



USDA INSTRUMENT GRADING PROGRAM

Glen Dolezal, Ph.D.

Cargill



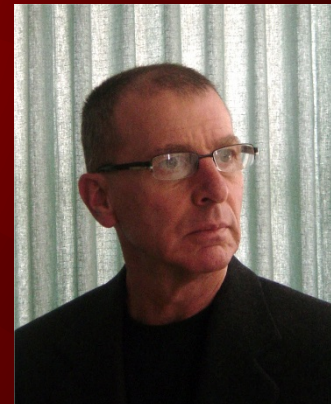
Gretchen Mafi, Ph.D.

Oklahoma State University



Lawrence Yates, Ph.D.

USDA-AMS, Livestock, Poultry & Seed Program





United States Department of Agriculture
Office of Inspector General

FSIS' and AMS' Field-Level Workforce Challenges

Recommendation 14

Form an ad hoc committee of independent and objective third party experts (such as academics, scientists, and consumer advocates) to review current methodologies and propose improvements to the image grading systems, relating to instrument performance, grader performance, and appropriateness of grading standards; and publish for public review and comment, the major milestones (thought process, studies, data, etc.) the committee used to determine proposed changes to the automated grading system.





United States Department of Agriculture
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FSIS' and AMS' Field-Level Workforce Challenges

Recommendation 19


Develop a plan to monitor and report variations in plant grading cameras to assure that any cameras that consistently grade high or low get proper maintenance by the company.



Audit Report 50601-0002-31
July 2013

Maintaining Consistency

Validation Cards



Card	Target	Tolerance	Low Limit	High Limit
Low	297	20	277	317
Medium	543	34	509	577
High	694	38	656	733
USDA	383	28	355	412

