Hereford

Innovations

Innovations

- Parentage
- Genomics: International Marketing
- Heterosis
  - Commercial cow herd is very straight bred
  - Why are producers giving up free 10-15%?
- Genomics
  - Better incorporation of genomic evaluations
    - Some SNPs are more predictive that others
  - Focus on ERTs (Economically Relevant Traits) & Indexes
    - RFI , Fertility, Health?
    - Docility????
  - Haplotypes

Hereford

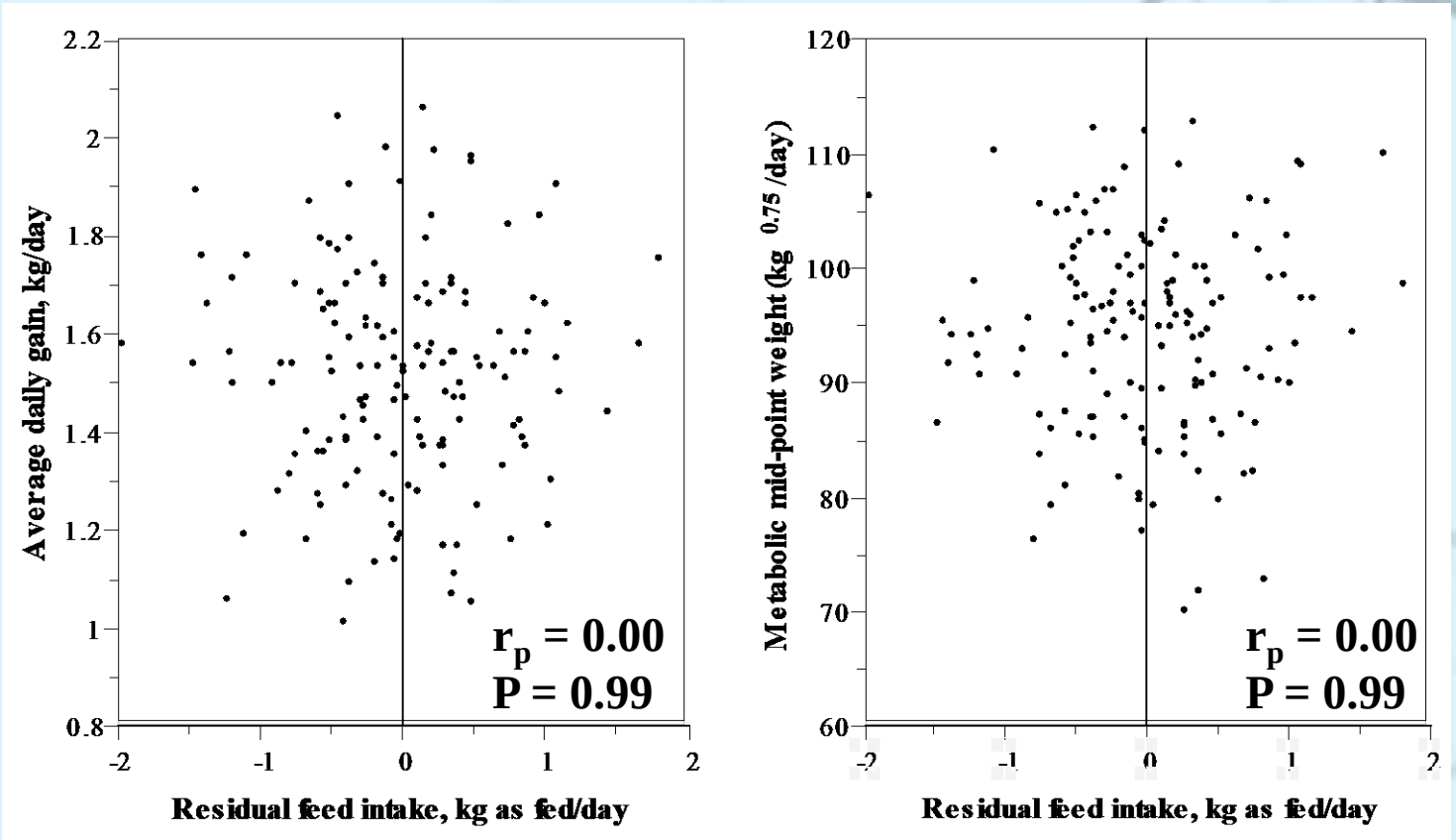
Why use RFI as our measure of feed efficiency??

