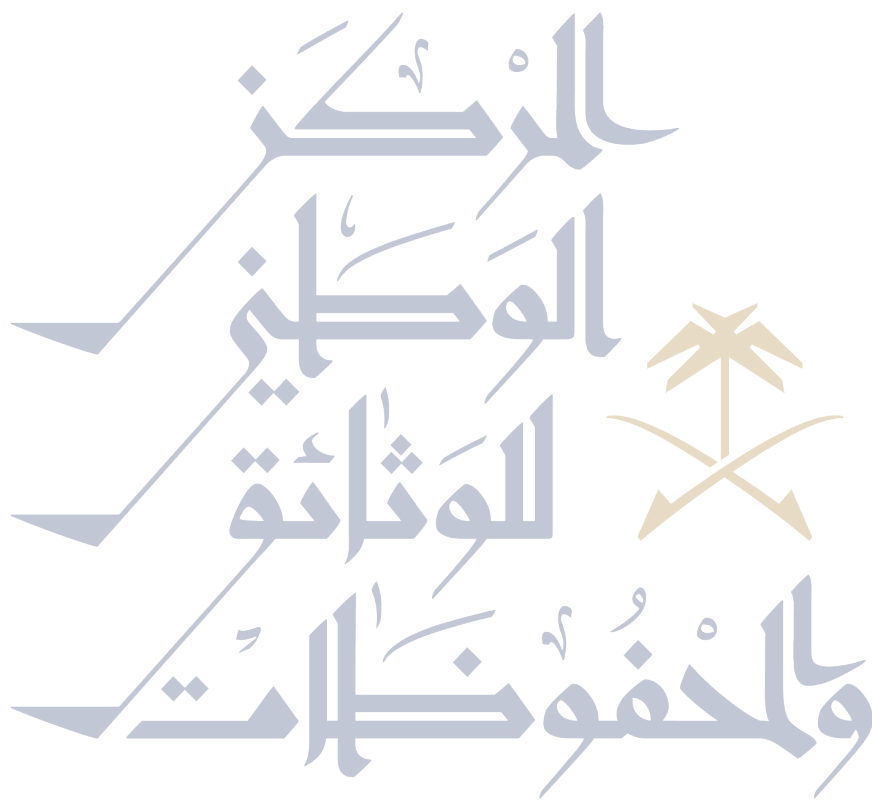


Regulations for Agricultural Safety



National Center for Archives & Records

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Section 1

1 Farm : It is a land that is mainly or partially exploited for plant cultivation, animal production, or both . The farm is a single economic unit, even if it consists of a range of different agricultural productive activities, whether in one piece or in several , as long as it is under one management .

2 The Law : Civil Defense Law issued by the Royal Decree No. 10 and dated 10/5/1406 H and all other relevant regulations .

3 Civil Defense Representative : The authorized person or persons by the General Directorate of Civil Defense, or one of its centers to carry out inspection, forfeiture, and investigation of violations as per the rules and procedures specified in the relevant Regulation, to ensure the safety of the building, safety equipment, and tools, and to impose the penalty stipulated .

4 The Relevant Authority : The Ministry of Interior, the General Directorate of Civil Defense, the ministry of agriculture and other public authorities involved in the agriculture and forestry .

5 The person responsible for safety : The owner and operator of the farm shall be responsible for ensuring that the requirements of these Regulations are met, and the competent authority responsible for agricultural activity and forestry shall be responsible for the implementation of the regulation .

specifications :

(a) Saudi Standards, issued by the Saudi Standards, Metrology, and Quality Organization, SASO.

(b) International Standards: in the absence of Saudi Standards, the United States of America Standards , or the Standards of the European Common Market Countries , are to be considered. If the equipment or material is manufactured in other countries (other than US or EU countries). In that case , the specifications must be based on the manufactured countries' relevant authorities. A document must be submitted to prove the availability of all safety rules in equipment or material used in all cases .

Second : The safety rules and requirements in these regulations represent the minimum that must be met. Therefore, the safety officer must ensure these rules and requirements are met and take necessary measures to put them into practice.

Third : It must be ensured that all farms, buildings, stores and wells, and relevant machines meet safety conditions and means. They must be inspected while their efficiency and usability must be tested. All necessary restorations and repairs must be made whereas out-of-order and malfunctioned equipment and machines must not be used even if the potential risk is small.

Fourth : Workers of a farm or forest must be trained on safety, rescue, first-aid, and firefighting. Training must take place at one of the specialized national schools or institutes accredited by the General Directorate of Civil Defense, provided that the trainee will train the rest of employees.

Fifth : The safety officer must have a record (called Safety and Firefighting Record) as per the form prepared by the Civil Defense. All the pages of the record must be stamped by the respective Civil Defense Center and must contain the names of employees who have received training and their ratio to the number of employees. It must include also their level of training, test periods, maintenance, inspections, notes, etc. The record must be kept in a safe place with the safety officer to show it to the Civil Defense representative.

