



DATA REQUIREMENTS: INSTRUMENT GRADING SYSTEMS FOR BEEF CARCASSES

1. PURPOSE AND SCOPE

The U.S. Department of Agriculture (USDA), Agricultural Marketing Service (AMS), Livestock and Poultry (L&P) Program operates a voluntary program to predict beef carcass quality and yield factors made by approved instrument systems, often referred to as instrument (or camera) grading. Under the program, a customer may use instruments to augment the official USDA beef carcass grading in its establishment, provided the customer adheres to all applicable QAD Procedures.

A key feature of the voluntary instrument grading program is that the USDA grader makes the ultimate determination of the official USDA grade. In cases in which the USDA grader's grade determination differs from that of the instrument, the USDA grader may override the instrument grade as outlined in [QAD 515 Procedures](#). For example, if the instrument grade for an individual carcass is Prime but the USDA grader determines the grade of the carcass is Choice, the official USDA grade for the carcass is Choice.

To continuously improve the voluntary instrument grading program, including a better understanding of situations that cause an override as described above, customers are required to provide AMS with additional camera-generated data as described in this procedure. This will allow AMS and grading customers to fully maximize the benefits of instrument-assisted grading.

Provisions of this procedure apply to all L&P customers who participate in the voluntary instrument-assisted grading program for beef.

2. STATEMENT OF NEED AND BENEFITS

A robust and comprehensive data acquisition and analysis program is necessary to enhance oversight of instrument grading. Historically, L&P analyzed aggregate data to identify anomalies, outliers, and related issues; however, aggregate data are not detailed enough to allow L&P to pinpoint potential root causes, thereby limiting effectiveness in resolving problems.

Beginning July 1, 2024, detailed data for every individual carcass graded by an instrument will be captured by the customer and transmitted to L&P. For facilities engaging in the instrument-assisted program, this will negate the need to provide aggregate information. Individual carcass data will include information such as but not limited to marbling score, camera number, operator number, grader number, and carcass maturity. In addition, when a camera override occurs additional data will be required including but not limited to the type of override, degree of difference between the camera and USDA grader designation, and images of the ribeye taken by the camera. Data format and structure should adhere to requirements in section 4.1.2 according to this [data dictionary](#) and [data table example](#).



3. REFERENCES

[QAD 500 Procedure: Beef, Bullock, and Bull Grading Methods and Procedures](#)

[QAD 511 Procedure: Instrument Approval Process, Instrument Grading Systems for Beef Carcasses](#)

[QAD-512 Procedure: Instrument Installation Process, Instrument Grading Systems for Beef Carcasses](#)

[QAD 515 Procedure: Beef Carcass Instrument Grading Procedures](#)

[United States Standards for Grades of Carcass Beef](#)

4. RESPONSIBILITIES

4.1 Customer Responsibility

- 4.1.1 Instrument hardware and/or software will be used to capture override data and will be pre-approved by L&P.
- 4.1.2 Data will be provided by the customer to L&P in the format and structure described in this [data dictionary](#); an example of a data table meeting these requirements is located [here](#). Data will be provided for each carcass graded with use of an instrument and additional information will be provided when an instrument override occurs. Additional override information will include, but is not limited to type of override, degree of difference between the instrument and official grader grade determination, and images of the ribeye.
- 4.1.3 The customer will provide data each day instrument grading occurs. Data will be submitted by 10:00 a.m. Central Standard Time (CST) the following business day after grading has occurred. Data transmission will occur through submission of data files to a secure FedRAMP compliant [reporting system](#) established by L&P.
- 4.1.4 To ensure secure transmission of untampered data, the customer will purchase a public key infrastructure (PKI) certificate annually from [Sectigo.com](#).

4.2 L&P Responsibility

- 4.2.1 L&P will provide the customer access to a Java client, supported by all current Windows platforms, to allow data transmission.
- 4.2.2 L&P will provide the customer a secure account through which to submit data.
- 4.2.3 L&P will ensure a PKI client is setup correctly for the customer.
- 4.2.4 L&P will notify the customer daily by email when files have been received and processed. (The customer may opt out of this notification.)
- 4.2.5 L&P will maintain, use, and dispose of records according to the USDA's [Departmental Regulation \(DR\) 3080-001](#).
- 4.2.6 L&P will monitor instrument override data and contact the customer promptly when abnormalities or other concerns are identified.



5. Subject to Change

This procedure is subject to revision by the L&P Program at any time.

Mark Perigen, Director
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