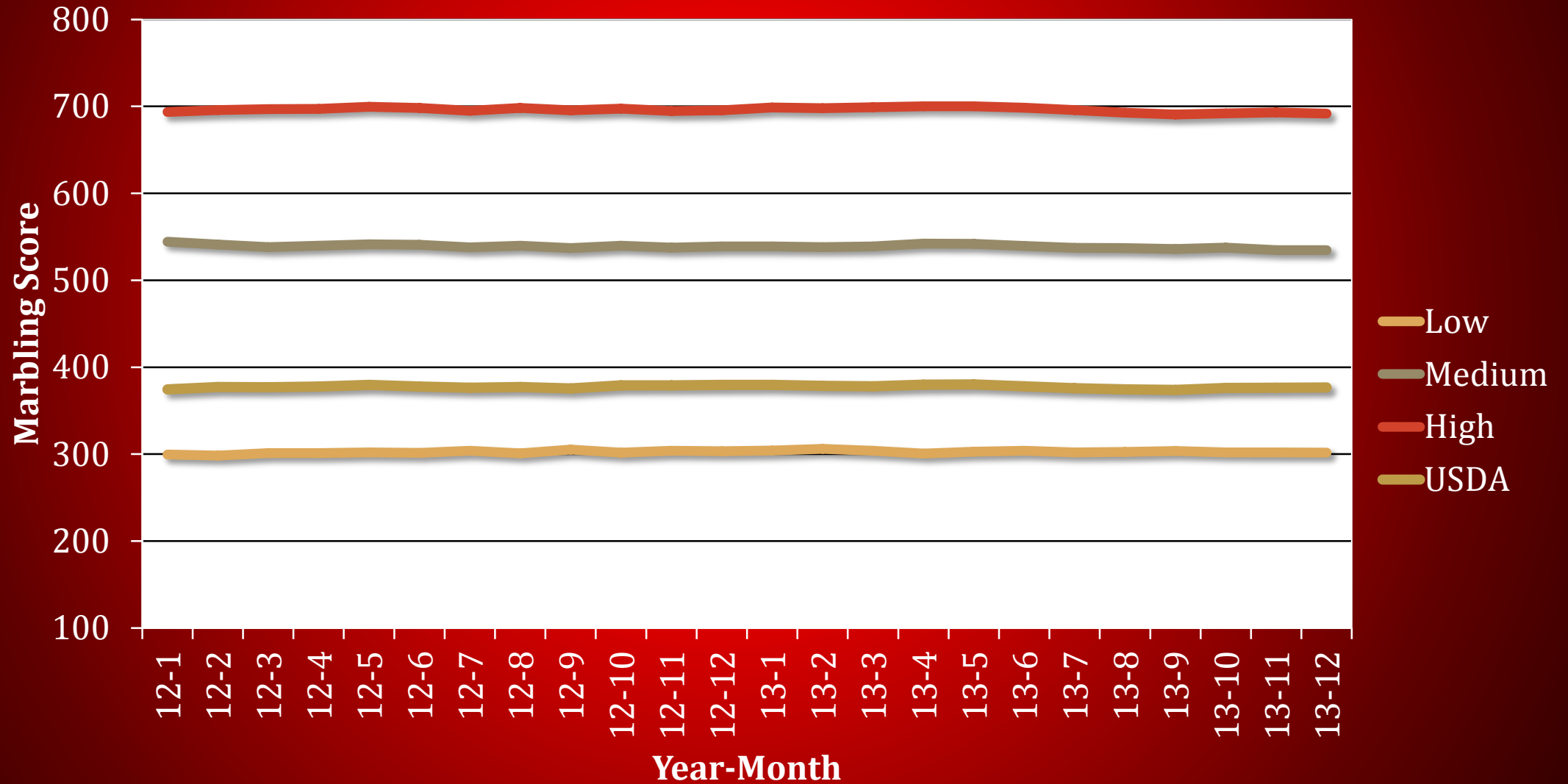
Maintaining Consistency

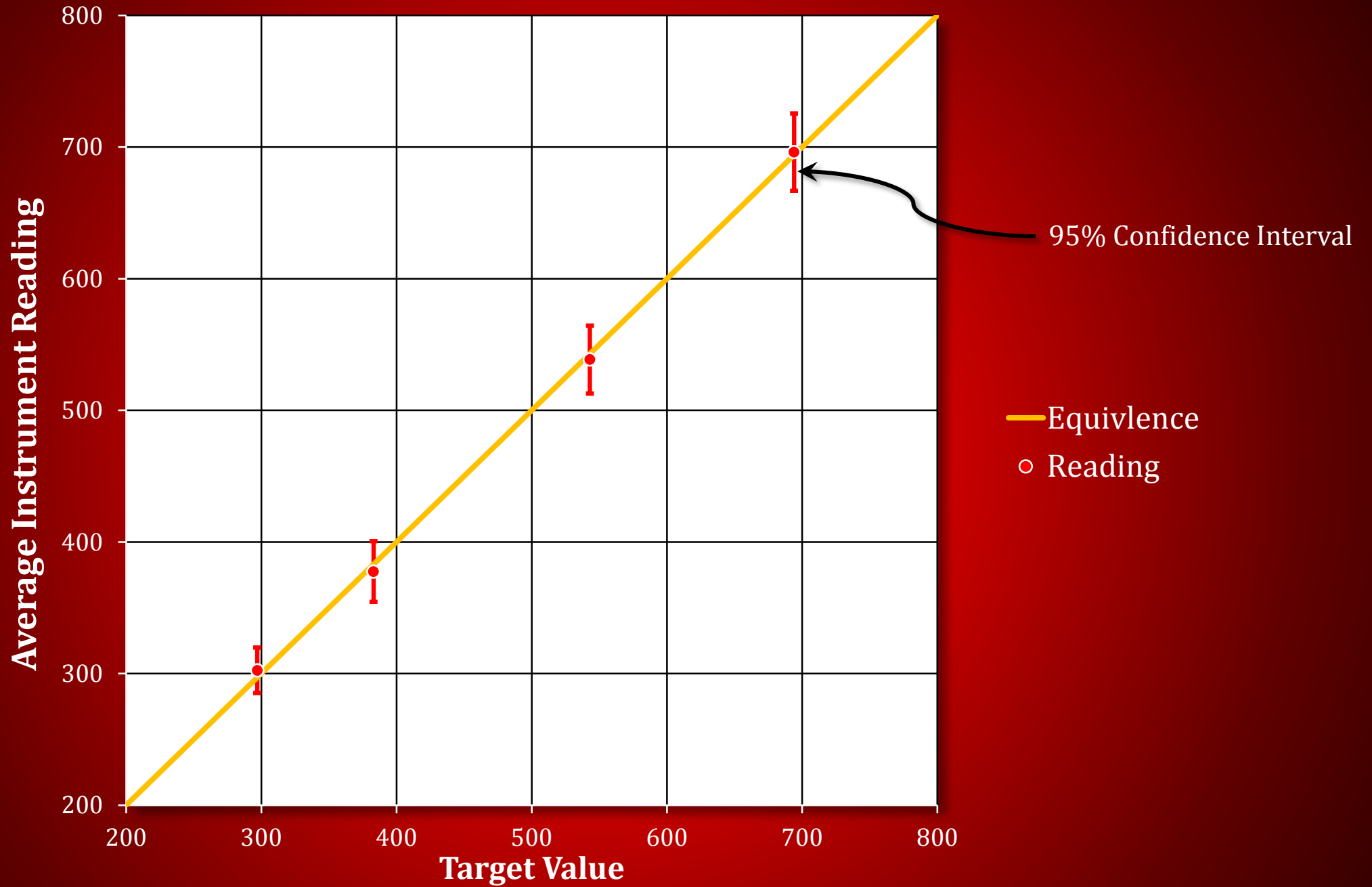
Validation Cards

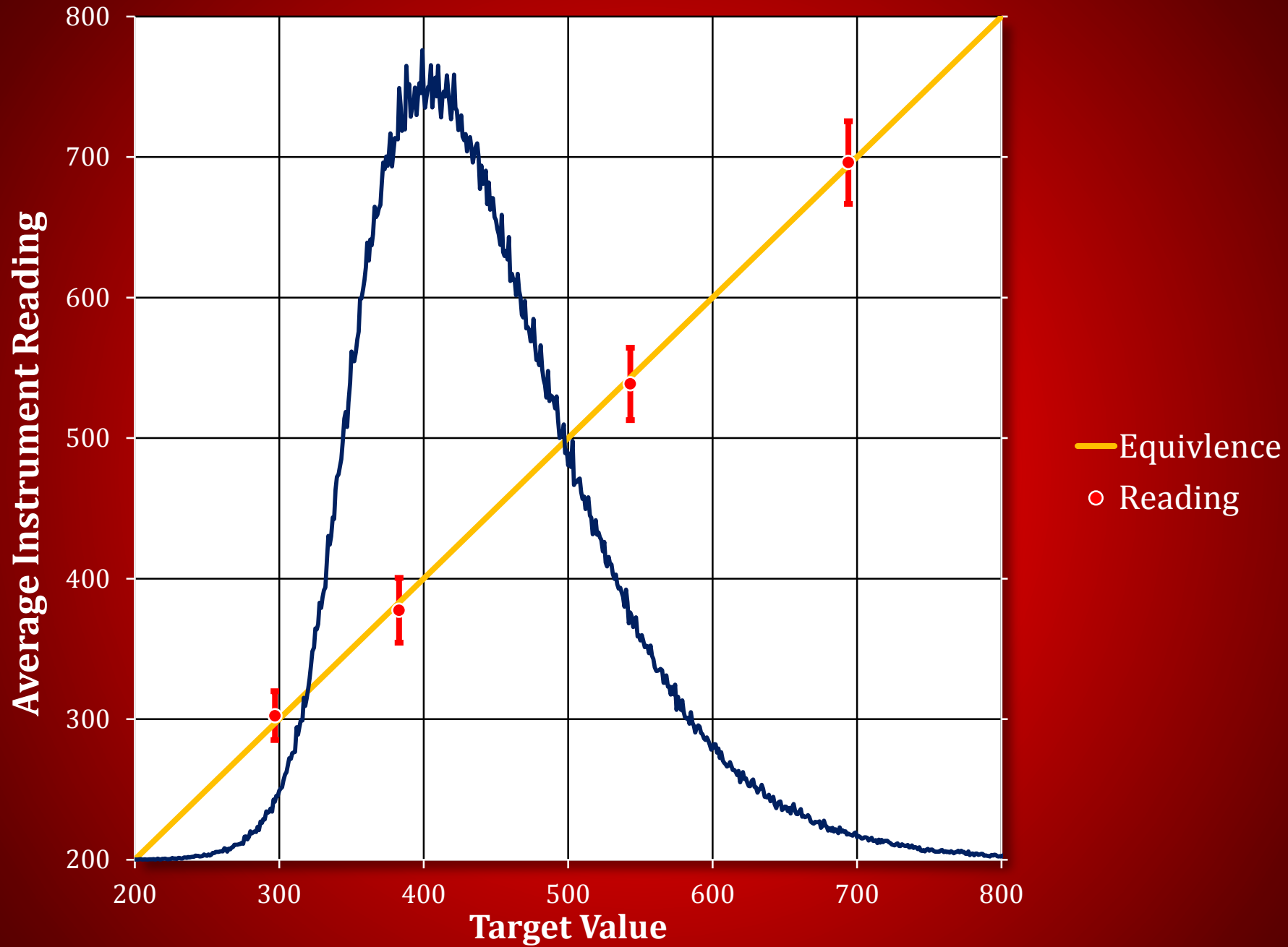
Card	Target	Tolerance	Low Limit	High Limit	Reading	Std. Dev.
Low	297	20	277	317	303	9
Medium	543	34	509	577	539	13
High	694	38	656	733	696	15
USDA	383	28	355	412	378	12

