40 Years of Beef A.I.

Dr. Bob Walton

1

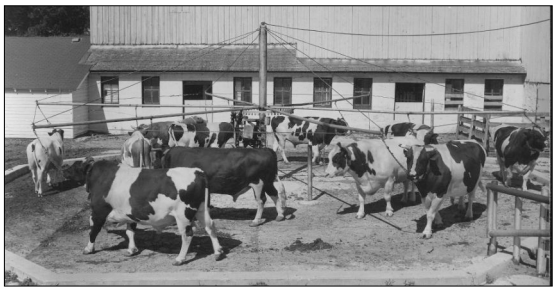
Pre-1960

1946 NAAB Established

1960 1970 1980 1990 2000 2010

2

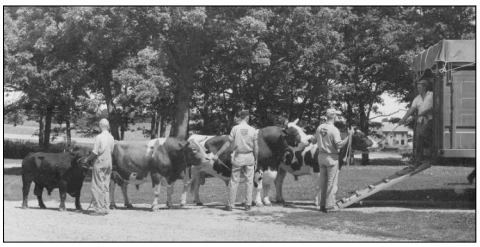
Pre-1960



1960 1970 1980 1990 2000 2010

3

Pre-1960

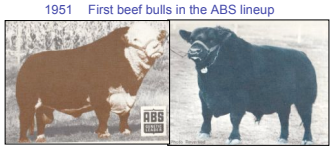


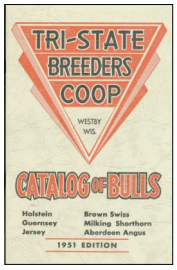
1960 1970 1980 1990 2000 2010

4

Pre-1960

1951 First beef bulls in the ABS lineup





1960 1970 1980 1990 2000 2010

5

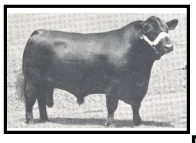
Pre-1960 In the Beginning

- Little individual performance data
- No progeny performance data
- No synchronization options
- Relied on technicians
- Choice of Angus or Hereford
- One price and no individual bull choice

1960 1970 1980 1990 2000 2010

6

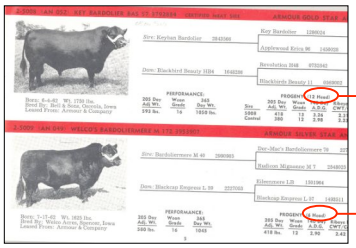
1960s



1960 1970 1980 1990 2000 2010

7

1960s



12 Head

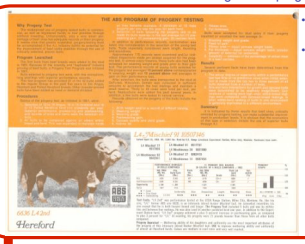
6 Head

1960 1970 1980 1990 2000 2010

8

1960s

1961 ABS Initiates large scale progeny test program



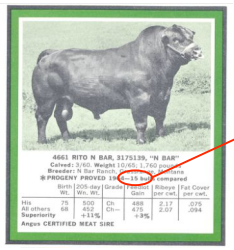
- Multi herd large contemporary group comparisons
- Included both performance and carcass traits

Dr. Ray Woodward

1960 1970 1980 1990 2000 2010

9

1960s



Structured Progeny Test vs 15 Sires

Tested for

- Birth Weight
- Weaning Weight
- Feedlot Gain
- Quality Grade
- Ribeye Area
- Fat Cover

1960 1970 1980 1990 2000 2010

10

1960s

1965 The beginning of the "Exotic Era"

- First Charolais bulls Bramard and Dessauny from France in 1965
- Bismark is ABS' first Simmental bull imported when Switzerland opens up in 1966

1960 1970 1980 1990 2000 2010

11

1960s

1965 1st Progesterone based Synchronization Programs

Repro-Mix

Without prostaglandins and understanding of follicular development these systems yielded sub par results