Selection for low RFI will:

1. Have no effect on growth & animal size

Phenotypic (r_p) & genetic correlations (r_g) are near zero

Arthur et al. 2001; Basarab et al. 2003; Crews et al. 2003; Jensen et al. 1992



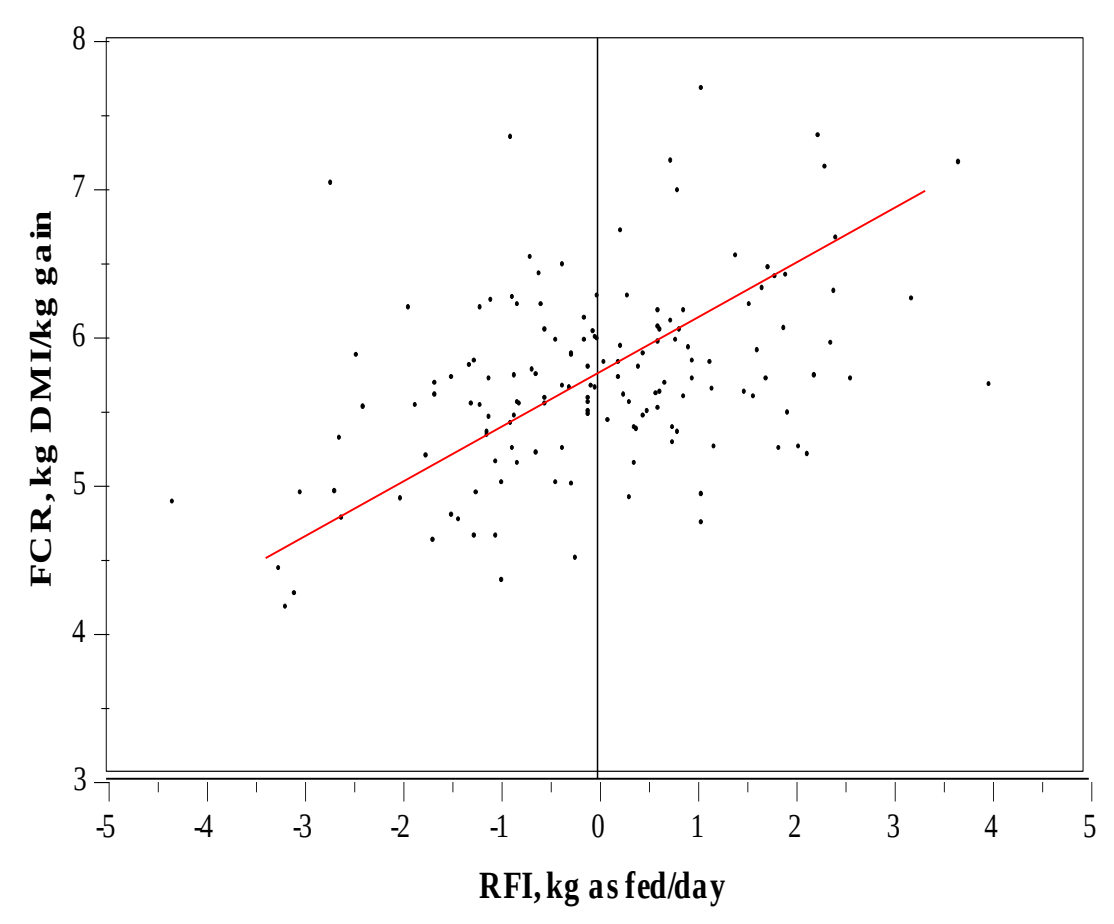
148 steers from 5 genetic strains fed a finishing diet and gaining 1.52 kg/day . No relationship to slaughter weight, hip height and gain in hip height (Basarab et al. 2003).

Selection for low RFI will:

2. Improve Feed Conversion Ratio (FCR) by 9-15% at equal body size & average daily gain

Phenotypic (r_{p} = 0.53-0.70) & genetic correlations (r_{g} = 0.66-0.88) are positive