Sixth : The safety officer will cooperate with the competent Civil Defense Department or Center to develop a detailed plan to handle accidents and train workers how to deal with accidents, and also specify the procedures that must be taken until the Civil Defense teams have arrived to the site.

Seventh : The safety officer must place warning and guidance signs in a visible place. These signs are written in clear handwriting in Arabic and English, and any other languages and also explain the places of danger, type of danger and how to prevent it or deal with it, in the event of a fire, God forbid.

Eighth : These conditions and rules aim to set safety requirements and firefighting methods to protect forests, farms, and their annexes, including buildings, facilities, and various activities, in order to save lives and protect agricultural and animal resources.

Ninth : This regulation focuses on safety requirements and fire-fighting measures without prejudice to other regulations and instructions related to farms and forests issued by the Ministry of Agriculture and Water.

Tenth : The General Directorate of Civil Defense must coordinate with the Ministry of Agriculture and Water to prepare a detailed plan and enforce this regulation gradually, especially for small farms. The plan must determine the types of farms and classifies them into categories according to their area.

Eleventh : Civil Defense committees may, within the limits of their local jurisdiction, exempt small farms of some of the conditions stipulated for in this regulation after considering each case separately, providing that this exemption does not violate the conditions and safety instructions for the farm, its workers, or those who visit it frequently.

Twelfth : Safety violations will be seized, investigated and penalties will be imposed according to the Civil Defense laws, regulations or instructions that regulate these matters.

Section Two (Safety conditions)

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First : Conditions related to site and buildings

1-1

The site must be determined by the instructions given by the Minister of Agriculture and Water and by other competent authorities, bearing in mind that the farm or forest is linked to a road, which is not less than (8 meters) wide and suitable for passage by large cars, in order for Civil Defense vehicles (firefighting, rescue, ambulance) to reach the site in the event of a fire or accident in the farm or its facilities, God forbid.

1-2

1 . Non-flammable materials must be used for constructing all buildings and structures, whether they are intended for housing or for storing agricultural products, pesticides, fertilizers, agricultural and livestock machinery. The safety regulations and instructions issued by the Civil Defense, the conditions set by the Ministry of Municipal and Rural Affairs, the Ministry of Agriculture and Water and its branches, and the standard specifications issued by the Saudi Standards, Metrology and Quality Organization (SASO) must be applied. Houses must be kept at a safe distance from the edge of the planted parts, the generators, or fuel tanks, according to the concerned municipality's opinion which is based on the nature of the site.

2 . It is prohibited to erect all buildings, constructions, dwellings, and farms in valleys, streams of torrents, and places where water collects on the farm, in line with the relevant regulations and instructions, which prohibit the ownership of valleys and streams of torrents and infringement on the same.

1-3

All buildings and structures intended for storing pesticides must be separate from the rest of the farm facilities, such as food and agricultural products stores, housing, offices, places where agricultural animals are housed, and others. The distance between pesticide stores and other buildings must not be less than (fifty meters).

Second : Disposal of crop residues and waste (burning must be under supervision)

2

It is prohibited to burn any crops, residues, or waste on farms or fields except in the narrowest scale, provided that the following conditions are met :

1. Burning is the only way to dispose of waste and weeds after notifying the competent Civil Defense Center before setting fire to waste and weeds. Civil Defense has the right to approve or reject the burning based on the assessment of the situation.

2 . Burning must take place in a safe area free of inflammable materials, not in the direction of the wind. The place specified for burning must be located far from housing, warehouses and crops by no less than (100) meters and burning must occur on days when the wind speed is low.

3 . The crop residue or waste to be burned must be of a known type and limited in quantity so that they can be quickly put out by suitable material in the event of a sudden change of wind direction.

4 . Appropriate firefighting means must be provided at the burning site such as water, fire extinguishers, sand, and some buckets and shovels. It is preferable to put the residue or waste to be burned in suitable pits or in iron drums.

5 . Burning must be carried out under human supervision of qualified workers who are trained in firefighting. A suitable number of such workers must be available at the site throughout the burning process. They must not leave the site until after the burning process has been over and the fire has been completely dozed.

6 . Fire that has been set under supervision must be dozed before the close of business and under the responsibility of those in charge of the operation.

Third : Storing and using pesticides

3-1

A separate building or room must be designated to be used as (a pesticide storage area) and must be kept out of reach of people, especially children.

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The pesticide storage area must have fire-resistant walls or partitions.