1960 1970 1980 1990 2000 2010

12

1960s

Mid 1960s A.I. Management Schools trained Ranchers

1960 1970 1980 1990 2000 2010

13

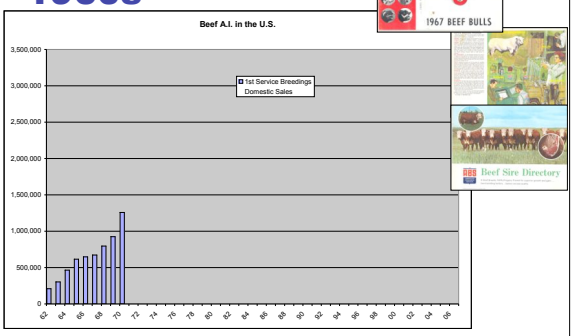
1960s

Beef Improvement Federation
Founded
1967

1960 1970 1980 1990 2000 2010

14

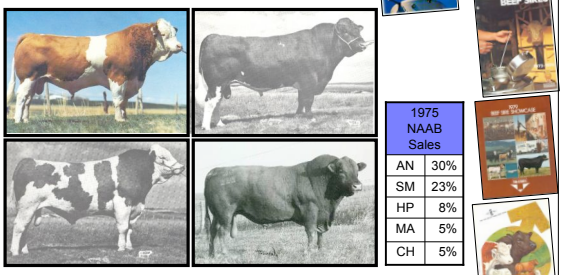
1960s



1960 1970 1980 1990 2000 2010

15

1970s



1975 NAAB Sales	
AN	30%
SM	23%
HP	8%
MA	5%
CH	5%

1960 1970 1980 1990 2000 2010

16

1970s

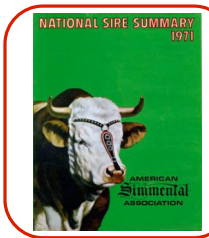
Early 1970s Development of longer holding time tanks

1960 1970 1980 1990 2000 2010

17

1970s

1971 First Simmental Sire Evaluation Report



1960 1970 1980 1990 2000 2010

18

1970s

1971 First Progeny Tested Simmental to sell in North America

- PACIFIC tops the Lacombe Sale at $165,000 to ABS

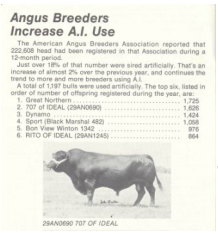
1960 1970 1980 1990 2000 2010

19

1970s

1972 Open A.I. Policy adopted by the American Angus Association

- Open A.I. allows for the development and propagation of highly proven sires
- Along with improved computer technology, open A.I. enables today's genetic evaluation systems



Angus Breeders Increase A.I. Use

The American Angus Breeders Association reported that 222,638 head had been registered in that Association during a 12-month period.

Just over 18% of that number were sired artificially. That's an increase of almost 2% over the previous year, and continues the trend to more and more breeders using A.I.

A total of 1,197 bulls were used artificially. The top six, listed in order of number of offspring registered during the year, are:

1. Sireal Northern 1,725
2. 707 of IDEAL (29AN0690) 1,626
3. Dynamo 1,424
4. Sport (Black Marshal 482) 1,068
5. Bon View Winton 1342 976
6. RITO OF IDEAL (29AN1245) 864

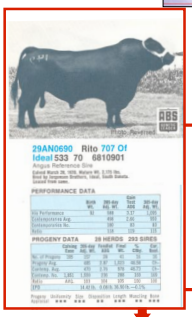
29AN0690 707 OF IDEAL

1960 1970 1980 1990 2000 2010

20

1970s

1973 ABS publishes in house EPDs



29AN0690 Rito 707 Of Ideal 533 70 6810901

PERFORMANCE DATA

PROGENY DATA 28 HERDS 293 SIRES

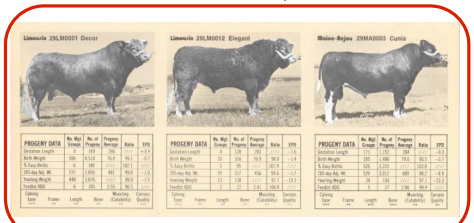
- Generated from ABS progeny test herd data
- Calculated using BIF standards
- Traits included
  - 205 day weight
  - Feedlot ADG
  - Final Weight
  - % Cutability

