

Forty Years of Beef AI

*Dr. Robert Walton
Former ABS President*

I deeply appreciate the invitation and the opportunity to be a part of this 40th Anniversary B.I.F. program. Although I'm supposed to be retired, I do run my own herd with 50 registered Simmental cows at home, and try to keep in touch with the industry a bit, so preparing for this presentation has been a delight and a wonderful opportunity to revisit people and events of a long, and for me, a grand career in livestock improvement. If you haven't read Courageous Cattlemen, Bob DeBaca's wonderful book in recent times, I recommend that you do so. I know almost everyone he wrote about in the book, but I still learned lots of new things about them and it was refreshing to recall the road many of us have traveled together. Jay L. Lush, Ray Woodward, Martin Jorgensen, Ferry Carpenter, Buddy Cobb, Frank Baker, Richard Willham, H.H. Stonaker, Jim Brinks, George Chiga, Don Vaniman, Sally Forbes, Roy Beeby, Tom Lasater, Lou Chestnut, Harry Furgeson, Dave Nichols, Roy Wallace and Bob DeBaca were among those I worked closely with, and several were my classmates with Dr. Lush and to whom I had the privilege of presenting the ABS Animal Breeding and Genetics award at ASAS.

My direct involvement with AI began in 1962 when I was elected by ABS to design and implement this dairy progeny testing program in the Holstein breed. In that role, I developed and implemented the ABS EDS (Estimated Daughter Superiority) sire evaluation system in 1963, which was adapted and renamed the Predicted Difference System by USDA in 1965. That basic system is still in place and used around the world and in the beef industry; although it has evolved greatly with the availability of faster and more powerful

computer systems, and with the application of great scientific minds to improve the mathematical adaptation to the specific traits of economic interest. The Animal Model or reduced Animal Model is the most modern revision.

Dr. Ray Woodward and I became acquainted when I joined ABS. He had already been there 3 years in developing the 1st Beef Progeny Program. We obviously had many mutual interests as geneticists. In 1965, during a time of reorganization at ABS when I was basically put in charge of the company – including the marketing operation and the genetic programs including beef cattle – Ray became my mentor on the beef industry, and I became his champion. ABS was approaching the 100,000 beef units/year sales volume, but couldn't get over that level. I declared that we were either going to really get serious about the Beef AI business or we were going to get out.

I really had no intention of getting out, but I wanted to be sure I got the full attention of a staff that was very good, but had always been focused on the dairy side of our business. I recognized that Ray Woodward had been fighting a valiant but lonely battle up to that time and I was determined to get him some help.

As most of you know, Ray Woodward had been a longtime proponent of performance testing and that him coming to ABS signaled his realization that Beef AI done right would be a perfect compliment to performance testing. While some of our beef semen was going into dairy cows, most of the time beef breeding with AI was to a group of performance oriented commercial producers across the upper

Midwest, using several British breeds and who were followers of Ray Woodward's philosophy.

It was obvious that three things were needed for an expansion of Beef AI, besides the commitment of a primarily dairy marketing team -

1. Someone to get the cows bred – our traditional AI Technicians were a long way from the beef cows – so we began developing the ABS Field AI Training Program at locations all over the country wherever we could congregate enough cattlemen to run a school. By the time I retired in 1991, we had trained our 125,000 cattlemen and dairymen in these schools.
2. Longer holding time liquid nitrogen refers – that could be leased to ranchers along with the semen needed for their breeding season without the need for N² refill during that time and could be returned with unused semen intact and nitrogen remaining at the end of the season. The Linde Company got the job done 1st and I'm still using one of those tanks on my farm that is nearly 35 years old. We would buy as many as 4,000 of these tanks at the beginning of each season and resell them after they returned as "field tested" to dairymen the rest of the year. (I.e. lowering my inventory cost and providing income).
3. A system for estrus synchronization to minimize the labor required or to even make it possible to implement a Beef AI program on a real cattle operation. That was a tough one to crack and it's gone through many systems, but today, probably 90% or more of Beef AI is done using these protocols.

As these things were happening at ABS in the mid to late 60's, some tough battles were

happening elsewhere with P.R.I. and then B.I.F. I was aware of this through Ray and others on our staff, but I had my hands full with similar battles going on in the dairy field – I.e. who was going to control the AI industry, the AI companies or the dairy breed registry associations. I was elected to the NAAB Board, became its President, and led the battle which we won on this critical issue. It was also during this time that I brought in a beef registry executive, Bill Durfey from AICA, to become the NAAB Executive Secretary and give new leadership to the organization. Ray Woodward was my primary contact enticing Durfey to join us. This also helped the beef industry know that we were serious about Beef AI.

Back at ABS, with the AI Training School rolling, the longer holding time refers on the way, and a start on estrus synchronization, our Beef AI program began to take off and really laid the groundwork for the exciting 10 years to follow. With the interest in locating new genetic material to produce beef with less fat, rather than undoing 200 years of selection for more fat as we had done in the British breeds to fit the market in the past, the recognition that Charolais, in this country, did have less fat led to going back to France to get more Charolais genetics to augment what had gotten to the U.S. via Mexico and from upgrading several decades before. Senator Harry Hayes of Canada, a real shaker and mover, led the way making a route available through Canada in 1965 with a number of Charolais and one Simmental (Pie Rouge) coming in that 1st year. ABS had long had a presence in Canada, so we had an inside track in securing many of these bulls as they came to Canada in the years following with over 20 breeds brought in. Ray and I made numerous trips together to Europe in selecting the specific animals to bring in. We established a stud site at Bragg Creek near Calgary, which became a mecca for these new breeds and we produced millions of units of semen there for export to the U.S. and all over the world.