Arthur et al. 2001; Basarab et al. 2003, Herd et al. 2002

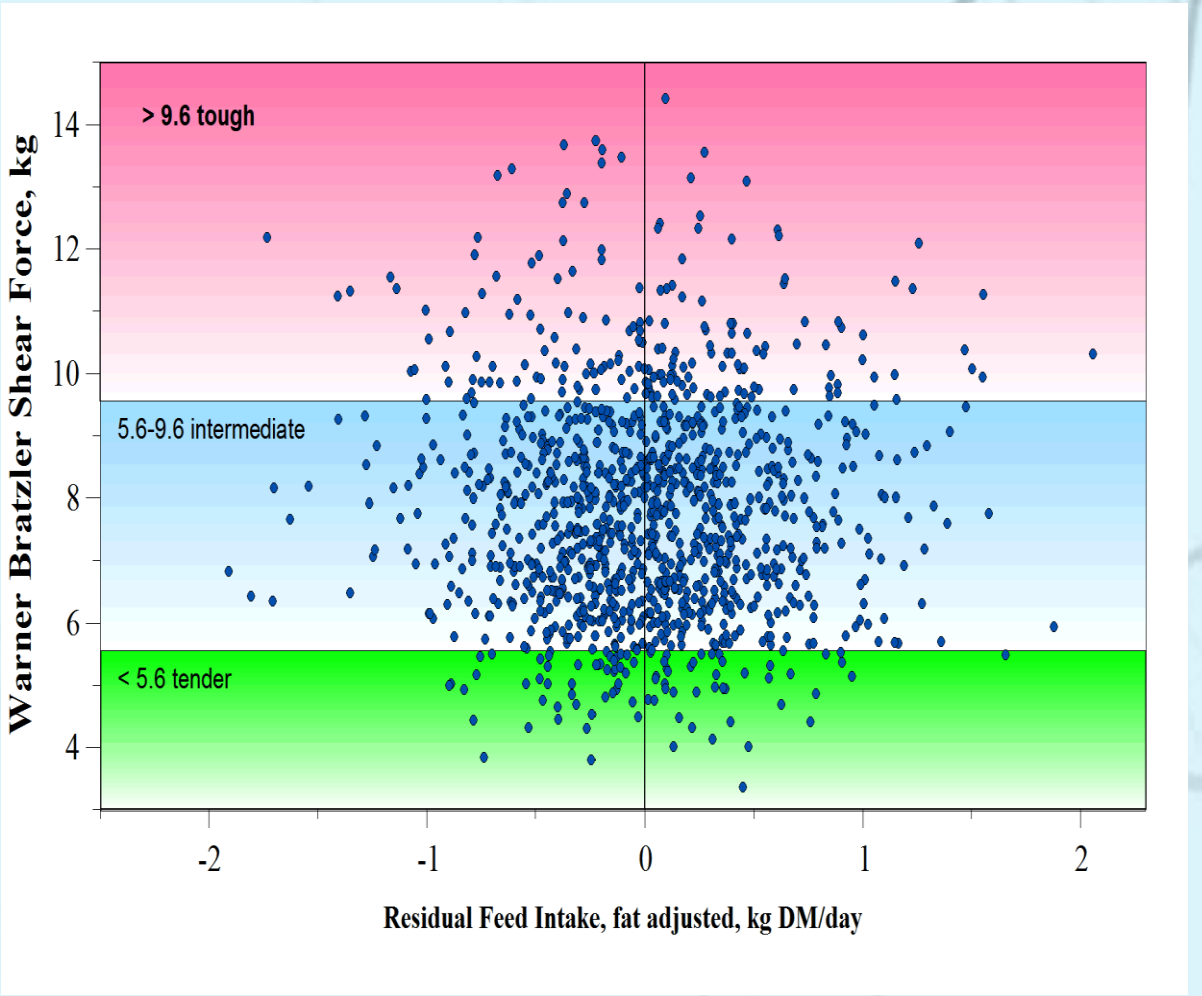


Selection for low RFI will:

3. Have LITTLE to NO effect on tenderness

Phenotypic (r_{p} = -0.09-0.12) correlations surround zero

Basarab & Aalhus, 2013



Selection for low RFI will:

