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China Announces Revised Standards on Grain Processing

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Report Highlights:

On September 4, 2015, China notified the WTO of the National Food Safety Standard on Grain Processing (an update to GB 13122), issued by the National Health and Family Planning Commission (NHFPC), as SPS/N/CHN/1003. The deadline for submission of final comments to China is November 3, 2015. This standard pertains to primary processing of grains (cereals) as raw materials. The proposed date of entry is yet to be determined. Comments can be sent to China's SPS Enquiry Point at sps@aqsiq.gov.cn. The following report contains an unofficial translation of this draft measure.

Executive Summary:

On September 4, 2015, China notified the WTO of the National Food Safety Standard on Grain Processing (an update to GB 13122), issued by the National Health and Family Planning Commission (NHFPC), as SPS/N/CHN/1003. The deadline for submission of final comments to China is November 3, 2015. This standard pertains to primary processing of grains (cereals) as raw materials, and it will partially replace (GB 13122-1991) on Code of Sanitary Practice for Flour Mill. The proposed date of entry is yet to be determined. Comments can be sent to China's SPS Enquiry Point at sps@aqsic.gov.cn. The following report contains an unofficial translation of this draft measure. In addition, interested parties are also welcomed to submit comments through the U.S. SPS Enquiry Point below so that comments can be considered as part of the U.S. Government official comment submission to the WTO:

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BEGIN TRANSLATION:

National Food Safety Standard Code of Hygienic Practice for Grain Processing

(Draft for comments)

Issued by National Health and Family Planning Commission of the People's Republic of China

Foreword

This Standard will replace GB 13122-1991 Code of Sanitary Practice for Flour Mill.

In comparison with GB 13122-1991, this Standard has the following main changes:

- The title was modified to Code of Sanitary Practice for the Production of Grains (Cereals);
- Expanded the scope of applicability;
- Changed the structure of this Standard;
- Emphasized the requirements for process control in receipt of raw materials and production process, and for prevention of contamination during the whole production process including transportation and storage of products;
- Added the requirements for procurement, inspection and acceptance, transport and storage of the raw

materials;

- Added the control indicators, monitoring and recording requirements for the critical control points;
- Added the specific requirements for product traceability and recall;
- Added the requirements for management of records and documents.

National Food Safety Standard

Code of Sanitary Practice for the Production of Grains (Cereals)

1. Scope

This Standard shall apply to the production enterprises that make primary processing of grains (cereals) as raw materials.

2. Terms and Definitions

The terms and definitions provided in GB 14881-2013 National Food Safety Standard General Code of Sanitary Practice for Food Production shall apply to this Standard.

3. Procurement, Transport and Storage of Raw Materials

3.1 Procurement

Procured raw grains shall conform to GB 2715 Food Sanitation Standard.

3.2 Transport

3.2.1 The bags and containers that pack and contain raw grains must be toxin-free, dry and clean.

3.2.2 Transport vehicles shall be dry and clean. Raw grains must not be mixed with toxic, hazardous or contaminated goods in loading or transport as to avoid contamination to the raw grains.

3.3 Storage

3.3.1 Raw grains shall be stored in a cool, ventilated, dry and clean warehouse with facilities for control of pest, rodent and bird, and must not be mixed with toxic, hazardous or contaminated goods in storage. The warehouse shall have the facilities for control of pest, rodent and bird.

3.3.2 If the raw grains are stored in an open area, the area must be dry and above the ground, and appropriate measures shall be taken to protect against rain and mildew.

4. Site Selection and Plant Environment

It shall meet the relevant regulations in Chapter 4 of GB 14881-2013.

5. Plant Building and Facilities

5.1 Design and Layout

The design and construction of all new construction, expansion and renovation projects shall be in accordance with the relevant laws and regulations of China.

5.2 Design and Layout of Plant Building

5.2.1 Plant layout shall include production areas and auxiliary areas.

5.2.2 Plant layout shall be designed according to the needs of production needs and sanitary requirements, and shall be neat, orderly and scientific. All processes shall be interfaced reasonably.

5.2.3 Generally, the space between equipment and between equipment and wall in the production workshop shall meet the following requirements: main operating channel $\geq 90\text{cm}$; operator passage gap without operative surface $\geq 70\text{cm}$; equipment horizontal dimension $\leq 1\text{m}$ gap without operator passage and without maintenance surface $\geq 40\text{cm}$; if equipment maintenance and operation otherwise require a gap, such gap shall prevail. Ensure the clothes or body of operators during operation (including cleaning and mechanical maintenance) will not contact and contaminate the materials.

5.2.4 Set a separate lab which shall have sufficient space and be equipped with appropriate testing instruments and devices. If no such testing lab, a qualified testing institution shall be hired.

