

**TEXAS DEPARTMENT OF STATE HEALTH SERVICES  
MEAT SAFETY ASSURANCE  
Austin, TX**

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<h1 style="margin:0;">MSA DIRECTIVE</h1>	6100.8 Revision 2	7/03/23
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**INSTRUCTIONS FOR VERIFICATION OF IMMUNOLOGICALLY CASTRATED HOGS DURING ANTE-MORTEM INSPECTION**

**I. PURPOSE**

This directive instructs inspection program personnel (IPP) to use quality assurance (QA) certificates as documentation to determine whether hogs treated with *gonadotropin releasing factor analog – diphtheria toxoid conjugate* (GRFA-DTC) are classified as barrows during ante-mortem inspection. If intact male hogs are presented for slaughter without a completed QA certificate, IPP to address these hogs as intact boars. This revision provides new instructions for verifying the authenticity of the QA certificate for immunologically castrated (IC) barrows that have been treated with GRFA-DTC in the United States and IC barrows that are imported for slaughter.

**II. CANCELLATION**

MSA Directive 6100.8, *Instructions for Verification of IMPROVEST Hogs*, 10/29/13.

**III. BACKGROUND**

A. GRFA-DTC is an approved pre-slaughter treatment given to growing intact male pigs for the temporary suppression of testicular function and reduction of boar taint (an unpleasant aroma or taste that can occur in cooked pork from some male pigs) in intact male pigs slaughtered for human food. It is a protein compound that uses the pig's own immune system to provide the same effect as surgical castration, but GRFA-DTC is administered much later in the pig's life than surgical castration. Both immunological and surgical castration reduce boar taint. IC temporarily blocks the biological cascade that leads to the development of androsterone and skatole, which are the substances responsible for causing boar taint. IC is distinctly different from chemical castration and should not be confused with or referred to as chemical castration. GRFA-DTC is also approved for the temporary suppression of estrus in female market hogs (gilts) intended for slaughter.

B. There are at least three comparable characteristics that can be observed on ante-mortem between IC barrows and mature boars. These include but are not limited to:

1. Reduction in aggressive, sexual behavior compared to mature boars;
2. Visual differences in the relative size of testes (reduced in the IC barrows); and
3. Color of the scrotum (IC barrows will typically not have reddened scrotums).

C. All male hogs may have some odor. The decision to classify the hogs at barrows is based upon the establishment presenting a completed QA certificate at antemortem inspection. See IV. A.

D. When IC barrows are delivered for slaughter under a GFRA-DTC certification program, there needs to be coordination among the establishment procurement employees, establishment operations, and IPP in the establishment. Although communication will be among establishment procurement, establishment management, and the IPP, the Circuit Manager (CM) and Central Office (CO) are available for consultation and technical guidance, if needed.

E. To qualify for slaughter as barrows, IC barrows are to be delivered to an establishment with a completed QA certificate. This document certifies that the IC barrows have received GFRA-DTC in compliance with the manufacturer's instructions and have been inspected for animal behavior and visual appearance on the farm to fully qualify as IC barrows before being loaded and delivered to the slaughter establishment. If intact male hogs are delivered for slaughter without a QA certificate, the IPP are to address these hogs as intact boars (see Section IV. D.) The certificate may also include gilts when mixed gender loads are presented for harvest. Inclusion of GFRA-DTC administered gilts on the certificate is for convenience only.

## **IPP RESPONSIBILITIES**

A. IPP are to classify hogs as IC barrows when an establishment presents the QA certificate before ante-mortem inspection. This classification alleviates questions about any biological variation in the testes or the secondary sex organs that may be observed at slaughter.

**NOTE:** This directive does not apply to gilts. Because there are no secondary sex changes that affect the carcass disposition when gilts are treated with GFRA-DTC, a QA certificate is not required when GFRA-DTC treated gilts are presented for ante-mortem inspection.

B. IPP are to classify the IC animals as barrows during ante-mortem inspection when all fields on the certificate (whether treated in the US or imported for immediate slaughter) have been completed.

**NOTE:** The manufacturers of GFRA-DTC have received a USDA, Agriculture Marketing Service (AMS) Process Verified Program for the quality assurance certification program. The USDA seal only appears on QA certificates for IC barrows raised in the US.

C. If the QA certificate is incomplete, IPP are to notify establishment management and give them an opportunity to obtain a completed certificate. If the establishment cannot present a completed QA certificate, IPP are to follow the instructions in paragraph D. of this section.

D. If intact male hogs are presented for slaughter and there is no QA certificate, or if the certificate is incomplete, IPP are to address these hogs as intact boars, and the disposition will be made either under [9 CFR 311.37\(c\)](#) or [9 CFR 311.20\(a\)](#) or (b) to pass for food, pass for cooked comminuted food, or condemn, as appropriate. IPP are to document an MOI in PHIS with the subject line "Incomplete certificate for IC hogs" and describe the establishment's inability to provide a complete QA certificate.

#### IV. QUESTIONS

Refer questions through supervisory channels.

A handwritten signature in blue ink that reads "James R. Dillon". The signature is written in a cursive style with a large initial 'J' and 'D'.

James R. Dillon, DVM, MPH  
Director, Texas State Meat and Poultry Inspection Program  
Department of State Health Services