4. Little if any effect on age at puberty

5. No effect on calving pattern in first calf heifers

6. No negative effect on pregnancy, calving or weaning rate

7. Positive effect on body fatness/weight particularly during stressful periods

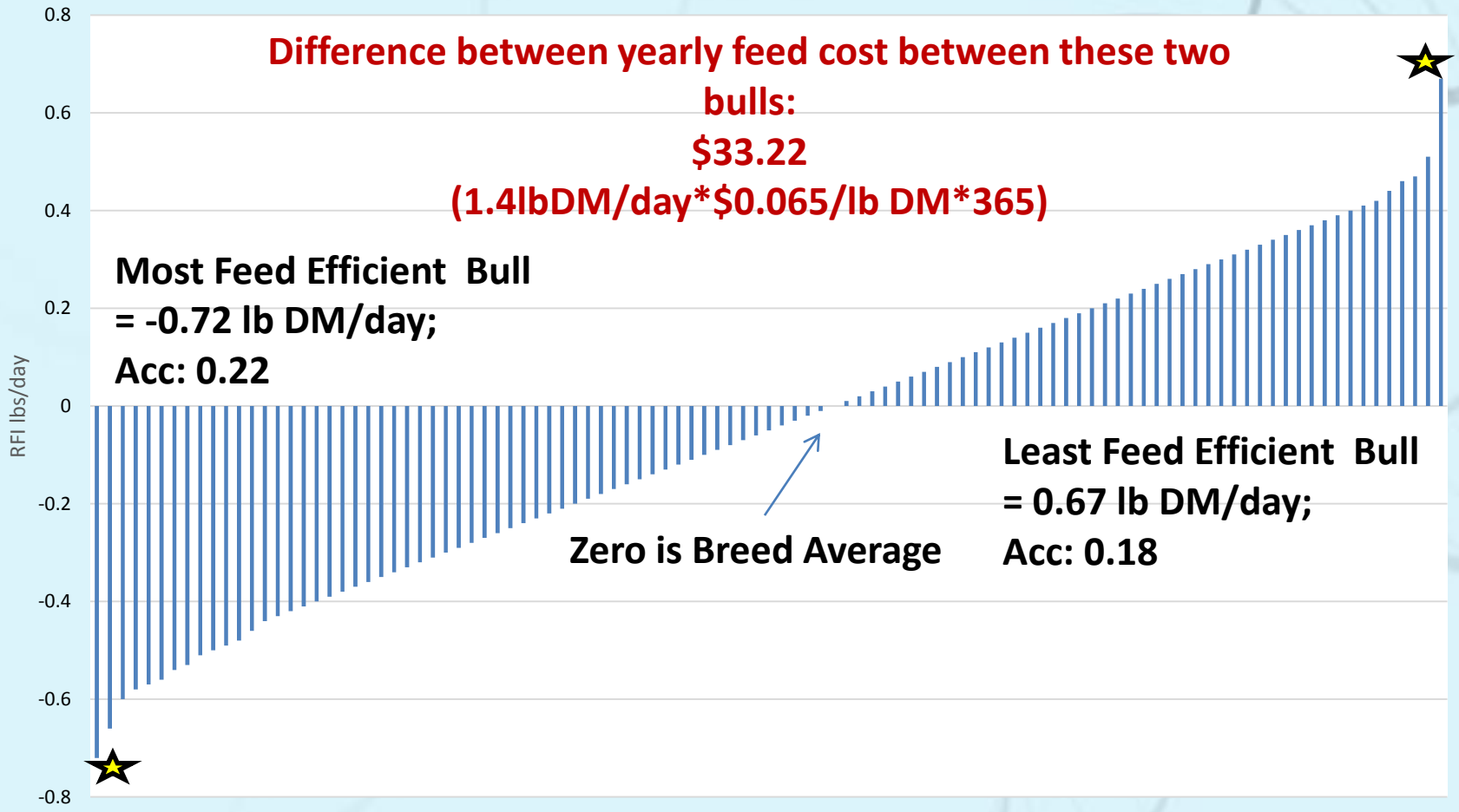
8. Decreased Phosphorus and Nitrogen Excretion

