Specifications

Rumen pH Boluses for Research Cattle

GENERAL INFORMATION

1.0 Background and Purpose:

Scientists at the Roman L. Hruska U.S. Meat Animal Research Center (USMARC) are developing scientific information and new technology to solve high priority problems for the U.S. beef, sheep, and swine industries. As a part of this effort, they need to measure ruminal pH and oxidative reduction potential in beef cattle for up to 90 days.

CONTRACTOR REQUIREMENTS

2.0 Technical Requirements/Tasks:

The Contractor shall provide:

- 100 rumen pH boluses and 10 ORP rumen boluses
- Boluses shall be compatible with standard bolus gun equipment.
- Boluses shall have the following specs: 130mm x 32 mm in size and weigh 180grams, have an accuracy of ±0.2pH for 90 days, and then ±0.4pH from 91 to 150 days.
- Data shall be transmitted to the base station at least every 10 minutes.
- Rumen ORP boluses shall have the following specs: 130mm x 32 mm in size and weigh ~ 180 grams.
- Oxidative reduction potential will be measured, and raw data will be available for download.
- The product shall be MOONSYST Smart Rumen Bolus pH and the Smart Rumen ORP Bolus.

3.0 Deliverable / Schedule/ Address:

Delivered 45 days after award to:

USMARC
844 Road 313
Clay Center NE 68933

Key Deliverables

Item No.	***Deliverable***	***Objective***	***Due***
1	100 Smart Rumen Bolus pH Units	Accuracy of ±0.2pH for 90 days, and then ±0.4pH from 91 to 150 days.	45 days after award
2	10 Smart ORP Bolus Units	Oxidative reduction potential measurements with rumen temperature and animal activity.	45 days after award
3	Plug & Play Gateway System		45 days after award