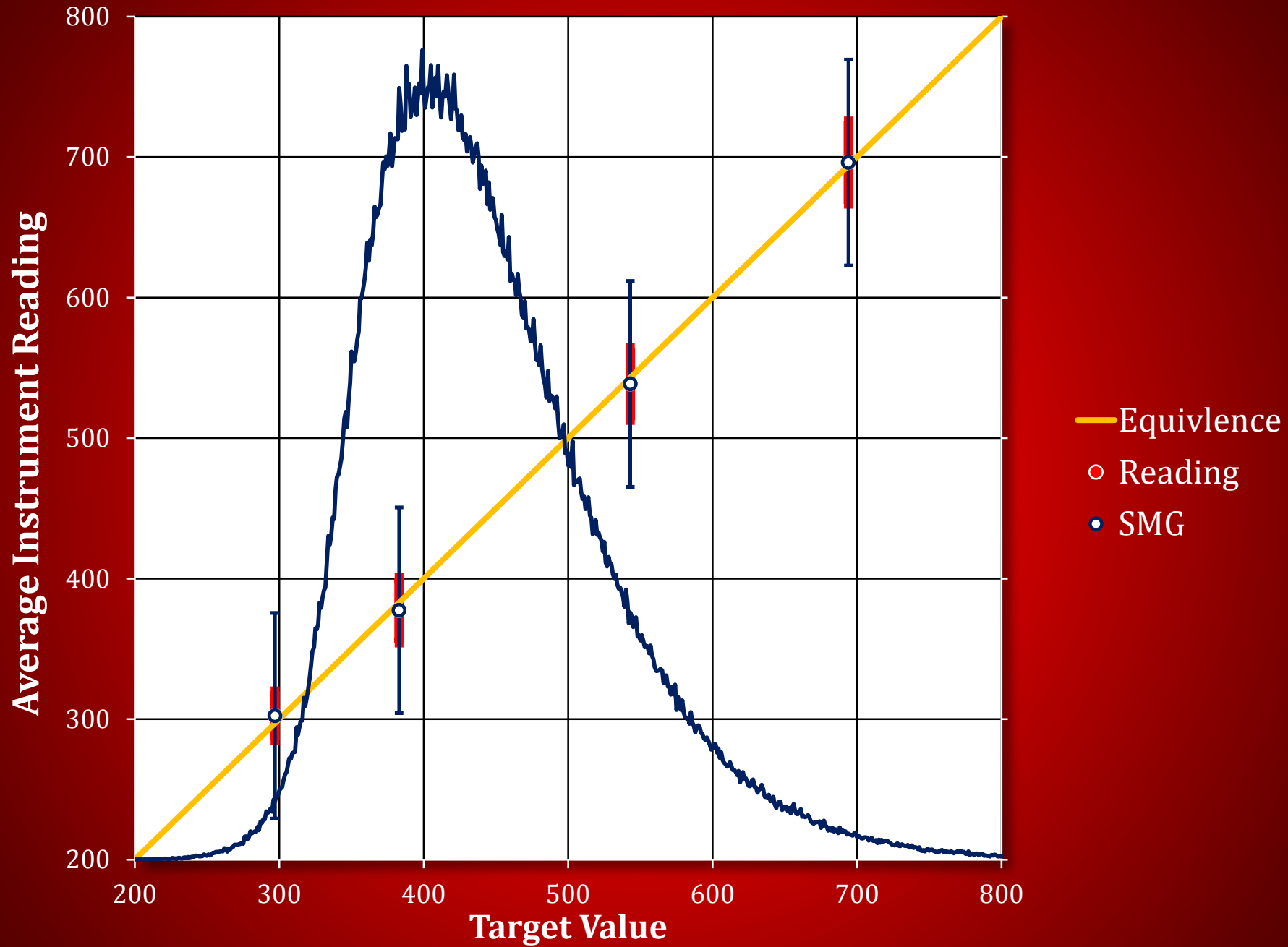


Validation Card Readings: History









Instrument Validation

Approach for Ensuring Consistency

- Strong potential for correlation between card readings
- Multivariate statistical process control
 - Hotelling's T^2
 - Too complex for “on the spot,” in-plant validation
 - Software expense
- Multi-stage approach
 - Stage 1: Daily at start of each shift
 - Low, medium and high card within tolerance (2 x SD)
 - Stage 2: Historical trend
 - 2 of the 3 cards within 1 x SD for at least 6 of the previous 10 validations





RECIPROCAL MEAT CONFERENCE

РЕЦИПРОКАЛ МЕАТ КОНФЕРЕНСЕ

