



United States Department of Agriculture

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Marketing  
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TO: FGIS POLICY BULLETIN BOARD

FROM: Anthony Goodeman, Acting Director  
Field Management Division

SUBJECT: Bulk and Containerized Dried Distiller Grains with Solubles  
(DDGS), Wheat, and Corn shipments to Vietnam

ORIGINATING OFFICE: Policies, Procedures, and Market Analysis Branch

**\*\*\*The following instructions apply to DDGS, wheat, and corn shipped to Vietnam using phosphine gas fumigant. Methyl Bromide is an acceptable fumigant; however, specific Methyl Bromide monitoring instructions have not been finalized. In order to facilitate marketing of DDGS, corn, and wheat to Vietnam, FGIS is issuing the following policies and procedures that pertain to phosphine gas only. An updated bulletin will be issued when Methyl Bromide monitoring instructions are finalized.\*\*\***

## 1. PURPOSE

This memorandum establishes instructions for official personnel (Federal Grain Inspection Service (FGIS) personnel and Official Agency personnel) when bulk and containerized DDGS, wheat, and corn shipments are destined for Vietnam.

## 2. REPLACEMENT HIGHLIGHTS

This policy bulletin replaces #278 dated September 8, 2017, which is obsolete and removed from the website. This policy bulletin is revised to include temperature monitoring; appropriate symbols related to temperatures in the fumigation schedule; revised checklist; language related to the netting procedure; a note indicating EPA labels must also be followed; and a note explaining that one 921-2 needs to be completed per minimum exposure period.

### 3. BACKGROUND

In September 2012, Animal and Plant Health Inspection Service (APHIS) received the first DDGS Notice of Non-Compliance from Vietnam. The notice reported detection of Larger Cabinet Beetles (*Trogoderma inclusum*) in containers of DDGS. As a result, Vietnam started to require fumigation for all export DDGS shipments on November 21, 2012. APHIS worked with all official inspection agencies and the U.S. industry on a national basis to ensure the deficiencies were limited in scope and communicated the need for increased care and vigilance.

In October 2015, APHIS received a subsequent DDGS Notice of Non-Compliance but this time it was for Warehouse Beetles (*Trogoderma variabile*). From the traceback investigation, APHIS found deficiencies in pest exclusion at the transload site and at the fumigation site. APHIS also received, from the Vietnam, a report of quarantine pests in grain in December 2015. The report claimed that Wheat Weevils (*Sitophilus granarius*) were found in two holds of a wheat shipment. The shipment, however, had not been fumigated. APHIS suggested in a letter to Vietnam that fumigation with phosphine would avoid this problem in the future.

In September 2016, Warehouse Beetles were again detected in multiple container shipments of DDGS. By October 5, 2016, Vietnam had announced mandatory pre-arrival Methyl Bromide fumigation of DDGS, wheat, and corn and the suspension of DDGS imports effective 60-days from formal notice. APHIS then initiated an extensive review of DDGS export handling, inspection, and fumigation procedures, and started the multilayered negotiations with Vietnam.

On December 1, 2016, APHIS sent a letter to Vietnam outlining the results of investigation. In the review of the fumigation records for DDGS cargos, APHIS found that fumigation is often conducted at the minimum labeled gas concentration and duration. Also, there were often no records available on stowage examinations or of aeration measures following fumigation. They concluded that the lack of consistency in fumigation procedures is the likely explanation for any failure of fumigation treatment as opposed to insect resistance to phosphine.

In addition to the results of the investigation, APHIS proposed a program that would involve new requirements for inspection and fumigation. This includes an additional 24-hour fumigation duration, mandatory stowage exam, higher fumigant concentration, more stringent fumigant monitoring requirements and additional safeguarding measures that are required for APHIS's phytosanitary certification of DDGS, wheat, and corn destined to Vietnam.

The following policies and procedures are required for all DDGS, corn, and wheat containerized and bulk shipments to Vietnam in order to comply with the protocols agreed upon by Vietnam and APHIS.

## 4. POLICY

a. Prior to loading, official personnel must:

- (1) Conduct an official stowage examination in accordance with FGIS Directive 9180.48, Stowage Examination Services. Issue an Official Stowage Examination Certificate upon request.

