

New 'Muscle Profiling' Research Aims To Increase Cow Meat Value

Cull Market Represents up to 25 Percent of Total Beef Production

DENVER, Colo. — Beef from fed cattle is frequently used differently than beef from cull cows and bulls. That's why the industry, through the beef checkoff, recently completed the "Cow Muscle Profiling" project, a follow-up to successful muscle research on beef steers and heifers.

The research catalog's information on potentially valuable cow muscles so that processors can make informed decisions and increase the value throughout the cow beef production system. It is

a culmination of more than two years of planning and projects coordinated on behalf of the Cattlemen's Beef Board and state beef councils by the National Cattlemen's Beef Association (NCBA).

Today muscles from the cull cow and bull market — which represents from 18 to 25 percent of total U.S. beef production are used for more than just the middle meats, according to the National Market Cow and Bull Beef Quality Audit, also funded

through the beef checkoff. Cows represent more than 90 percent of this beef source.

Beef from these animals is used to produce subprimals, lean beef and beef trimmings. These cuts go into both whole muscle cuts and further processed items.

Yet until now little has been known about the muscles from these cuts, according to Bucky Gwartney, Ph.D., director of research and technical services for NCBA. This new research, performed at the University of Ne-

braska and the University of Florida, characterizes the individual muscles in market cows and helps differentiate their value in the beef carcass.

More than 3,300 individual muscles were evaluated in the research for traits such as shear force (for tenderness estimation), fat and moisture composition, dimensional data, color, pH, water holding capacity, collagen analysis and heme-iron concentration. Sensory testing was also conducted.

Even though a large and highly variable population was chosen, the research found that muscle traits varied across the population less than was expected. Muscle tenderness is one of the most important traits, and five of the 21 muscles were considered tender when evaluated by shear force testing. Three muscles were moderately tender.

In addition, many of the muscles evaluated were considered lean, with less than 5 percent fat. The Food and Drug Administration (FDA) definition of "Lean" is less than 10 grams of fat, 4.5 grams or less of saturated fat and

95 milligrams of cholesterol per 100 gram serving.

"This kind of research will help us expand our utilization of the beef carcass," said Bill Nice, a beef producer from Morrison, Ill., and vice chairman of the industry's Joint Product Enhancement Subcommittee. "Cattle producers benefit from this effort as a result of the increased demand generated for more parts of the animal."

According to Gwartney, information from this research will be distributed to the market cow industry, and address possible market cow grading standards and ways to upgrade muscles that lend themselves to more value in the market cow chain.

A manual has been developed, including all the summary data and relevant photos from the project. A CD-ROM containing the raw data, as well as other information such as fabrication videos and 3-dimensional views of the cow carcass and its cuts, is also being produced. For more information, contact the NCBA Research and Knowledge Management Department at 303/694-0305.

Testing For SCN Still Important Despite New Soybean Varieties

WOOSTER, Ohio — Though over 200 new soybean varieties that resist soybean cyst nematode have been made available so far for the 2003 season, growers shouldn't shirk monitoring SCN populations in their fields.

Of the new resistant varieties, all but four originate from the same resistant source, painting a picture that tells Ohio State University plant pathologist Anne Dorrance that eventually resistant varieties from PI88788 will no longer be effective against the pest.

And, the amount of time it takes to identify and incorporate resistance genes from new sources of resistance, as well as breed a high-yielding competitive soybean variety, increases the importance for growers to continue testing SCN populations despite the varieties they do plant.

"The list of new varieties coming from PI88788 is telling us that growers need to be sampling their fields and monitoring SCN populations often to make sure that the source of resistance they are planting is still working," said Dorrance. "If the grower plants the same resistant variety year after year, eventually the nematode will adapt to it and the line will no longer be effective."

Dorrance said that the barrier between SCN and certain resistant soybean varieties is already crumbling in limited areas throughout Ohio, and will likely continue as SCN populations adapt to varieties that carry the PI88788 resistance.

"I think what growers don't understand is that resistance does not mean a complete resistance. The way resistance is measured to soybean cyst nematode is by how many females reproduce compared to the susceptible check," said Dorrance.

"There will still be females reproducing on that resistant line, developing nematodes that eventually will develop an appetite for that particular resistant variety."

The best way for growers to determine whether they should plant a susceptible soybean variety, a resistant variety or plant a non-host crop is to test their soils for egg populations.

"This may sound ludicrous, but growers should be planting susceptible soybean varieties if the populations are from zero to 40 eggs per cup of soil," said Dorrance.

"By selecting a susceptible variety, it keeps the genetic pool in check so that all nematodes are competing with each other for food and no one nematode with a particular appetite for a specific source of resistance can dominate.

Though PI88788 has been the mainstay of soybean cyst resistant lines for Ohio growers for the past decade, Dorrance said growers should be keeping their eye out for the development of

new lines that carry resistance, such as "Peking" and "Hartwig."

"Though we've got new varieties coming down the line, we are still very limited at this point as to what is available for growers in terms of different resistant lines," said Dorrance. "That's why it's important to test fields for the presence of SCN. A grower does not want to waste a good source of resistance by overusing it. If this happens, it could mean losing the crop."

Visit Us
At The Keystone
Farm Show
Booth #118



NELSON

AUTOMATIC WATERERS

Always Fresh Clean Water

Nelson Manufacturing Company
Cedar Rapids Iowa U.S.A.

To purchase or for a FREE Brochure call:

1-888-844-6606

www.nelsonmfg.com



- Stainless Steel
- Cleans Easily
- No Float Valves
- No Freezing

VISIT US AT THE KEYSTONE FARM SHOW - BUILDING E - BOOTH NO. D659

WERTZ FARM & POWER EQUIPMENT

(717) 235-0111 6877 Lineboro Road, Glen Rock, PA (800) 839-1992

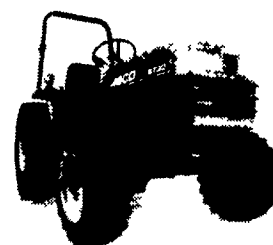
YOUR FULL SERVICE DEALER FOR:



GEHL

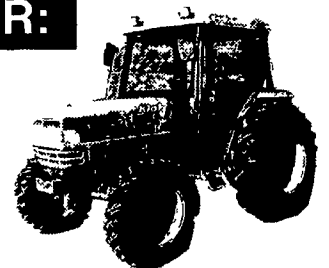
Husqvarna

WOODS



AGCO
you've gotta drive one

AGCO
NEW IDEA
BUILT FOR THE BOTTOM LINE



KIOTI

Simplicity



A Full Line Dealership With Sales, Service & Parts For A Wide Variety Of Farm Equipment, Lawn Equipment, Chain Saws & Trimmers

October Pig Crop 2 Percent Below Year Ago

WASHINGTON, D.C. — The October 2002 U.S. pig crop at 8.33 million head, was 2 percent below the previous year, according to the National Agricultural Statistics Service (NASS).

Sows farrowing during October totaled 940 thousand head, 2 percent below last year. The average pigs per litter for October increased to 8.86, compared to 8.85 last year.

The U.S. inventory of sows and gilts on November 1, 2002, was 5.83 million head, down 2 percent from November 1, 2001. U.S. sows and gilts bred during October totaled 1.18 million head, down 1 percent from the previous year.

The next "Quarterly Hogs and Pigs" report will be released at 3 p.m. ET on December 30, 2002. The next "Monthly Hogs and Pigs" report will be released at 3 p.m. ET on January 31, 2003.