5.3 Structure of Plant Building

5.3.1 The plant building shall be built with fireproof building materials conform to the food safety standard. The plant building shall be sturdy and durable, easy to maintain and clean, and able to prevent the contact surface of raw grains and finished products, and interior packaging materials from being contaminated (such as intrusion, habitation and breeding of pests).

5.3.2 In order to prevent cross-contamination, it shall have separate personnel access and material transport channel, and each channel shall be installed with door screen or two-way swing door that is easy to clean. The personnel access and material transport channels between different areas shall have a buffer room.

5.3.3 If the workshop has staircase or overpass crossing the production line, it shall avoid contamination to the nearby materials and the contact surface of materials, and shall have safety facilities.

5.4 Safety Facilities

5.4.1 The power supply in the plant building must have grounding wire and leakage protective system. The sockets of different voltages must be clearly marked.

5.4.2 The power sockets used in highly humid environment shall be waterproof.

5.4.3 The installation of fire-resistant, anti-explosion and fire-fighting facilities shall meet the requirements of fire-fighting regulations.

5.4.4 If necessary, first aid materials shall be placed at the appropriate and obvious places.

5.5 Roof and Ceiling

5.5.1 The indoor roof or ceiling of the workshop and warehouse shall use light colored materials that do not absorb water and are free from odor and temperature-resistant, and have smooth surface. The roof of production area with high humidity must have appropriate slope or radian to reduce or prevent condensation water dripping.

5.5.2 As a principle, the ventilation pipeline in the areas requiring high cleanness such as finished product trimming, packaging and storage rooms shall not be installed right above the facilities with top opening, but shall be installed on the ceiling.

5.6 Wall, Doors and Windows

5.6.1 The wall of production workshop shall use light colored anti-rot materials without toxin or odor, and shall be smooth, watertight and easy to clean, and shall not use lead-containing paint.

5.6.2 All doors and windows of the production workshop shall use the anti-rust, anti-moisture and easy-to-clean frame, and shall not use wooden materials.

5.6.3 The windows shall be opened during operation. Double-layer stainless screen with prescribed quantity shall be installed according to the standard. The screen shall be easy to dismount and clean.

5.6.4 It is inadvisable to have stool on the windows in the production workshop. If there is window stool, it shall be at least one meter above the ground, and the surface shall be inward tilt at 45° .

5.6.5 The thermal insulating material used in the production workshop shall not contain asbestos.

5.7 Floor and Drainage

5.7.1 The floor shall be paved with the building materials that are non-toxic, watertight, non-water absorbing, anti-skid, free of crack and corrosion-resistant (such as terrazzo tile or concrete). The floor shall have an appropriate slope (preferably $1.0\% \sim 1.5\%$).

5.7.2 If any fluid flows to the floor during the production process or the production environment has any area that humid at all times, the floor slope shall be 1.5% ~ 3.0% depending on the flow rate.

5.7.3 The floor shall have sufficient floor drains. Floor drains shall be installed at the places on lower slope. No floor drain may be installed directly under production equipment. All floor drains shall have water trap and corresponding filter screen, to prevent odor or blockage in drainage pipe caused by solid waste.

5.7.4 Drainage outlet shall have a device to prevent intrusion of pests.

5.7.5 The waste water shall be discharged to the waste water treatment system, or treated by other appropriate means.

5.8 Water Supply and Gas Supply Equipment

5.8.1 The production water shall conform to GB 5749 Domestic Drinking Water Sanitation Standard. The water pressure and flow rate shall satisfy the needs of normal production; if necessary, the production site shall have a water storage device and a hot water facility. The water supply system shall have measures to prevent siphon and back-flow, and have a complete water supply network diagram.

5.8.2 The water storage device (pool, tower or tank), the water supply pipes and utensils directly contact with water shall use non-toxic, odorless and anti-corrosion materials. The inlet and outlet of water supply facilities shall have safety and sanitation facilities to prevent intrusion of pests and other hazardous substances.

5.8.3 If self-contained water source is used, water purification or disinfection facilities (such as sedimentation, filtering, deferrization, demanganization, defluorination and disinfection) shall be installed depending on the characteristics of local water quality, to ensure that the water quality conforms to GB 5749 and other standards.

5.8.4 The gas supply equipment shall use frequency conversion control, and shall have necessary devices of gas water separation, oil water separation and preliminary filtering.

5.9 Lighting Facilities

Shall comply with Article 5.1.7 of GB 14881-2013.

5.10 Ventilation Facilities

5.10.1 The processing, packaging and storage places shall keep good ventilation, and avoid that the indoor temperature is too high. If necessary, ventilation equipment shall be installed. The air shall flow from the higher cleanness area to the lower cleanness areas.

5.10.2 Ventilation and exhaust device shall be easily removable for cleaning, repair or replacement. The air vents shall have corrosion-resistant mesh enclosure. Free air inlet must be at least 2 meters above the floor and far from the contamination source and exhaust outlet. Air inlet and outlet shall have a device to prevent intrusion of pests.