**Note: Be aware of any insects injurious to grain that may be in the immediate vicinity of the container being loaded. The stowage area and loading area must be free of infestation.**

**Note: Keep in mind that these additional protocols have been offered by APHIS and accepted and made mandatory by Vietnam. A stowage exam remains permissive under the Agriculture Marketing Act of 1946 (AMA) for processed product.**

- (2) Ask the manager of the container loading site if a Pest Management Plan is in place.
- (3) For vessel (bulk) shipments, make sure the recirculation systems is installed according to FGIS Fumigation Handbook.

b. During loading, official personnel must:

Perform a phytosanitary inspection in accordance with FGIS Directive 9180.35, Phytosanitary Inspection.

**Note: Confirm there are no quarantine pests, other than insects, found in the cargo. If an unidentifiable insect or weed seed is found, contact the local State Plant Health Director for guidance.**

c. After loading, official personnel must:

- (1) Complete the FGIS 921-2, Insect in Grain Report. Include all treatment details.

**Note: If a booking of DDGS containers has different commodity temperatures resulting in different exposure times as per the fumigation schedule (Attachment 2), then complete one 921-2 for the containers that fall within each minimum exposure period.**

- (2) Be physically present and witness the fumigation application.
  - (a) Ask the fumigator if a Fumigation Management Plan (FMP) has been prepared and if sufficient fumigant will be applied to meet the Fumigation Schedule for Bulk and Containerized product. (Attachment 2).

- (b) Ask the fumigator if netting is available for container vents and doors to prevent insect intrusion during aeration. The fumigator must state that the netting will be used. (Container shipments only)

**Note: Official Personnel do not need to be present at time of container aeration.**

- (c) Ask the fumigator if monitors are in place at the center mass of product (center mass monitoring) so that concentration levels will be recorded. (DDGS only)

**Note: Official Personnel do not need to be present when readings are taken.**

- (d) Confirm commodity temperature readings. Immediately prior to fumigation, Official Personnel must verify the temperature by viewing the temperature readout on the fumigator's device (DDGS in containers only).
- (e) Request a fumigation certificate from the fumigator presenting all pertinent fumigation information (dosage, duration, carrier identifications, temperature, and in the case of DDGS, 24 hour phosphine concentration readings, etc.).

**Note: Phosphine and Methyl Bromide are both acceptable fumigants.**

- (f) Make sure the appropriate 'Fumigation Schedule' (Attachment 2) was followed based on the fumigation information.

**Note: The licensed fumigator must also comply with the instructions within the EPA registered label.**

- (3) Complete the 'Checklist for Official Inspection of DDGS/Wheat/Corn to Vietnam' (Attachment 1).

**Note: One checklist must be completed for every FGIS 921-2 issued.**

- (4) Provide the following applicable statement in the "Remarks" section of the FGIS 921-2.

- (a) If appropriate requirements on the checklist (Attachment 1) are met:

*"The inspected lot conforms to the requirements for DDGS/Wheat/Corn for export to Vietnam."*

- (b) If appropriate requirements on the checklist are not met:

*“The inspected lot does not conform to the requirements for DDGS/  
Wheat/Corn for export to Vietnam.”*

**Note: Only include the specific commodity in the statement.**

## **5. PHYTO INSPECTION AND WITNESS OF FUMIGATION PERFORMED IN DIFFERENT OFFICIAL AGENCY TERRITORIES**

- a. Completing the FGIS 921-2

The official agency that performs the phytosanitary inspection is responsible for completing the FGIS 921-2.

This official agency must:

- (1) Send the list of containers that are on the booking to the official agency responsible for witnessing the fumigation.
- (2) Complete items 1 through 4 of the checklist (Attachment 1).
- (3) Place appropriate statement in “Remarks” section of FGIS 921-2 upon receiving all pertinent fumigation information from the official agency witnessing the fumigation.
- (4) Complete fumigation information and place inspectors name of witnessing official agency in the inspector block of fumigation section of FGIS 921-2.

- b. Witnessing Fumigation

The official agency that witnesses the fumigation is responsible for following the requirements set forth in the policy section.

This official agency must:

- (1) Complete items 5 through 10 of the checklist (Attachment 1).
- (2) Send all pertinent fumigation information to the official agency responsible for completing the FGIS 921-2.

## **6. FILING INSTRUCTIONS**

File a copy of this memo with the FGIS Directive 9180.35, Phytosanitary Inspection. Field office managers must ensure that a copy of this memorandum is provided to official agencies operating within their circuit.

