstanding milk production but is still positive for both fat and protein test. He sires great type (+1.7 PTAT) as his daughters are dairy with great fore udders, strong center support and excellent teat placement. Russell is a Mor son that specializes in high components (+.20% fat and +.04% protein) and positive health traits.

New release 014JE00467 Excite lives up to his name. This Mor son out of a Mannix is a high fat bull (+.05 fat and +61 PTAF) that also sires great type (+1.50 PTAT). They are tall with good strength and dairyness. The Excite daughters have great rear udders, strong center support and smooth fore udders.

Other sires that continue to impress as they add more information include: 014JE00460 Epic with high components and great udders and 014JE00415 Peter who seems to climb every summary.

The PACE young sire program is extremely proud to have created the genetics highlighted here. We are constantly striving to make this program the highest quality possible and invite you to share in the success of the program by either joining the PACE program or utilizing the bulls mentioned above.



014JE00473 Louie Daughter:  
Louie Lucky L Annabelle  
Dennis T Leamon, Statesville, N.C.



014JE00472 Alexander Daughter:  
Valley Oaks Alexander Wedding-P VG-85%  
Ray Orisio Jr., McMinnville, Ore.

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