5.10.3 The areas generating dust shall have a device to eliminate collect or control dust.

5.11 Warehouse of Raw Materials and Auxiliary Materials

5.11.1 The warehouse shall be compatible with the production capacity and the product storage requirements, and its size shall ensure smooth operation; it shall be easy to clean.

If goods of different natures are stored in same warehouse, these goods shall be separated by nature.

5.11.2 The warehouse shall be built with non-toxic and solid materials, and have measures to prevent the raw grains and finished products from being contaminated.

5.11.3 The warehouse shall have a device to prevent intrusion of pests.

5.11.4 The stock shall have an appropriate distance away from the wall and floor, to keep ventilation and facilitate goods handling.

5.11.5 The warehouse shall have temperature recorder and humidity recorder according to the different settings of goods in stock.

5.11.6 Dedicated storage areas shall be provided to store insecticide, acid, alkali, and other toxic and hazardous substances. The storage area of hazardous substances shall be far away from the production workshop and the warehouse.

6. Machinery and Equipment

6.1 Design

6.1.1 The design and structure of all production equipment, including pipes and tools, shall be easy to clean, disinfect and inspect, and shall have the design and measures to avoid entry of machine lubricant, metal debris, sewage or other contaminants.

6.1.2 The contact surface and edge shall be smooth, and it shall not have any dead space or crack, so as to reduce accumulation of debris, dirt or organic substance.

6.1.3 The design and manufacturing of storage and transport system shall be easy to maintain good sanitary conditions.

6.1.4 In the production workshop or raw materials processing area, the structure of equipment and tools that do not contact with the raw materials and products shall also be easy to clean.

6.2 Materials

6.2.1 The equipment, operation desk, conveying belt, transport vehicle, tools and other supporting facilities for production and likely contacting with the raw materials shall be made of non-toxic, odorless, non-absorbing, corrosion-resistant and repeated cleanable materials, and shall conform to the applicable national standards.

6.2.2 The directly contacting surface shall not be made of any material that would cause potential hazard or contamination to the finished product.

6.2.3 The lubricant used in the equipment that directly contacts with the finished products to be packaged shall conform to GB 15179 Food Machinery Lubricating Grease.

6.3 Equipment and Installation

6.3.1 Equipment

6.3.1.1 The production equipment shall be suitable for the production and processing of the products.

6.3.1.2 The layout of production equipment shall conform to the requirements of processes, and ensure the production process is smooth and orderly.

6.3.1.3 The measuring, controlling and recording instruments shall be regularly calibrated.

6.3.1.4 Sufficient ventilation equipment shall be installed to ensure normal ventilation for the drying, conveying, cooling and blowing processes.

6.3.2 Installation

Shall comply with Article 5.2.1.3.2 of GB 14881-2013.

6.3.3 Quality Inspection Equipment

6.3.3.1 The production equipment shall be suitable for the production and processing of the products.

6.3.3.2 The layout of production equipment shall conform to the requirements of processes, and ensure the production process is smooth and orderly.

6.3.3.3 A qualified inspection institution shall be hired to inspect the items which the enterprise is unable to inspect.

7 Management Institutions and Personnel

7.1 Institutions and Duties

7.1.1 A quality management institution accountable by the highest leader of the enterprise (or the highest leader of the member of a group) shall be established to fully take charge of quality management.

7.1.2 The enterprise shall have such functional departments as production management, quality management and sanitation management. The person responsible for production management shall not concurrently serve as the person responsible for quality management.

7.1.2.1 The manager of production management department shall manage raw material processing, production operation, finished product packaging and other tasks relating to production.

- 7.1.2.2 The manager of production management department shall establish the standards for quality control of raw materials and auxiliary materials, packaging materials, production process and finished products, conduct sampling inspection, track quality and carry out other tasks relating to quality management.
- 7.1.2.3 The manager of sanitation management department shall establish and revise the various sanitation management systems, manage the sanitation of environments inside and outside the plant and the plant facilities, as well as operational and personal sanitation in production and cleaning, and organize the sanitation training and physical check for the operators. All these operators must be duly licensed for their posts.
- 7.1.3 The quality management department shall have sufficient authority to manage quality, and its manager shall have the power to stop production and stop releasing products from the factory.
- 7.1.4 The quality management department shall have inspectors to inspect and analyze the quality and hygiene of raw materials, semi-finished products and finished products.
- 7.1.5 A sanitation management leading group, composing of the managers of the sanitation management department, the production management department and the quality management department, shall be set up to plan, review, supervise and assess the sanitation practices in the whole plant.
- 7.1.6 The sanitation management leading group shall have full-time or part-time sanitation management personnel which have passed the specialized training, to propagate and enforce the health laws, regulations and rules, inspect the implementation of sanitation practices and maintain records.
- 7.2 Personnel Requirements
- 7.2.1 The person in charge of enterprise shall be familiar with the Law of the People's Republic of China on Food Safety, the Law of the People's Republic of China on Product Quality and other applicable laws and regulations, and has the professional knowledge about food safety and sanitation, production and processing of foods.
- 7.2.2 The persons in charge of production management, quality management and sanitation management shall be familiar with the Law of the People's Republic of China on Food Safety, the Law of the People's Republic of China on Product Quality and other applicable laws and regulations.
- 7.2.3 The person in charge of production management shall have the required knowledge about processes, production technologies and sanitation.
- 7.2.4 The person in charge of quality management shall have the ability to discover and identify the adverse events in all production processes and products.
- 7.2.5 The inspectors shall have passed the occupational skill appraisal of the grains industry, and obtained the qualification of grains quality inspector.
- 7.2.6 The enterprise shall have a sufficient staff of quality management and inspection to satisfy the demand of on-site quality management and product inspection during the whole production process.