## **7. QUESTIONS**

Direct any questions regarding this procedure to the local field office or to the Policies, Procedures, and Market Analysis Branch (202) 720-0228.

Attachments

### Checklist for Official Inspection of DDGS/Corn/Wheat to Vietnam

Vietnam Phyto Inspection Checklist		Bulk Vessel (x)	Containerized (x)
1.	Shipment Type:		
2.	Site inspection determines no insects injurious to stored commodities are present in immediate vicinity of loading container.		
3.	Manager of container loading site states that a pest management plan is in place.		
4.	Official stowage exam determines container is free from debris, moisture, insects, decayed flooring and objectionable odor.		
5.	Licensed Fumigator indicates that a fumigation management plan (FMP) has been prepared and that sufficient fumigant is available to meet or exceed below fumigation schedules.		
6.	FMP documents recirculation system of phosphine fumigation (as per Fumigation Handbook) and specifies the need for notation of seal numbers for hatch covers and manways, continuous monitoring of recirculation blowers, and prevention of hold aeration prior to completion of fumigation duration as per table in Attachment 2.		
7.	Netting is available for container vents and door to prevent insect intrusion during aeration following fumigation. Fumigator states the netting will be used.		
8.	Phytosanitary inspection confirms no quarantine pests other than insects. (e.g., weed seeds)		
9.	(Applies to DDGS only). Licensed Fumigator has monitors to record fumigant concentration at center of product (center mass monitoring) to ensure full treatment schedule is completed.		
10.	(Applies to DDGS only). Licensed fumigator's fumigation report indicates fumigant concentration readings (at least one per every 24 hours) consistent with full treatment schedule.		

Upon completion of checklist, official personnel should ensure the FGIS 921-2 contains full treatment details and one of the following statements as applicable:

*“The inspected lot conforms to the requirements for (DDGS/Wheat/Corn) for export to Vietnam.” or “The inspected lot does not conform to the requirements for DDGS/Wheat/Corn for export to Vietnam.”* (Only include the specific commodity in the statement).

**FUMIGATION SCHEDULE for Containerized DDGS<sup>1</sup>**

Commodity Temperature (°C)	Commodity Temperature (°F)	Minimum PH <sub>3</sub> Concentration Reading <sup>2</sup>	Minimum Exposure Period
10-15	50-59	750 ppmv	5 days
>15-20	60-69	750 ppmv	4 days
>20	≥70	750 ppmv	3 days

Or

**FUMIGATION SCHEDULE for Containerized Corn and Wheat**

Commodity Temperature (°C)	Commodity Temperature (°F)	Minimum PH <sub>3</sub> Concentration Reading <sup>2</sup>	Minimum Exposure Period
10-15	50-59	45 g/1000 ft <sup>3</sup>	5 days
>15-20	60-69	45 g/1000 ft <sup>3</sup>	4 days
>20	≥70	45 g/1000 ft <sup>3</sup>	3 days

**FUMIGATION SCHEDULE for Bulk DDGS, Corn, Wheat<sup>3</sup>**

Commodity Temperature (°C)	Commodity Temperature (°F)	Minimum PH <sub>3</sub> Concentration Reading <sup>2</sup>	Minimum Exposure Period
10-15	50-59	45 g/1000 ft <sup>3</sup>	5 days
		<b>If cylinderized gas: 750ppmv</b>	
>15-20	60-69	45 g/1000 ft <sup>3</sup>	4 days
		<b>If cylinderized gas: 750ppmv</b>	
>20	≥70	45 g/1000 ft <sup>3</sup>	3 days
		<b>If cylinderized gas: 750ppmv</b>	

<sup>1</sup> If applicant chooses to use cylinderized gas (e.g., Ecofume) for Corn and Wheat, use this table for treatment schedule and note that mass monitoring is not required.

<sup>2</sup> Phosphine concentration readings at center mass must not be less than 500ppmv throughout duration of treatment. Also no more than one 24 hour interval reading at center mass is less than 750ppmv.

<sup>3</sup> Recirculation System as per FGIS Fumigation Handbook must be applied when using PH<sub>3</sub> pellets and tablets. For cylinderized gas, the equipment setup and other requirements for the recirculation system must be consistent with the Handbook, in spite of the fact that use of cylinderized gas in the recirculation system is not specifically addressed the Handbook.