Results and conclusions

**Diet effect on measured CO\textsubscript{2} emissions**

No significant diet effects in 14 of the 15 studies. Lower CO\textsubscript{2} emissions were observed from steers fed diets containing 60% DDGs as compared to that from steers fed the control diets (0% DDGs).

**The CO\textsubscript{2} emissions for each species across different studies**

Significant differences were observed across different studies for each species of broiler, laying hen, and steer, possibly due to different stages of production, different weather conditions, or different management practices.

### Comparison of measured CO\textsubscript{2} emissions with estimated CO\textsubscript{2} production rates from THP

Higher measured CO\textsubscript{2} emissions were expected because the total CO\textsubscript{2} emissions should be the sum of metabolic CO\textsubscript{2} production of the animals plus CO\textsubscript{2} generation from other sources (e.g. litter or manure). Since the estimated CO\textsubscript{2} productions were consistently lower than the measured CO\textsubscript{2} emissions in broiler and steer studies; they were multiplied by correction factors of 1.15 and 1.16 respectively to represent the total CO\textsubscript{2} emissions.

#### Uncertainties in estimated VR

Uncertainties in estimated VR in dairy cow studies were relatively large because the relatively large variations in measured CO\textsubscript{2} emissions in these studies were not well represented by the relatively constant estimated CO\textsubscript{2} production values.

### Comparison of directly measured VR with estimated VR using the CO\textsubscript{2} balance approach

Relatively high R\textsuperscript{2} were observed in studies of broilers and turkey due to the relatively high variability of VR in these studies.