3-3

The pesticide storage area must have proper lighting including lamps and explosion-proof light switches to facilitate finding pesticide containers. A backup lighting source must be available at the site. The flooring of the storage must be made of chemical-resistant tiles, while the 2-meter-high walls must be covered with white Qashani tiles. The storage area must be thermally isolated .

3-4

The storage of pesticides must prevent exposure to humidity. Pesticides must be stored in a way that allows taking or adding any quantities easily. Pesticides with older production date and which are in use must be permanently taken from the store .

3-5

The buildings and facilities for storing pesticides must have fire alarm and fire protection systems in addition to appropriate fire extinguishers as per the decisions of the competent Civil Defense Department or Center following inspection of the site and in light of the quality, size and risk arising from the stored materials.

3-6

The storage room must have lower and upper ventilation openings, covered with a metal grid, and equipped with fire-resistant doors that open easily to the outside. It is preferable to provide the storage rooms with air suction to create the appropriate temperatures for storing pesticides and to take into account the storage conditions as per the regulations of warehouse safety conditions issued by the Civil Defense.

3-7

The place where the pesticides are stored must be located far from the water sources to prevent contamination and from the cultivation area by a sufficient distance, preferably at the end of the farm's edges. The pathway must lead easily to the pesticide storage place.

3-8

The storage area of pesticides must be divided into shelves designated for the different types of pesticides according to their severity and toxicity. Pesticides including the ones having solid ingredients must be stored on shelves high from the surface of the ground to prevent corrosion.

3-9

The storage area of pesticides must not be in the direction of the winds in the area as far as possible and the same must be applied to the rest of the facilities inside the farm.

3-10

Warning and No Entry signs must be placed in a visible spot to prevent unofficial employees from entering the storage area of pesticides, preferably at the door of the warehouse. The storage area must be constantly closed if there is no need to use pesticides.

3-11

The storage area of pesticides must have tools and devices to remove pollution, such as providing a nearby source of water and an adequate quantity of soap and other cleaning materials. A restroom near the storage area must be set up to pesticide workers to use after engaging in any activity related to pesticides.

3-12

The inventory of the storage area must be constantly monitored to ensure that the lid of the container is tightly closed and the container itself is in the upright position. Damaged bottles and containers having leakage must be removed and disposed of properly .

3-13

It is prohibited to store pesticides with other materials such as agricultural products, foodstuffs, fodder, water and early seeds intended for cultivation and other chemicals used in agriculture.

3-14

Pesticides must be stored in their original containers, and the information label of the pesticide must be kept in the same place on the original packaging. Instructions on the label must be followed. It is prohibited to store pesticides in food and drink containers.

3-15

It is prohibited to store glass or transparent containers containing pesticides or chemicals under direct sunlight. Containers can intensify the heat of sunlight and rays, thus causing ignition.

3-16

Large quantities of unnecessary pesticides must not be stored for a long time. Pesticides depicting signs of change or damage or having expired must be disposed with .

3-17

It is necessary for owners of pesticides to notify Civil Defense personnel of the materials inside the storage areas and the extent of their danger, because this will save their lives and the lives of others where there is a fire. The said information must be displayed in inside each storage area.

3-18

Those in charge of pesticide storage areas must be trained on safety, firefighting, rescue, and first-aid in cooperation with the Ministry of Health, safety schools, and private sector training centers. Gas masks, shoes and gloves must be provided for at least two persons permanently and outside the warehouse so that they can be easily accessed.

3-19

A register of the inventory of the warehouse must be kept indicating the date of validity of the existing pesticides, their use and the place of their use, to be used and submitted at the request of the pertinent authority.

3-20

The pesticide storage area and its contents must be inspected regularly in order to dispose of damaged containers and materials as soon as possible and as per proper methods.

3-21

A special room for mixing and preparing pesticides must be set up and be adjacent to the storage room. Its floor tiles must be resistant to chemicals and its two-meter-high walls must be covered with white Qashani tiles and must have a wash basin connected to a drainage tank made of concrete to prevent the leakage of pesticide residues into the groundwater.

(Precautions to be followed when using pesticides)

3-22

People living in neighboring areas must be warned when pesticides are sprayed, especially those who have apiaries to take the necessary precautions.

3-23

Care must be taken to ensure that there are no persons, children or pets when pesticides are sprayed in a place .

3-24

The recommended protective clothing and masks must be worn during the mixing and spraying process. Care must be exercised to prevent skin, eyes, and mouth from being exposed to pesticides and avoid inhaling the pesticide fumes or dust .

3-25

You must not work alone when using pesticides having a label that says (toxic or dangerous). Someone alongside the spraying operator must be present to monitor and provide assistance if necessary.

3-26

It is prohibited to eat, drink or smoke while using a pesticide.

27-3

Weather must be suitable for spraying while spraying must be stopped during a strong or sudden wind, taking into account that pesticides must be sprayed in the case of low winds towards the direction of the wind to avoid danger of pesticides .