As I said earlier, we had already set the table with our beef preparation in training, distribution, and management and we had this great network of performance oriented people excited about AI. That led to explosive growth in Beef AI. We sold enough beef semen to breed over one million cows in both 1973 and 1974, before the recession hit the whole country and particularly the beef industry. It was a heady time!

As some of you may remember, the British beef registry associations, except for Red Angus, had opposed allowing registration of AI offspring except on a very restricted basis through the 60's. With the explosion of popularity of the "exotic" breeds, which adapted open AI policies, and many commercial breeders using Beef AI, some enlightened Angus breeders in particular, and Martin Jorgensen specifically (one of your founders, past president, and recipient of the Seedstock Breeder Award) began challenging the breed's policy. Ray Woodward kept me informed on these developments and we were quietly behind the scenes giving full support to this truly courageous cattleman.

In 1974, the Angus Association acknowledged the impossible legal position the Board was in, and changed their policy. To their credit, the Angus breeders in this country jumped on this new opportunity and new tool with both feet, recognized the potential of large databases with widespread use of AI, soon had a national-sire summary with help from my friend, Richard Willham, and have never looked back. As an aside, it should be noted that the American Simmental Association had the 1st national beef sire evaluation program and as a Simmental breeder, I often wonder why we didn't just leave those Angus breeders alone in the dark ages. But I had to wear my other hat as ABS President, and we couldn't walk away from the potential in a great breed like the Angus.

In 1968, we developed and introduced the ABS Genetic Mating Service, which combined a linear evaluation system for functional dairy conformation for each cow with a computer decision process utilizing all possible mating sires to determine the best possible mating for that cow. Millions of commercial dairy cows around the world have now been mated using this system that combined the wisdom of the dairyman with the power of the computer. This was another industry first.

I had intended to introduce a similar system in our beef breeding program, but the recession and many other problems interfered with that plan, including my resignation from ABS in 1982. Peter Grace would not accept my resignation, but instead changed the whole management system we reported to within The Grace Company, and gave me a free hand to rebuild the ABS that had been almost destroyed the previous 7 years. There was so much to be done, but we got it done including the 1st clones in the animal world with the creation of Fusion and Copy long before Dolly the sheep was even heard of. Gene was also conceived before Dolly, but because of the longer gestation period for cattle, was born just after Dolly. Anyway, we finally introduced the ABS Genetic Type Summary to the beef industry in 1988 and it has added immensely to the effectiveness of beef cattle breeding.

That recession in 1974-75 really put a crimp in most businesses and certainly in agriculture. The beef business took a real beating as the previous years had been so good that cattle numbers had continued increasing in defiance of the typical 10 or 11 year cattle cycle, so the supply of beef far exceeded demand. Thus, President Nixon's freeze on beef prices and other communities exacerbated the crunch on beef producers' income. Instead of a normal product cycle curve, the Beef AI business fall was precipitous as producers got out of the business or hunkered down and minimized all

outgo just to survive. The supply of top proven beef bulls from our long-term progeny testing programs greatly exceeded the demand, and many outstanding bulls were sent to market or sold at a great discount for natural breeding service as all segments of the industry contracted to weather the storm.

The bloom was off the “exotics” and many of the newly introduced breeds never got a chance to be adequately tested in our beef production systems. Those that were better established and had a database and genetic evaluation systems in place were able to survive if they had real merit, but it was a severe testing time and many fell by the wayside.

The Angus breed, which really got their act together after the legal case was resolved, began to make significant genetic progress using AI and their new sire evaluation systems. As the industry began to recover, they were in the best position to take advantage of the new growth opportunities and have rightfully claimed their spot at the top of most Beef AI breeding programs.

As synthetics or composites have been developed and the power of hybrid vigor has been understood more widely in commercial beef production, several other breeds have regained their footing and are finding major niche positions in crossbreeding programs for beef production.

Some breeds or breeders tried to be all the things to all genetic needs in the industry, but I sense that most of them now recognize the specific strengths and/or weaknesses of their breed and are seeking to find their best fit in the national breeding program.

I've not been to Brazil or Argentina for at least 20 years, but I understand the beef industry there has gone way past us in percent

of beef cows bred AI in commercial herds using much of the technology we developed here. We'd better take a lesson from that and do a better job of practicing what we have been preaching!

Like in the dairy business, the cows never stay milked and you have to keep doing it everyday. We have developed magnificent tools and management systems for Beef AI in commercial production, but we have to keep moving ahead as markets and conditions change. We have to keep our genetic tools sharpened and aimed in the right direction. Yesterday's solutions are soon out of date.

One final note regarding one of our heroes... it was a great privilege to play a role in the nomination of Dr. Ray Woodward to have his name and portrait hung in the Saddle and Sirloin Gallery of leaders in the livestock industry at Louisville, KY about 15 years ago. His presence certainly adds to the prestige of the gallery.

Now back to the stories exemplified in Courageous Cattlemen... As I reread those stories, I gained a new appreciation for those individuals who reflected the very best of human attributes. Many were truly 1st or 2nd generation pioneers who were clear and courageous thinkers, who battled formidable circumstances, or people in bringing about what we now call performance testing. They were strongly committed to doing what was best for the industry without concern for personal gain. That was the heritage of the B.I.F. They and you are to be commended for courage, integrity, dedication and foresight in making B.I.F a real cornerstone of the beef industry. I tip my hat to you and to them, and am proud to say that I know I was friend to so many of them and to so many of you.

Thank You