

# **Computing EPDs on ET calves**

At its February meeting, the American Angus Association Board of Directors passed a motion to implement the generation of interim expected progeny differences (EPDs) using performance records on embryo transfer (ET) calves produced by registered Angus recipient cows. The motion also included a charge to proceed with work to adapt the National Cattle Evaluation (NCE) model to incorporate this in the future.

#### In the past

Prior to this, weights of ET calves have not been included in the NCE procedures to compute EPDs. Interim EPDs computed on ET calves have been based solely on the average of the two parents.

Concerns for calculating EPDs on ET calves have always centered on the effects of the recipient dam on the calf's performance, especially weaning weight.

The Association asked Sally Dolezal of Dolezal Enterprises, Derby, Kan., to analyze Angus Herd Improvement Records (AHIR) submissions on 4,655 ET calves out of registered Angus recipient females. Dolezal reported the results of that study at the February meeting.

### **Under investigation**

The study evaluated data on 2,439 bulls and 2,223 heifers. Birth weights (BW) and weaning weights (WW) were analyzed. Age of the dam was defined as the age of the recipient dam when the calf was 205 days old.

The study found the effects of

management, herd, age of recipient female and recipient milk EPD to be significant sources of variation for BW and WW in both the heifer and the bull data.

Dolezal also concluded that:

A group of ET calves, all born to registered Angus recipient females, can be ratioed as a contemporary group. Previously, an ET calf was automatically given a ratio of 100.

► Changes to the calculation of interim EPDs on ET calves would apply only to those calves out of *registered Angus recipient females*.

The interim EPD calculations on ET calves born to dams that are *not* registered Angus would continue to be calculated by averaging the EPDs of the two genetic parents and would not be influenced by the calf's individual animal performance. This is necessary because of the inability to account for the maternal effects of the recipient female.

► If the recipient dam is a registered Angus, the ET calf's BW and WW could be adjusted for the age of the recipient dam. Essentially, this would give an ET calf a third parent in the calculation to establish interim EPDs. The adjustment would be reflected in the interim BW, WW and yearling weight (YW) EPDs, along with the contemporary group effect.

► For the WW EPD, the recipient dam's milk EPD and permanent environmental effect would be used to calculate the interim EPDs rather than the maternal information of the donor dam. As a result, the interim YW EPD would be affected through the WW direct EPD.

#### Effects

The action taken by the Board at this time will not affect progeny data for sires in the American Angus Association *Sire Evaluation Report.* Nor will it affect the progeny ratios of the donor dams or the EPDs of either parent.

It will affect the interim EPDs listed on the performance registration certificates (PRC) for ET calves out of registered Angus recipient females. Because the NCE model can't calculate EPDs using three parents at this time, NCE-generated EPDs still will not be calculated on these calves until they become parents.

The new protocol is intended to provide a better tool for producers to use in analyzing groups of ET calves.

In fiscal year (FY) 2001, the American Angus Association registered 22,154 ET calves, 8.1% of total registrations.

ET registrations for FY 2001 were up 8.7% compared to FY 2000. At the close of March, ET registrations were running 13% above last year for the first six months of FY 2002.

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