7.3 Education and Training

The enterprise shall develop a training plan and organize the managers and employees of all departments to participate in various orientation and on-job trainings and education, so as to enhance the relevant knowledge and skills of employees.

8 Sanitation Management

8.1 Management Requirements

8.1.1 All departments of the enterprise shall establish a sanitation management program according to this Standard, and the sanitation management leading group shall review and supervise the implementation of the sanitation management program.

8.1.2 The sanitation management department shall develop and implement an inspection plan.

8.1.2.1 The person in charge of sanitation management of every shift every day shall inspect the implementation of the sanitation management program.

8.1.2.2 The sanitation management department shall organize the persons in charge of sanitation management

to inspect the sanitation of production and environment in the whole plant at least once every month.

8.1.3 Each inspection shall maintain a record, and the record shall be kept in file.

8.2 Sanitation Management of Plant Environment

8.2.1 The plant area and surrounding areas shall keep clean. The roads and grounds in the plant shall maintain good conditions, and shall have no breakage, serious ponding or flying dust.

8.2.2 The plants in the plant area shall be cut and trimmed regularly to keep a tidy environment. It is prohibited to pile up any junk items or unnecessary devices, so as to avoid breeding of pests.

8.2.3 The drainage system shall keep free flowing, and shall not have any sludge accumulation. The wastes shall be properly cleared away.

8.2.4 The effect of harmful (toxin) gas, waste water, waste and noise on the environment shall be controlled.

8.2.5 The waste disposal place shall not emit odor or harmful (toxin) gas, and shall prevent breeding of pests.

8.3.6 Pest control in the plant area shall comply with Article 8.8.

8.3 Sanitation Management of Plant Building and Facilities

8.3.1 A plant facilities maintenance system shall be established and the plant facilities shall be maintained, tested and serviced according to the relevant regulations, so as to ensure the plant building in good sanitary conditions.

8.3.2 All facilities in the plant building shall keep cleaning at all times, and shall be maintained and updated in timely manner. When the plant roof, ceiling or wall breaks, it shall be repaired immediately. The floor shall not have any breakage or ponding.

8.3.3 It is advisable to use explosion-proof clean lights. The lights and supporting covers shall be cleaned regularly.

8.3.4 Appropriate measures (such as screen window, gas curtain, fence or moth-killing light) shall taken in the production places to prevent intrusion of pests.

8.3.5 Pest control in the plant building shall comply with Article 8.8.

8.3.6 Some water-tight waste containers that are easy to clean and disinfect (other than disposable container) with cover (or sealable device) shall be placed at the appropriate places in the raw materials treatment, processing and packaging areas, and shall be removed and cleared away regularly (at least once every day). After the wastes are cleared away, the reusable container shall be cleaned immediately.

8.3.7 The packaging materials or other items may only be provided upon request. The controlled operation area shall not put any items not ready to use, or any packaging materials or any other unnecessary items. It is prohibited to store any toxic substance in the production workshop. The cleaning and disinfection items for internal use in the workshop shall be stored at a dedicated area or cabinet, clearly marked and managed by a special person.

8.3.8 The water tank (tower or pool) in the workshop shall be cleaned regularly, and shall be inspected and disinfected before every shift every day. If the enterprise uses self-supplied water, it shall send a water sample to the qualified inspection institution twice every year, to ensure the quality of water for production purpose conforms to GB 5749.

8.4 Sanitation Management of Machinery and Equipment

8.4.1 The equipment, tools and production pipes for processing, packaging, storage and transport purposes shall be regularly cleaned. The soaked barn for processing of parboiled rice and germinated brown rice shall be cleaned and disinfected regularly. Cleaning and disinfection shall comply with Article 8.6.

