

# BioQscan<sup>®</sup>

## Online Pork Loin IMF, Backfat/Loin Depths, and % Lean Measurement

### BIOTRONICS, INC.

World leaders in the development of ultrasound technologies for food animal industries. Products are marketed world-wide for genetic improvement of swine and beef cattle. Now serving the pork packing industry with similar and advanced technology.

### SCIENTIFICALLY BASED

The management team at Biotronics, Inc. has more than 60 years of combined research and development experience in the application of ultrasound technology to improve meat quality characteristics in swine and beef cattle.

### CONTACT

Biotronics, Inc.  
1609 Golden Aspen Drive  
Suite 105, Ames, IA, USA  
50010-8011  
(515) 233-4161  
[www.biotronics-inc.com](http://www.biotronics-inc.com)



The USA pork industry has seen a very dramatic change in the type of pig that is bred and produced today to serve an ever growing domestic and export consumer market. Yesterday's pig was extremely fat in comparison to what is produced today through highly selected breeding stock, resulting in very high yielding carcasses. While these genetic accomplishments are to be applauded, they have had a very negative impact on the flavor and juiciness associated with high value cuts of the carcass, and in particular, the pork loin. The reason is backfat is genetically and positively associated with the "taste" fat or marbling that is found in pork loins and other muscles of the carcass. Genetically selecting for lower backfat has resulted in lower amounts of the intramuscular fat (IMF) deposited between the muscle fibers.

Measures the level of marbling in pork loins, backfat and loin depth using non-invasive ultrasound scanning of hot carcasses.

- Operates at line speeds of 1,380 carcasses per hour.

Identifies high quality pork loins and carcasses early in the harvesting process to maximize sorting opportunities.

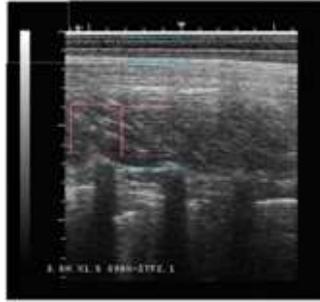
- Performs as accurately as visual Marbling Score grading when compared against actual chemical analysis.
- Determines carcass % lean from backfat and loin depth measures.

Numerous research studies have documented that the IMF is positively associated with juiciness, tenderness, and flavor of pork products. Because of the significant loss of this natural quality trait, a large segment of the pork packing industry has implemented pumping pork products with sodium salt solutions and other flavor enhancers to artificially restore what Mother Nature was providing basically at no cost. A growing segment of the pork industry wants to reverse this genetic trend of lower pork quality. One aspect of this genetic reversal process is the measurement of individual pork carcasses for IMF, while at the same time allowing the packing industry to differentiate pork loins for IMF and capitalize on a global market for highly marbled pork.



# BioQscan®

## Features and Benefits



**Sequence: 0016002**  
**13:45:34 05/23/2013**  
**IMF: 2.9%**  
**Fat: .59; Loin: 2.16**

The **BioQscan®** system is a fully integrated system that includes the ultrasound scanning system, computer processing center, and scanning probe. Housed in a stainless steel cabinet, the chassis can withstand the environmental rigors of all pork packing plants. The system maintains a full data base that is custom tailored to interface with other plant processing requirements. All processing is done at line speeds with instant availability of pork loin % IMF and carcass % lean determinations. The system interfaces with existing carcass sequence or identification systems. For plants that do not have individual carcass identification capabilities, an add-on carcass sequence number printer or other numbering system can be investigated.

The **BioQscan®** system fits any scale of daily pork processing capacity, from 1,380 carcasses per hour down to much lower capacities. Custom kill plants may want to use this system to not only differentiate high quality loins, but to also provide payment premiums to the producers who are providing them with a consistently high quality pig.

## Plant Requirements

- ❖ Clean 120v power source (USA Installations) & Ethernet.
- ❖ Alignment fixture that will turn and maintain carcasses at a correct angle for probe positioning as the carcass moves past the scanning station.
- ❖ Over-head counter balance fixture to assist the probe operator.
- ❖ Interface specifications for merging the **BioQscan®** data flow with other in-plant data processing requirements.
- ❖ Trolley tracking for carcass identification.



### TECHNICAL SUPPORT

Biotronics maintains a staff of highly trained technical persons. Always available to assist over the telephone or with onsite service support as required.

### MINIMUM DOWNTIME

If an online installation system does fail, the backup system will be back on line in a matter of a few moments. All systems are built with the redundancy needed to insure rare complete system failure.

### TURNKEY SOLUTIONS

The BioQscan® system has multiple system checks to insure that all key components are functioning correctly day in and day out. Measurement precision tests are fully integrated into the software for ease of performance and recording of test results.

For more information on any of our products or services, please contact us at (515) 233-4161

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Biotronics, Inc.  
1609 Golden Aspen Drive, Suite 105  
Ames, IA, 50010-8011, USA  
Phone 515 233 4161  
Fax 515 233 4163