1960 1970 1980 1990 2000 2010

21

1970s

1973 ABS publishes in house EPDs



Limousin 29LM0001 Decor

Limousin 29LM0012 Elegant

Maine-Anjou 29MA0003 Cunia

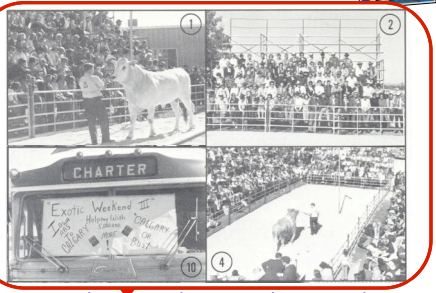
PROGENY DATA

1960 1970 1980 1990 2000 2010

22

1970s

1974 The Cattle Market and the "Exotic Era" reaches it's peak

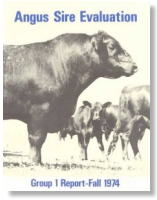


1960 1970 1980 1990 2000 2010

23

1970s

1974 First Angus Sire Evaluation Report



1960 1970 1980 1990 2000 2010

24

1970s

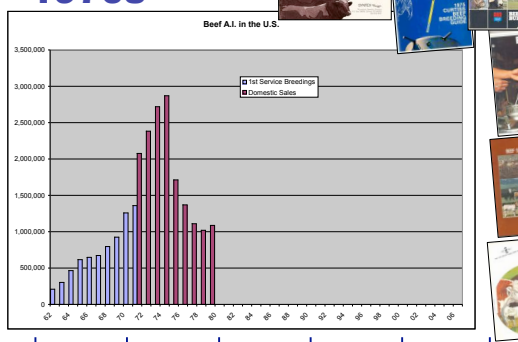
CSS®
CERTIFIED SEMEN SERVICES

1975 CSS Established

1960 1970 1980 1990 2000 2010

25

1970s



1960 1970 1980 1990 2000 2010

26

1980s

1985 NAAB Sales	
AN	39%
SM	18%
HP	16%
LM	3%

1960 1970 1980 1990 2000 2010

27

1980s

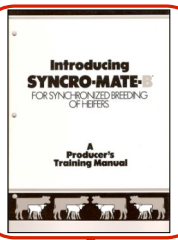
1980 Introduction of Prostaglandins for Synchronization of Beef Cattle

1960 1970 1980 1990 2000 2010

28

1980s

1983 Introduction of Synchromate-B for Synchronization of Beef Cattle



1960 1970 1980 1990 2000 2010

29

1980s

Mid 1980s Dry Shippers Enhance Distribution

1960 1970 1980 1990 2000 2010

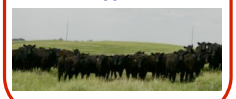
30

1980s

Late 1980s MGA & Prostaglandin programs adopted

Combination of MGA and prostaglandin provides cheap and reliable means of heifer synchronization.

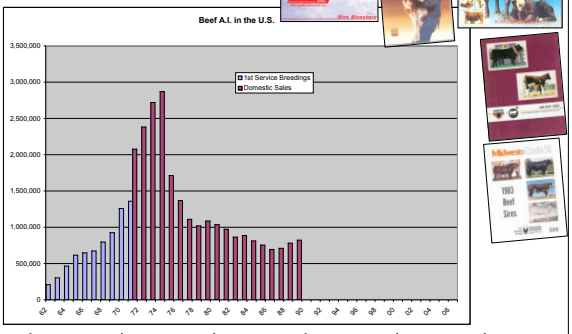
This combined with reliable birth weight EPDs and a push back against the bigger birth weight genetics of the 70's & 80's fuels strong growth in heifer A.I.



1960 1970 1980 1990 2000 2010

31

1980s



1960 1970 1980 1990 2000 2010

32

1990s

1995 NAAB Sales	
AN	60%
SM	10%
HP	8%
AR	5%

1960 1970 1980 1990 2000 2010

33

1990s

1998 1st GnRH based synchronization systems

Select Synch

Introduced by Select Sires and the Reproduction Think Tank

GnRH PG

0 6 7 13

Heat detect & A.I.

1960 1970 1980 1990 2000 2010

34

1990s

1998 1st Ultrasound Genetic Evaluation

2002 Angus Sire Evaluation Data

	Carcass 3 herds/4 progeny					Ultrasound 60 herds/212 progeny				
TRAIT:	CW	Marb	REA	Fat	%RP	IMF	REA	FT	RMP	%RP
EPD:	+7	-.02	+.17	-.03	+.38	+.11	+.13	+.00	+.00	+.10
Acc:	.39	.42	.38	.38	.38	.79	.79	.79	.82	.79

Top 10% BW, Top 20% WW, Top 10% YW, Top 15% Milk, Top 15% IMF, Top 25% REA

1960 1970 1980 1990 2000 2010

35

1990s

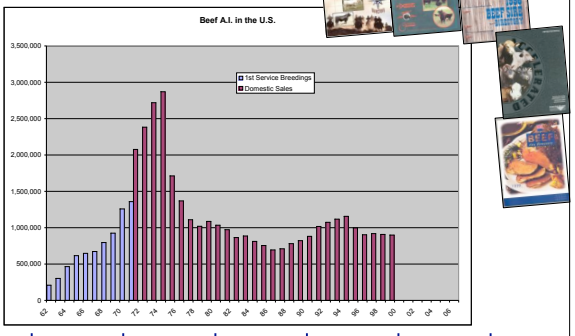
1999 1st Beef Industry Selection Indexes