8.4.2 After the pesticide has been used in the workshop, all equipment and tools shall be thoroughly cleaned to remove pesticide residues and eliminate contamination.

8.4.3 The cleaned removable equipment and tools shall be placed at an area preventing the product contact surface from contamination, and shall maintain usable conditions.

8.4.4 The water for cleaning the equipment and tools contact with the products shall conform to GB 5749.

8.4.5 The detergents for cleaning the equipment and tools contact with the products shall conform to GB 14930.1 Food Tools and Equipment Detergents Sanitary Standard.

8.4.6 The compressed air filtering system shall be regularly maintained and serviced, so as to remove filtering

water and oil in timely manner and avoid pollution. Appropriate measures shall be taken to ensure the hygiene and quality of the compressed air.

8.4.7 The production machinery, equipment and places shall not be used for any purpose irrelevant to production.

8.5 Sanitation Management of Auxiliary Facilities

8.5.1 In-house Water Station

8.5.1.1 If the enterprise has an independent water station, detailed operation procedures and management program shall be established, and strict and systematic water quality inspection, system maintenance and service records shall be maintained. The manager shall regularly (at least once every quarter) conduct inspection and assessment.

8.5.1.2 All tools must conform to the sanitary requirements, and all equipment shall be maintained and serviced regularly to keep good sanitary conditions.

8.5.1.3 All disinfectants must be properly stored and the registration formalities shall be strictly implemented to ensure the stock and record are consistent. Other items irrelevant to the water quality treatment shall not be placed in the water station.

8.5.1.4 The water tank (tower, pool) shall be regularly (at least once every quarter) cleaned and disinfected, and the water quality shall be inspected at any time, so as to ensure the quality of water for production usage conforms to GB 5749.

8.5.1.5 The water treatment equipment shall be cleaned, inspected and serviced regularly or frequently depending on the actual operation.

8.5.1.6 No irrelevant persons may enter into the water station. After the inspection and service is completed, the various overhaul openings, doors and windows must be closed immediately.

8.5.2 Boiler Room

8.5.2.1 The boiler operators must have passed the vocational skill training and obtained the qualification certificate.

8.5.2.2 The boiler shall be safely operated, serviced and maintained according to the requirements of the relevant administrative authority. The detergents used in the boiler must be non-toxic and the dosage shall be strictly controlled. The boiler fouling shall be removed regularly (with record).

8.5.2.3 The smoke emission from the boiler shall be monitored, so as to ensure the emission conform to GB 13271 Boiler Air Pollutant Emission Standard. The smoke vent duct shall be cleaned regularly so as to avoid pollution in the plant environment.

8.6 Cleaning and Disinfection Management

8.6.1 The enterprise shall develop cleaning and disinfection measures and systems to ensure all places, equipment and tools at the enterprise are clean.

8.6.2 The detergents to directly clean equipment, tools and packaging materials shall be food-level detergents, and shall not use any non-food level detergents which would threaten product safety or sanitation.

8.6.3 The cleaning and disinfection methods must be safe and sanitary, and the disinfectant and detergent in use shall be safe and suitable.

8.6.4 The sweeping, cleaning and disinfecting equipment and tools shall be properly kept at a dedicated place and shall be managed by a special person.

8.7 Employee Health Management

8.7.1 Shall comply with Article 6.3 of GB 14881-2013.

8.7.2 All operators must keep good personal sanitary practices, and shall frequently cut hair, frequently shear a nail, frequently take a shower, and frequently change clothes.

8.7.3 Before entry into the production workshop, the operators must wear clean and tidy uniform, hat and working boots. The uniform shall cover the coat, and the hair shall not be out of the hat. If necessary, mask shall be worn. Uniform and working shoes shall not be worn into toilet or taken away from the production workshop. Before an

employee enters into the production workshop and after the clothes has been changed, his hands must be washed and disinfected.

8.7.4 Hands shall maintain clean during production and operation. In the following cases, must wash hands and the enterprise shall have the measures to monitor: before work, after go to toilet, after handling contaminated raw materials and items, and after any activity irrelevant to the production. The production site shall have hand washing facilities. Hands shall maintain clean during production and operation.

8.7.5 The workers at the production workshop shall not use such cosmetic as nail polish, lip stick or pressed powder, or wear such ornament as waist watch, ring, and necklace or ear ring.

8.7.6 Employees must not drink alcohol before going to work, and must not smoke at production site. Employees must not carry out any activity harmful to production hygiene during work.

8.7.7 If any operator injures at hand, he shall not touch any product or raw material, and may return to work only after the wound has been treated and bandaged, and the operator must wear protective gloves.

8.7.8 The personal clothes and uniforms of each employee shall be stored separately. Personal clothing (shoes, bags and hats) shall be stored at the dedicated locker in the dressing room, and other personal belongings shall not be brought into the production workshop.

