# DNA Marker Validation Update

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# Bovigen (Pfizer Animal Genetics)

Last panel validated was Quality Grade (2006)

No current or pending validations

Have not been asked to validate Feed Efficiency panel

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# MMI

Tru-Marbling & Tru-Tenderness
- Replicated MMI analysis of AAA Carcass Merit data
- Problems with subsequent independent data set
- Validation is on-going

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# Igenity Profile

Carcass composition traits … Dec. 2007 analysis
- Ribeye Area
- Hot Carcass Weight
- Fat Thickness
- Marbling Score
- % Choice
- Yield Grade

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# Igenity Profile for Carcass Traits (12/07)

| Breed | TRAIT | Panel | b | F | p | N |
|---|---|---|---|---|---|---|
| Combined Angus and Charolais CMP population data | USDA Marbling Score | MBS | 0.338 | 2.233 | **0.07** | 777 |
| | Back Fat Thickness | BFAT | 0.377 | 2.878 | **0.045** | 747 |
| | Hot Carcass Weight (lbs) | HCW | -0.253 | 0.36 | **0.73** | 753 |
| | % Choice Quality Grade | % CHOICE | 0.374 | 2.477 | **0.06** | 791 |
| | Ribeye Area (sq. inches) | REA | 0.094 | 0.26 | **0.30** | 780 |
| | Yield Grade | YG | 0.216 | 1.262 | **0.13** | 732 |

*MBVs for each trait were provided by Igenity. The F test is based on a model including fixed contemporary group, random sire, and the regression of Igenity MBV for the trait in question.

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# Igenity

"Feed Efficiency" Panels

Dry Matter Intake (DMI)
Residual Feed Intake (RFI =NFI)

Difficult to find suitable intake data sets

## Igenity DMI & RFI

Guelph data (Steve Miller)
  Crossbred; mostly Angus & Simmental
AgCanada data (Denny Crews)
  Straight-bred Angus & Charolais
Beef CRC data (Australia)
  Straight-bred British breeds
  Straight-bred Brahman
  Tropically-adapted Composites

## Igenity DMI & RFI

Merial derived Molecular Breeding Values
  (MBV) for
  1. Bos Taurus (multiple breed data)
      All Canadian Data + CRC taurus
  2. Angus (Angus data)
      AgCanada Angus + CRC Angus
  3. Brahman-Influenced (Brangus data)
      CRC tropically-adapted

## Igenity DMI & RFI

NBCEC did not receive data

Each group – Canada East, Canada West
  & Australia – analyzed own data on behalf
  of NBCEC

No analysis of combined data sets as in past

## Igenity DMI & RFI

Bos taurus (general) & Angus MBV

Some inconsistent results; need further
  study

## Igenity DMI & RFI

Brahman-influenced MBV

  No associations in straight-bred Brahman
    nor taurus
  Significant associations found in the
    Australian tropically adapted cattle
    (Brahman-composites, Santa Gertrudis,
    Belmont Red)