

UNITED STATES DEPARTMENT OF AGRICULTURE  
FOOD SAFETY AND INSPECTION SERVICE  
WASHINGTON, DC

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**FSIS DIRECTIVE**

6100.8  
Rev. 1

1/14/21

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**INSTRUCTIONS FOR VERIFICATION OF IMMUNOLOGICALLY CASTRATED HOGS**

**I. PURPOSE**

This directive instructs inspection program personnel (IPP) to use quality assurance certificates as documentation to determine whether hogs treated with *gonadotropin releasing factor analog – diphtheria toxoid conjugate* (GRFA-DTC) are classified as barrows. If intact male hogs are presented for slaughter without a quality assurance certificate, IPP will address these hogs as intact boars. This revision clarifies the use and certification of GFRA-DTC treated female market hogs (gilts). This revision provides new instructions for verifying the authenticity of the quality assurance certificate.

**II. CANCELLATION**

FSIS Directive 6100.8, *Instructions for Verification of Hogs Treated with Improvest®*, 10/29/13

**III. BACKGROUND**

A. GRFA-DTC is a Food and Drug Administration (FDA)-approved pre-slaughter treatment given to growing intact male pigs for the temporary immunological castration (IC) (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 intended for pork for consumers. It is a protein compound that uses the pig's own immune system to provide the same effect as surgical castration, but GFRA-DTC is administered much later in the pig's life than surgical castration. Both immunological and surgical castration reduces 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. GFRA-DTC is also approved for the temporary suppression of estrus in gilts intended for slaughter.

B. The prepuce pouch (or sheath) of any male pig's reproductive tract can trap urine, bacteria, and semen, giving it a pungent smell. The pungent odors from the prepuce pouch should NOT be confused with boar taint in pork fat that can only be detected by individuals sensitive to androsterone or skatole once fat is sufficiently heated. Different than the prepuce pouch pungent smell, the sources of boar taint are primarily two substances in the fat tissue, androsterone (produced by the testicles) and skatole (a byproduct of tryptophan metabolism in the pig's large intestine), that begin to accumulate as the male pig matures. As part of sanitary dressing, it is important when removing the prepuce pouch during the slaughter process that it is not punctured or cut as it can spill the contents of the pouch, contaminate the carcass, and emit an unpleasant odor.

C. 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).

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**DISTRIBUTION:** Electronic

**OPI:** OPPD

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 Office of Policy and Program Development (OPPD), Policy Development Staff (PDS) is available for consultation and technical guidance, if needed.

E. To qualify as slaughter barrows, IC barrows are to be delivered for slaughter to an establishment with a quality assurance certificate. This document certifies that hogs have received GFRA-DTC in compliance with the FDA approved label 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 quality assurance certificate, 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.

F. The manufacturers of GFRA-DTC have received a USDA, Agriculture Marketing Service (AMS) Process Verified Program for the quality assurance certification program.

#### **IV. IPP RESPONSIBILITIES**

A. IPP are to classify hogs as barrows when an establishment presents the quality assurance 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 female market hogs (gilts). Because there are no secondary sex changes that affect the carcass disposition when gilts are treated with GFRA-DTC, a quality assurance certificate is not required when GFRA-DTC treated gilts are presented for ante-mortem inspection.

B. IPP are to verify the certificate contains the following information:

1. Animal owner;
2. Farm identification;
3. Lot number;
4. Age of the hogs when Dose 1 was administered;
5. Age of the hogs when Dose 2 was administered;
6. Number immunized;
7. Age of the hogs when quality assurance examination was performed;
8. Quality assurance supervisor;
9. Prescribing veterinarian;
10. The date range within which the lot is eligible for sale;
11. A declaration statement that male pigs are certified as barrows; and

## 12. The USDA Process Verified Seal.

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 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 quality assurance certificate, or if the certificate is incomplete or does not bear the USDA Process Verified Seal, IPP will 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.

## V. QUESTIONS

Refer questions regarding this directive through your supervisor or submit your questions through [askFSIS](#).



Assistant Administrator  
Office of Policy and Program Development