8.7.9 Visitors entering into and exiting the production and operation areas shall be appropriate managed. If any visitor will enter into the controlled production area, he must meet the sanitary requirements for on-site workers.

8.8 Management of Pest Control

8.8.1 The plant area shall take effective pest control and killing measures regularly or whenever necessary, to prevent gathering and breeding of rats, mosquitoes, flies and insects. If any place has any pests, emergent measures shall be taken to control and eliminate the pests, and prevent the pests from spreading or causing contamination to the products.

8.8.2 The enterprise shall have a rat trapping diagram and necessary rat trapping facility, and special persons shall be appointed to check the rat trapping facility every and maintain a record. Sticker, cage and mousetrap shall be used to trap and kill rats. Never use rat poison.

8.8.3 If there is any pest, the source shall be found out and it shall be thoroughly eliminated. The method to kill pest shall avoid contamination to the products, the product contact surface or packaging materials (for example, do not use pesticide). Only if other preventive measure is ineffective, pesticide may be used.

8.8.4 Before any pesticide or any other poison is used, measures shall be taken to prevent contamination or poison to the human body, equipment or tool. After the pesticide or any other poison is used, all equipment and tools shall be cleaned thoroughly to eliminate contamination.

8.8.5 The pest killing measure shall not be carried out at the production site during the production process. When the pest killing measure is being carried out, measures shall be taken to protect the raw materials, auxiliary materials and finished products and avoid contamination caused by the poison.

8.8.6 Pest and fly killing lamps may be installed at the entrance to and inside the production workshop to kill pests and flies which would enter into the workshop. The pest and fly killing lamps installed in the workshop must be far from the production area. The pest and fly control lamps shall be cleaned every day.

8.9 Sewage Management

8.9.1 Sewage discharge shall conform to GB 8978 Sewage Comprehensive Discharge Standard.

8.9.2 The enterprise shall have a detailed sewage discharge network map. The treatment capacity at the sewage outlet must be compatible with the actual production capacity.

8.10 Management of Uniforms

8.10.1 Design and materials of all uniforms shall meet the meet the sanitary requirements. The uniforms shall include coat, trouser, hat and boots, and for certain processes (task), also include mask, sleeve cover and other preventive items.

8.10.2 The uniforms of the workers who directly contact the products shall be disinfected every day, replaced

regularly and kept clean.

8.10.3 The workers in different production steps (such as cleaning work, rice hulling workshop, rice milling workshop, selection workshop and clean rice packaging workshop) shall wear the uniforms and hats of different colors so as to distinguish.

8.10.4 A system shall be established to keep all uniforms clean and tidy. The uniforms for the controlled operation area and other operation areas shall be cleaned separately to avoid cross-contamination.

9. Production Process Management

9.1 Development and Implementation of Production Operational Procedures

9.1.1 The enterprise shall develop a Production Operational Procedures.

9.1.2 The Production Operational Procedures shall include the following contents:

- Standard production and operation procedures;
- Production management rules (at least including production processes, management objects, monitored items, monitoring limit value, monitoring standard and precautions);
- Procurement procedures and requirements for raw grains and auxiliary materials (additives);
- Procedures and requirements for operation and maintenance of machinery and equipment.

9.2 Raw Materials, Auxiliary Materials and Packaging Materials

9.2.1 Raw materials, auxiliary materials and packaging materials shall conform to the non-toxic and health requirements. If the raw materials are the semi-finished products from the plant or other sources, the raw materials, production environment, production process and quality control shall conform to the good operation practices.

9.2.2 Sensory test shall be conducted before the raw materials are processed, and the raw materials shall be screened if necessary to remove the parts do not conform to the quality and sanitary requirements and foreign matters.

9.2.3 The qualified and disqualified raw materials shall be stored separately, and shall be clearly marked to distinguish.

9.2.4 The raw grains shall be stored in the conditions conform to the relevant standards, and shall be prevented from contamination and damage.

9.3 Production Process

9.3.1 The production operations shall observe the safety and sanitation principles, and shall be carried out under the controlled conditions of minimizing product contamination. The production process shall strictly control the physiochemical conditions, such as time, temperature and pressure, etc.

9.3.2 Effective measures shall be taken to avoid second contamination in production process or storage.

9.3.3 The operation, use and maintenance of equipment, containers and tools that transport, load and store the raw materials, semi-finished products and finished products shall avoid contamination during processing or storage.

9.3.4 Effective measures shall be taken to prevent any metal or other foreign matters mixing with the products.

9.3.5 During the production process, no maintenance of production equipment shall be carried out on the site.

9.3.6 During the production process, no pest killing measure shall be carried out.

9.3.7 During the production process, the windows of the clean operation area shall not be opened.

9.3.8 Routine repair and maintenance of equipment shall be intensified to maintain the equipment in clean and sanitary conditions. Maintenance of equipment must be in strict compliance with the proper operational procedures. In the event of any failure in the equipment, it shall be eliminated immediately to prevent any adverse effect on the product quality. Before production, always check whether the equipment is in normal conditions. All production equipment shall be maintained regularly, and maintenance records shall be kept.