9. Reduce feed costs (- $0.07-0.10/hd/d feeders, - $0.11-0.12/hd/d in cows)

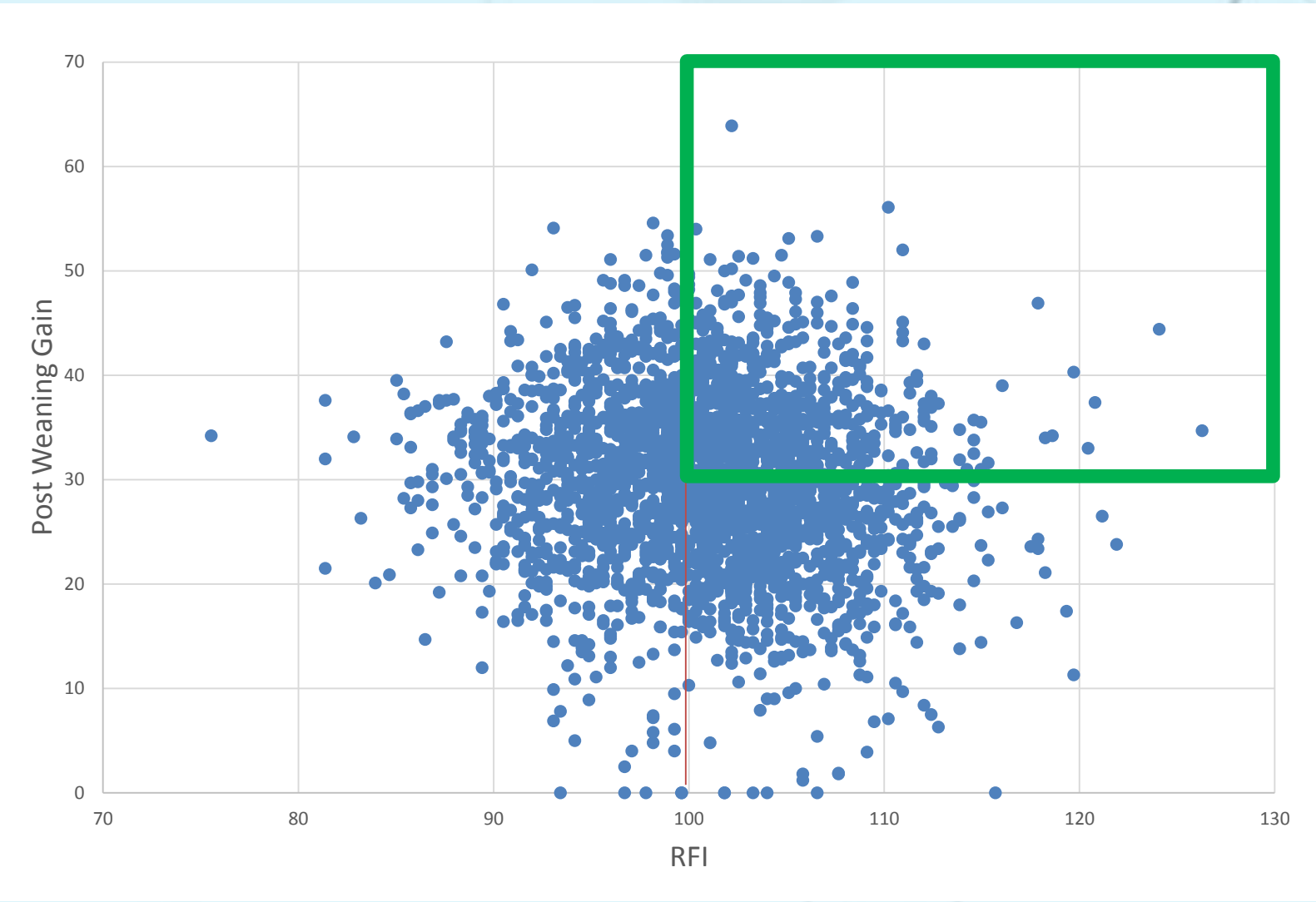
CHA Trial

- Over 1500 bulls tested
- New EPD run is available on the CHA website
- Currently Blending Genomically enhanced EPDS
- Fall/Winter 2016/17 – Feeding trials at Olds College and Cattlelands Feedyards

RFI for Tested Bulls (over 1500 bulls)



Use both RFI and PWG to Balance Selection



CHA's RFI EPD and PWG

- CHA's RFI EPD
  - Look for the EPD Average (Currently 100), larger the number the more feed efficient
  - Bull that scores 120 (120-100=20*10= 200)
    - Bull eats 200 pounds less than average per year
  - Bull that Scores 80 (80-100 =20*10 = -200)
    - Bull eats 200 pounds more than average per year
- CHA's Post Weaning Gain (PWG) EPD
  - Use with RFI EPD to ensure you maintain growth (Average is currently 30)
  - PWG = YW – WW
  - Economically important trait

Which bull sires more efficient calves?

LBH 157K
RIBSTONE 40W

MCCOY 58G
JACKPOT ET 105X

LBH 157K RIBSTONE 40W:

- 48 RFI tested Sons
- Sons average -0.25 lbs/day

LBH 157K RIBSTONE 40W Sons eat 105 lbs less feed/year when compared to MCCOY 58G JACKPOT ET 105X sons.

- USE RFI AS A SELECTION TOOL OVER GENERATIONS TO DECREASE COWHERD FEED REQUIREMENTS -

MCCOY 58G JACKPOT ET 105X:

- 33 RFI tested sons
- Sons average +0.04 lbs/day

Hereford

Questions