University of California Cooperative Extension • Tulare County

Beef Roundup

Volume III, Issue 1 June 2006

UC Cooperative Extension and Tulare County Cattleman's Association Presents
Preparing for Bull Selection

Tuesday, August 1, 2006
10:00 AM – 12:30 PM
Tulare County Ag Building Auditorium
4437 S. Laspina, Tulare, California

Understanding and applying today's EPD Information – ***Dr. Randy Perry, Fresno State, Animal Science***

Use of DNA-based Biotechnologies in the Beef Cattle Industry – ***Dr. Alison Van Enennaam, UC Davis, Animal Science***

What you should know to keep that bull breeding – ***Dr. John Maas, UCD Vet Science***

The Importance of Sire Selection

Bull selection is one of the most important decisions a producer makes. It requires advance preparation and effort to be successful. To effectively select sires, producers must not only be well versed in the use of Expected Progeny Differences (EPD) and understand breed differences, but they must also accurately and objectively assess their current genetics, resources, and management. Producers who stay up to date on advances in beef cattle genetics should profit from enhanced revenue and reduced production costs, as they best match genetics to their production situation.

Opportunity for Genetic Change

Sire selection represents the greatest opportunity for genetic change. Genetic change in cow-calf operations can occur both through sire selection and through replacement female selection in conjunction with cow culling. However, most producers raise their own replacement heifers, greatly limiting the opportunity for genetic change through female selection. If a sound genetic system is in place, the amount of genetic variation among potential replacement heifers should be relatively small. For this reason, doing a good job of selecting the best of the group creates very little improvement over choosing just an average, random sample. Second, a large proportion of potential replacements must be retained to maintain herd size. Depending on culling rate in the cowherd, usually one-half or more of the replacement heifer candidates are retained at weaning, to allow for further selection at breeding time. So, even if the best half of the heifers is retained, some average heifers will be in that group. Finally, the information used to select replacement heifers in commercial herds is limited. Producers may use in-herd ratios along with data on the heifers' dams, but these types of data on females do not reflect genetic differences as

well as do the Expected Progeny Differences (EPD) used to select bulls.

In contrast, whether selecting natural service sires for purchase or sires to be used via artificial insemination (AI), the amount of variation available can be almost overwhelming. Producers can find bulls that will increase or decrease nearly any trait of economic importance. Furthermore, since a relatively few bulls will service a large number of cows, producers can select bulls that are fairly elite even when natural mating. Use of AI allows commercial producers to use some of the most outstanding bulls in the world at a reasonable cost, allowing for enormous amounts of genetic change, if desired. Finally, selection of bulls is more accurate than female selection. Seedstock breeders provide genetic information in the form of EPD, which allow for direct comparison of potential sires across herds and environments. Unlike actual measurements, EPD consider the heritability of the trait to accurately predict genetic differences between animals. If AI is used, even greater accuracy is possible. Bulls used in AI may have highly proven EPD, calculated from thousands of progeny measured in many herds and environments.

Permanent and Long-Term Change

Genetic change is permanent change. Among management decisions, genetic selection differs from others in that the effects are not temporary. Feeding a supplement to meet nutritional requirements is beneficial as long as the feeding continues, and health protocols, while important, must be maintained year after year. However, once a genetic change occurs, that change will remain until additional new genetics enter the herd. Whether selecting for growth, carcass traits, or maternal performance, those traits, once established in the herd, are automatically passed on to the next generation.

Sire selection has a long-term impact. Regardless of whether a selected sire has a favorable or unfavorable effect on the herd, if his daughters enter the cowherd, his effects will remain for a considerable period of time. Assuming a sire is used for four years and his daughters are retained, his impact will easily extend into the next decade. And, while each generation dilutes his contribution, his granddaughters and great-granddaughters may remain in the herd a quarter-century after he last sired calves. For this reason, purchases of bulls and semen should be viewed not as a short-term expense but as a long-term investment into the efficiency and adaptability of the beef production enterprise.

By: Dan W. Moser, Kansas State University

The excerpts above were taken from:

Beef Sire Selection Manual
National Beef Cattle Evaluation Consortium

Remember the deadline for registration is July 26, 2006.

First 50 to register will receive a copy of the new Beef Sire Selection Manual by the National Beef Cattle Evaluation Consortium.

BULL SELECTION REGISTRATION FORM

Please mail this form with your check to:

Bull Selection Program
4437B S. Laspina St
Tulare, CA 93274

Cost is **$15** if pre-registered on or before July 26. Make check payable to UC Regents. Paying at the door will be $20.00. *(**For Tulare County Cattlemen members only** fee is prepaid by TCCA for up to two if you pre-register by July 26, 2006. TCCA members may also call VLA to register at 559-625-9615)*

The first 50 to register will receive a copy of the new Beef Sire Selection Manual by the National Beef Cattle Evaluation Consortium.

Name: _____ Phone: _____

Others Attending: _____ _____

_____ _____

Will attend lunch ☐ Yes ☐ No

Tulare Cattlemen member ☐ Yes ☐ No

Or you can call or fax by July 26, 2006
Phone: 559-685-3303
Fax: 559-685-3319

University of California
Cooperative Extension
Tulare County
4437B S Laspina St
Tulare, CA 93274

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Jim Sullins
County Director