10 Quality Management

10.1 Development and Implementation of the Quality Manual

10.1.1 The enterprise shall cause its quality management department develop a Quality Manual, and implement the Quality Manual after it is approved by the highest management authority. The Quality Manual shall include the provisions of Article 10.2, 10.3 and 10.4 of this Standard.

10.1.2 The enterprise shall collect and keep a complete set of the national and international standards regarding production quality and sanitation, and the copy of applicable laws and regulations.

10.2 Quality Management of Raw Materials, Auxiliary Materials and Packaging Materials

10.2.1 The enterprise shall establish a detailed procurement system, including supplier evaluation, quality specifications, inspection items, acceptance standard and inspection method, and develop and strictly implement the weighing, sampling, testing, evaluation, review, processing and delivery steps and procedures.

10.2.2 In receiving all raw materials and auxiliary materials, the suppliers shall be requested to provide the inspection certification or inspection report.

10.2.3 Each batch of raw materials and auxiliary materials may be used only if they are inspected and accepted according to the standard. If it is concluded that any lot of raw materials or auxiliary materials fails to meet the standard, it shall be clearly marked (as substandard or prohibited), and shall be stored in a dedicated area and disposed of in timely manner.

10.2.4 If it is concluded that any lot of raw materials or auxiliary materials meets the standard, they shall be used according to the FIFO principle.

10.2.5 The lot number of the accepted raw materials and auxiliary materials shall be compiled on the basis of production date and supplier's serial number. In order to keep traceability, the lot number shall be used continuously to the production log.

10.2.6 With respect to the raw materials and auxiliary materials that their quality would change due to a long storage period, the quality of such materials shall be confirmed by sampling inspection. If the materials fail to meet the standard, they shall not be used in production.

10.2.7 With respect to the raw materials and auxiliary materials require special storage conditions, the storage conditions shall be controlled and relevant records shall be maintained.

10.2.8 If the raw materials might contain any pesticide residue, drug residue, heavy metal or mycotoxin, it shall be confirmed that the content is within the range of national standard.

10.3 Process Quality Management

10.3.1 The enterprise shall use hazard analysis and critical control point (HACCP) system to manage the process quality.

10.3.2 The enterprise shall strictly implement the production operation procedures, and the formulation and the processes shall not be modified without approval. If there is any quality problem in production, it shall be quickly investigated and corrected.

10.3.3 The enterprise shall make sampling inspection on the semi-finished products at the control points of production process, and prepare the quality record, production log and other management statements, to control the quality in each production process and ensure traceability.

10.3.4 The substandard semi-finished products shall not enter into the subsequent processes, and shall be properly processed, and relevant record shall be maintained.

10.3.5 Before each lot of finished products enters into the warehouse, an inspection record shall be maintained. The substandard semi-finished products shall be properly processed, and relevant record shall be maintained.

10.4 Finished Product Quality Management

10.4.1 The enterprise shall develop the detailed quality indicators, inspection items, inspection standards, and sampling and inspection methods for the finished products. The minimum standard of quality indicators shall not be lower than the national standard, and the inspection method shall be generally consistent with the national standard. If the inspection method is inconsistent with the national standard, it shall be regularly calibrated with the

national standard.

10.4.2 When the finished products are to be released from the factory, random samples shall be taken to make inspection according to the product standard. The products that fail to meet the standards shall not be released from the factory, and the disposal of the substandard products shall be recorded.

10.4.3 The analysis result shall be recorded in the "Finished Product Quality Inspection Record", and shall use, in combination with the "Production Log", to determine whether the products conform to the standard, and also used as the basis for approval of delivery from the warehouse.

10.4.4 After the finished products enter into the warehouse, the storage conditions shall be managed and recorded.

10.4.5 When the finished products are delivered from the warehouse, the enterprise shall check the production date, shelf life and appearance. If the vehicle cannot protect the quality of the finished products during the transportation, the enterprise must not use the vehicle to transport the finished products.

10.4.6 The enterprise shall develop a plan to retain samples of finished products. The samples of each lot of raw grains and finished products shall be kept, so that they can be inspected in necessary quality inspection or in the event of any quality dispute. If necessary, stability test shall be conducted on the finished products during the shelf life.

10.5 Management of Finished Product Storage and Transport

10.5.1 The products in storage and transportation shall avoid direct sunshine, rainwater, severe temperature and humidity changes, impact or other factors that affect product quality.

10.5.2 The finished products shall be separately stored by variety; package form and production date, and based on the FIFO principle.

