DEPART

Agricultural Marketing Service

[Doc No. AMS-FGIS-21-0088]

Imaging Technology Solutions for the Inspection of Milled Rice

AGENCY: Agricultural Marketing Service, USDA

ACTION: Notice; request for proposals

SUMMARY: The United States Department of Agriculture's (USDA) Agricultural Marketing Service (AMS) is inviting manufacturers of automated imaging instrumentation to partner in cooperative research and development efforts to determine broken kernels, whole kernels, and milling yield, in percentage by mass, in short-, medium-, and long-grain milled rice. The goal is to develop a commercially available instrument that can be used in providing official inspection results at AMS field offices and official service provider locations. Manufacturers must be willing to enter into a cooperative research and development agreement that includes mutually agreed upon roles and responsibilities, providing a suitable instrument, and providing technical expertise to facilitate the development of algorithms and/or calibrations. AMS will provide the rice samples and inspection expertise necessary to facilitate method development efforts and assess whether the instrument is fit for the intended purpose.

DATES: Proposals are due by [INSERT 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: Interested persons are invited to submit proposals to: Timothy D. Norden, Chief Scientist, Technology and Science Division, Federal Grain Inspection Service, AMS, USDA at Timothy.D.Norden@usda.gov.

FOR FURTHER INFORMATION CONTACT: Timothy D. Norden, Chief Scientist, Technology and Science Division, Federal Grain Inspection Service, AMS, USDA, 816-702-3803, Timothy.D.Norden@usda.gov.

SUPPLEMENTARY INFORMATION: Under the authority of the Agricultural Marketing Act of 1946 (7 USC 1621–1627), as amended, AMS establishes quality and grade standards, and provides inspection services for milled and rough rice. The determination of broken kernels in rice is important in the inspection and grading of rice. A broken kernel is defined as any kernel that is less than three-fourths the length of a whole kernel. For the inspection of rough rice, the whole kernel milling yield is the percentage by mass of whole kernels in the total rice after milling. The total rice includes whole and broken kernels. For the inspection of milled rice, the percentage by mass of broken kernels, expressed as percentage by mass of total rice, is an important grade-determining factor. A comprehensive information on the grading and inspection of rice, including the assessment of broken and whole kernels in milled rice, can be found in the Rice Inspection Handbook at https://www.ams.usda.gov/sites/default/files/media/RiceHB.pdf.

California produces the largest volume of medium grain rice for export markets. AMS official inspection locations, in California, rely on an imaging instrument for official inspection results. However, the manufacturer discontinued this imaging instrument over 10 years ago and no longer provides parts or technical support. As a result, official rice inspection, in California, could be impacted, if the instrument was to become damaged or unusable; it could lead to an increase in time and cost for inspecting rice in the State.

AMS is inviting manufacturers of automated imaging instrumentation to partner in development efforts to determine broken kernels, whole kernels, and milling yield, in percentage by mass, in short-, medium-, and long-grain milled rice. Manufacturers must be willing to enter into a cooperative research and development agreement that includes mutually agreed upon roles and responsibilities, providing a suitable instrument, and providing technical expertise to facilitate the development of algorithms and/or calibrations. AMS will provide the rice samples and inspection expertise necessary to help develop the solution and determine if it is fit for the intended purpose. To meet official inspection

requirements and be deemed fit for purpose, instruments must have the capability of providing results for short-, medium-, and long-grain milled rice, in a total sample size of 40 – 50 grams, with a testing time of ten minutes or less. In addition, the instrument must ultimately deliver results that are as accurate as current official inspection results.

Manufacturers must provide a proposal that includes a description of the instrument and its current capabilities for analyzing broken kernels, whole kernels, and milling yield, in percentage by mass, in milled rice as defined in the Rice Inspection Handbook. The proposal should also address each selection factor as given in Table 1. AMS intends to select the top two instruments that demonstrate the greatest potential for successful development and implementation by summing the scores for the selection factors given in Table 1. Manufacturers who submit proposals will be notified directly when the selections are finalized. Selection and agreement to participate in the cooperative research and development process does not hold any obligation to future procurement.

Table 1 – Selection Factor Scores

Selection Factor	Score		
	1 point	2 points	3 points
Current capability for broken and whole kernels in milled rice in percentage by mass	One rice type (i.e., long-grain only)	Two rice types (i.e., short- and medium-grain)	Capability for short-, medium-, and long-grain milled rice
Total testing time	8 - 10 minutes	5 - 7 minutes	1 - 4 minutes
Test sample size	25 g or greater in a single analysis	–	40 g or greater in a single analysis
Sample presentation	Dependent on user technique*	–	Independent of user technique*
Ability to update algorithm and/or calibration	Requires manufacturer cooperation and expertise	User updateable, but requires special training and/or programming	User updateable with user-friendly tools available
Instrumentation	Shared cost for duration of project	Loan of one instrument for duration of project	Loan of two instruments for duration of project
Manufacturer development resources	Will provide tools and training	Will provide expertise and resources needed	Will provide expertise and resources needed

	for development efforts	with 3- to 6-week turnaround on requests	with 1- to 2-week turnaround on requests

*The way the sample is presented to the instrument by the operator can influence the results

Authority: 7 USC 1621–1627.

Melissa R. Bailey,

Associate Administrator,

Agricultural Marketing Service.

[FR Doc. 2022-03180 Filed: 2/14/2022 8:45 am; Publication Date: 2/15/2022]