+ $36.15 Profitability Value

1960 1970 1980 1990 2000 2010

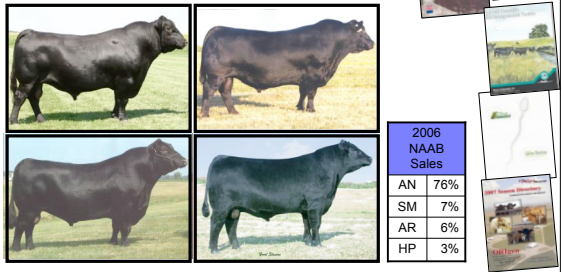
36

1990s



37

2000s



2006 NAAB Sales	
AN	76%
SM	7%
AR	6%
HP	3%

38

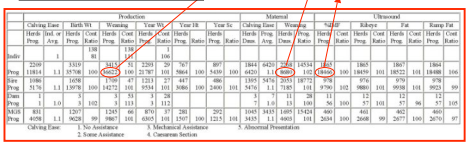
2000s

- Data Explosion

36,000 plus weaning records

Nearly 9,000 daughters

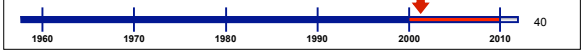
18,000 plus ultrasound records



39

2000s

2003 Introduction of CIDRs for Synchronization of Beef Cattle



40

2000s

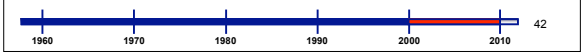
North Central Region Reproduction Task Force

41

2000s

The change from a commodity beef system to a value driven system is positively influencing A.I. usage

- Tremendous success of branded programs like CAB
- It's estimated that 40% of cattle today are sold on a grid



42

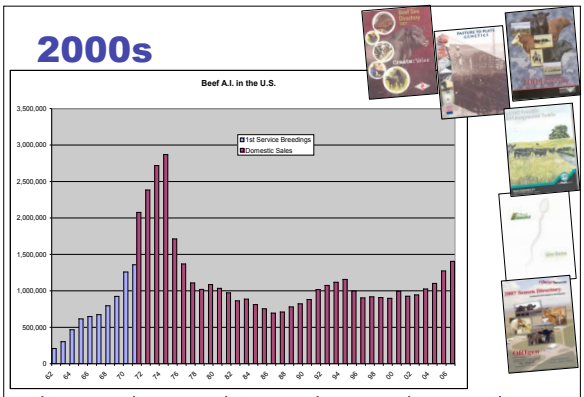
2000s Today

- Highly Proven Sires for 20 plus traits
- Effective timed synchronization systems for heifers & cows
- Overnight shipping
- Sexed semen

1960 1970 1980 1990 2000 2010

43

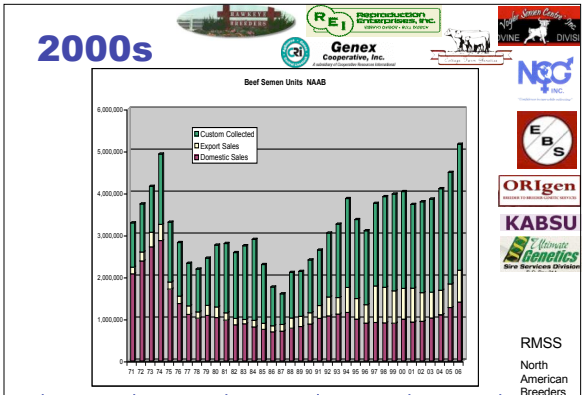
2000s



1960 1970 1980 1990 2000 2010

44

2000s



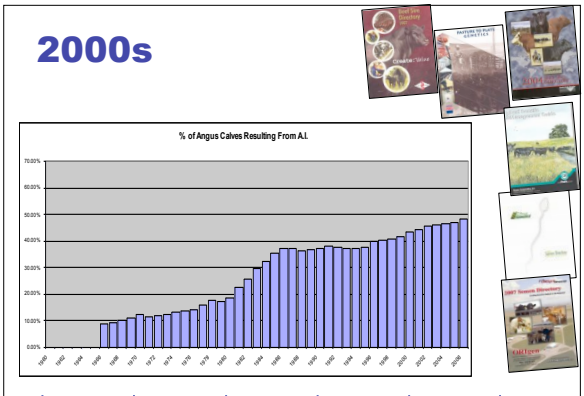
Reproduction Enterprises, Inc.
Genex Cooperative, Inc.
ORIgen
KABSU
Ultimate Genetics
Sire Services Division

RMSS
North American Breeders

1960 1970 1980 1990 2000 2010

45

2000s

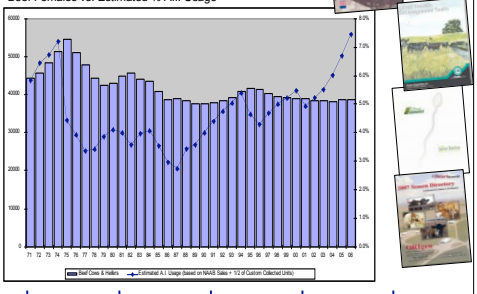


1960 1970 1980 1990 2000 2010

46

2000s

Beef Females vs. Estimated % A.I. Usage



1960 1970 1980 1990 2000 2010

47