10.5.3 The warehouse shall be cleared up frequently. The products in storage shall not be placed directly on the floor. The warehouse of finished products shall not store toxic, hazardous, perishable or flammable goods, or items that may cause odor.

10.5.4 Items stored in the warehouse shall be checked on a regular basis. If there is any abnormality, it shall be disposed of in a timely manner. The warehouse shall have a temperature record (if necessary, also humidity record). If any package is damaged or the quality of products will be significantly deteriorated due to long-term storage, the products shall be re-inspected.

10.5.5 During the transportation and storage, the products shall be handled with care and shall not be trampled. The tools and vehicles transporting raw materials, auxiliary materials and products shall be cleaned at all times and disinfected regularly to ensure hygiene. During the transportation, the products shall not be mixed with any toxic, hazardous, corrosive or odorous goods.

10.5.6 Transport means and vehicles other than van shall be equipped with dust-proof and rain-proof canvas, plastic sheets and other covering.

10.5.7 Warehouse receipt, delivery and transportation of raw materials and finished products shall maintain detailed records, including lot number, delivery time, place, name and quantity of items, so that the products may be recalled promptly in the event of any quality problem.

10.6 Finished Product After-sale Management

10.6.1 The enterprise shall establish a consumer complaint handling system. In the event of any consumer complaint, the manager of quality management department (and, if necessary, shall coordinate other relevant departments) shall immediately investigate the cause and make correction. At the same time, the enterprise shall appoint some persons give explanation or apology to consumers, and propose the settlement and corrective actions.

10.6.2 The enterprise shall establish a finished product recall system.

10.6.3 Consumer complaints and finished product recalls shall be recorded, including the product name, lot number, quantity, cause, settlement date and final solution. The records shall be regularly summarized and

analyzed, and distributed to the relevant departments for future improvement.

10.7 Management of Records

10.7.1 Records

10.7.1.1 The manager of sanitation management department shall, in addition to recording results of regular inspection, complete a daily sanitation management record, including the cleaning and disinfection measures taken and the sanitary conditions of operators, and keep a detailed record of result of handling abnormal situation and the measures taken to prevent recurrence.

10.7.1.2 The quality management department shall keep a detailed record of quality management activities and results from receipt of raw material to delivery of finished products, and compare and verify them with the original objective. It shall also record the result of handling abnormal situation and the measures taken to prevent recurrence.

10.7.1.3 The production department shall keep production record and production management record, including the result of handling abnormal situation and the measures taken to prevent recurrence.

10.7.1.4 The various records shall be reviewed and signed or affixed the seal by the executive persons and the managers. All records must be true, and must be made with the on-site inspection or supervision simultaneously, and must not be made in advance or subsequently. All records shall conform to the standard and shall be unambiguous. In the event of any modification to the recorded contents, the original record shall not be altered. The modifier shall sign near the modified content.

10.7.2 Reconciliation of Records

The sanitation, quality and production management records shall be timely reviewed by the sanitation, quality and production management departments. If there is any error, it shall be corrected immediately.

10.7.3 Retention of Records

All records required by this Standard shall be retained for at least 2 years.

11. Label

11.1 The label and instruction of pre-packaged products shall be consistent with GB 7718 National Food Safety Standard - General Rules for Label of Pre-packaged Food.

11.2 Non-retail packaged products shall indicate the following contents in Chinese and with common symbols on the package or the accompanying documents:

11.2.1 Product name and product standard number.

11.2.2 Net content.

11.2.3 Name and address of producer, consumer service hot-line or producer's telephone number.

11.2.4 Shelf life. The shelf life shall be printed on the label, and shall not be written on an additional tag.

11.2.5 Lot number. The production lot number may be expressed in plain code or secret code, but it shall be able to trace the raw materials of the product.

11.2.6 Other items required by the relevant authorities.

11.3 The exterior package and container shall indicate the lot number so as to facilitate warehousing management and recall of finished products.

12. Establishment and Assessment of the Management System

12.1 Establishment of the Management System

The enterprise shall establish a comprehensive and effective management system to implement this Standard, and coordinate various departments to comply with the provisions of this Standard.

12.2 Assessment of the Management System

12.2.1 The enterprise shall establish an internal assessment group composing of its management members at all levels, to conduct regular or irregular inspection on the implementation of this Standard by the enterprise. If any

problem is identified, it shall be reasonably solved and tracked.

12.2.2 The members of the internal assessment group shall receive certain training. A record of the training shall be kept.

12.2.3 The enterprise shall develop an internal assessment plan to determine the inspection items and cycle (generally once every half of year). It shall strictly implement the plan, and maintain the record.

12.3 Development, Revision and Abolition of the Management System

The enterprise shall establish the operational procedures to develop modify and abolish the relevant management systems that implement this Standard, so as to ensure that the quality managers may receive and follow the effective versions of the operational procedures
