

# 3

Treatment Manual

## Nonchemical Treatments

*Heat • Forced Hot Air • Niger Seed*

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### Dry Heat Treatment Facilities for Niger (*Guizotia abyssinica*)

Niger seed is grown as a marginal crop mainly in India, Ethiopia and Burma and is imported into the United States for bird feed. Since Niger seed from India, Ethiopia and Burma is frequently contaminated with Federal Noxious Weed seeds, it is required to be heat treated in accordance with T412 treatment schedule.

#### Location of Treatment Facilities in the US

Construct the proposed niger treatment facility near the port environs; **not** exceeding 10 miles from the port.

#### Checklist of USDA-APHIS Minimum Requirements for Dry Heat Treatment Facilities for Niger Seed Treatment

#### Minimum Requirements for Dry Heat Treatment

- ◆ Accuracy of the total temperature recording system must be within plus or minus 0.5°F. (0.3°C) of actual temperatures as recorded by a certified calibrated thermometer
- ◆ Action plan is be established to address any pests that may be associated with the storage, treatment, or shipment of niger seed
- ◆ All the valves and controls that affect heat flow to the treatment system are secured to avoid manipulation by unauthorized personnel during the treatment process
- ◆ Audible alarm or highly visible light is installed on burners or other equipment to indicate system failure and/or when **not** operating properly
- ◆ Gear systems used to control the niger seed conveyor (if applicable) are capable of being adjusted as necessary to meet treatment requirements

- ◆ Heating controls are automatic and run continuously throughout the treatment process. Manual adjustments are allowed, if necessary.
- ◆ Minimum of two temperature probes are situated in the heat-treating equipment in such a way as to determine that all niger seed being treated reaches the target temperature
- ◆ Proper sanitation measures are implemented to ensure there are no potential breeding grounds for pests on the premises, and therefore, little risk of reinfestation or cross-contamination
- ◆ Seed processing equipment has the capability to divert for retreatment any nontreated or treated seeds that do **not** meet treatment standards
- ◆ Speed indicator is present for continuous flow systems.
- ◆ Temperature readings are recorded on the chart at time intervals **not** exceeding 4 minutes between each reading
- ◆ Temperature recording chart is showing changes in temperature in increments of **not** less than 0.1 inch for each degree Fahrenheit (°F) or 5 mm for each degree Celsius (°C)
- ◆ Treated seeds are stored in a location separate from nontreated seeds-the treated and nontreated seeds must be handled in a manner to prevent cross-contamination

### Requirements for a Valid Treatment

#### Facility Requirements

- ◆ Facility operators or managers must record the following information on each treatment chart:
  - ❖ Date
  - ❖ Lot number
  - ❖ Operator signature
- ◆ Minimum number of temperature recording elements is two fixed temperature probes-accurate time/temperature records will also be maintained for any additional probes
- ◆ Treatment must be in a Niger seed facility maintaining current valid approval in good operating order so as to be capable of providing an acceptable treatment

#### Treatment Requirements

The Niger seed heat treatment schedule will be for at least 15 minutes at 120 °C (248 °F) and the following procedures will be used by operators to determine if treatment standards are met.

- ◆ Examine treatment records for completion of treatment
- ◆ If any temperature reading falls below 120 °C (248 °F), nullify the treatment for that specific lot of seed and retreat the seed

### Documentation Requirements

- ◆ If, for any reason records indicate that the niger seed was **not** held at the target temperature for the required time, retreat the niger seed and correct the reason for the faulty treatment before continuing any niger seed treatment
- ◆ Verify that the niger seed was kept at the target temperature for the required time
- ◆ Maintain a logbook of all niger seed treatments
- ◆ Maintain records of equipment breakdowns and repairs and changes or modifications to the treatment process

### Sanitation and Pest Control

#### The Plant and Warehouse premises

The premises must have a cleaning and control program. The facility manager will ensure that there are no potential breeding grounds for pests in the premises, and therefore little risk of reinfestation or cross-contamination.

#### Containers and Packaging

The facility manager will ensure that packaging, whether used or new, is checked and cleaned for pests so that the packages are **not** a source of pests and contamination

#### Waste Disposal

To minimize contamination risk and eliminate pest breeding sites, the facility manager will implement a regular waste program for waste and for nonconforming or infested produce.

#### Post Treatment Requirements

- ◆ After treatment and cooling, immediately place the niger seed in new bags-treat or dispose the old bags in a manner that will eliminate regulated pests.
- ◆ PPQ will monitor (by sampling the treated seeds periodically) for actionable contaminants
  - ❖ Some time in the middles of the bagging process, sample every 25th lot after treatment
  - ❖ Perform random inspections and viability tests as needed by PPQ at the Port of Entry

Label each sample with the following information:

- ◆ Bill of lading number
- ◆ Container and lot number
- ◆ Date the sample was taken
- ◆ Date the seeds were treated
- ◆ Origin of seed
- ◆ Vessel name and nationality

Send laboratory results with the above information to:

USDA-APHIS-PPQ-CPHST  
Treatment Quality Assurance Unit  
1730 Varsity Drive  
Suite 400, Raleigh, NC 27606