28-3

Unused pesticides must be returned to the original storage area as they were in the past before use. All clothes, protective clothing, hands and face must be washed well with soap and water. It is preferable to take a shower after spraying. When weather is hot it is preferable to spray pesticides in the early morning or evening when it is moderately hot. The plant must be in a state of dryness .

29-3

It is prohibited to enter a pesticide-treated land. It is also strictly prohibited to feed humans or animals from plants treated with pesticides before the end of the "dangerous" prohibition period, which is necessary for the elimination of their harmful effects, in accordance with the instructions for the use of pesticides .

30-3

Care must be taken not to overuse pesticides in farms, and to adjust the percentage of use by specialists in order not to lead to adverse results. Packages must always be emptied of any residues when carrying out the necessary dilutions for spraying .

3-31

Precautionary measures must be taken when using and storing methyl bromide gas when using it as a pesticide, especially to eliminate nematodes, because it is a very toxic gas if inhaled during the spraying process. It must not be stored in large quantities, but rather for the necessary quantities, provided that it is stored under the supervision of the safety official .

3-32

The use of nematicides must be replaced by safe methods such as steam pressure sterilization .

(Getting rid of excess pesticides and their empty containers)

A- Disposal of excess pesticides

3-33

Backfilled pits can be used if the quantities to be disposed of are small to medium, because it is an easy and low-cost method and does not expose the farmer to hazards, provided that these quantities are determined by the Ministry of Agriculture and Water's specialist.

The appropriate site for backfilled pit digging must be chosen taking into account the following :

- 1- Digging the pit in a flat, not-so-low site that is at least 160 meters away from any source of water (stream - dam - well) and on flat ground, on the condition that there is no risk of liquid flow and the site is not highly likely to have the potential for erosion.
- 2- The site is in a place where the pit does not fill with water, and thus its contents overflow or wash away by the flood waters.
- 3- Avoid the site where there is surface groundwater.
- 4- The pit must be far from homes, crops, or animal pens, and in a place that is not used for any other purpose after that.

5- The pit must have an engineering design of reinforced concrete, so that it is strictly prohibited to allow these materials to penetrate into the groundwater that may be close to the surface of the earth.

6- The backfilled pit must be exposed to sunlight and not be used for any other purpose.

7- A fence must surround the pit to prevent children and animals from entering, with warning signs placed around the pit indicating the danger of this site and cautioning not to approach it.

8- Civil Defense and other relevant authorities must be notified of the date of the process of disposing of excess pesticides in advance to send their representatives to supervise and take the necessary precautions.

(Elimination of residues of organic phosphorous pesticides and pyrethroids)

3-34

1- The residues of these accumulated compounds must be disposed of in pits of not less than (half a meter deep) in which a quantity of slaked lime (calcium hydroxide) equal in weight to the quantity of the pesticide must be dumped. The pesticide is distributed over it evenly then it is covered with a layer of dissolvable residues on top of it a layer of soil. Distance from water sources must be maintained, as mentioned in Clause (3-33, Section 1.)

2- In the event that there are quantities of the pesticide leaked from a perforated or crushed container, it must be handled carefully with the original package to transfer it cautiously to an empty package of the same type of compound or to be used quickly, if necessary. As for the scattered, spilled quantities of a dry pesticide, it is covered with a double layer of slaked lime, provided that it is not wet. Sawdust or a little soil can be used, provided that it is thoroughly scrubbed with the pesticide using a broom or something similar, then the amount is swept and burned with the broom used in scrubbing. The area, from which the pesticide is removed, will be recovered with a layer of caustic soda that lasts all night long, then it is washed well with water, and dried with sawdust, which is burned afterwards.

B- (Disposal of empty packages)

3-35

It is strictly prohibited to throw (dispose of) empty containers into oases, ponds or water channels.

3-36

The empty packages and containers of pesticides are generally disposed of as follows :

A) Non-combustible containers:

1) Glass bottles are smashed and buried in a pit as per the conditions set forth in Article (3-33).

2- The containers and other packages are perforated or destroyed so that they are not suitable for any other use and then buried as shown in Article No. (3-3).

3- Metal containers with a capacity of 20-55 gallons (75-210 liters) can be returned after washing to the exporting company if necessary, or they are destroyed and disposed of in backfilled pits as per Article (33-3).

B) Containers and combustible containers:

These could be plastic and must be washed first, or they could be made of cardboard, wood, burlap, lined paper and the like. They are all disposed of by burning unless there is a warning from the production company. It is prohibited to burn packages that originally contain chlorate compounds or materials that convert heat to toxic gases. As for the materials permitted to be burned, it is taken into consideration that the burning process takes place in the absence of an active wind and that there are no people or animals in the direction of the wind and the rising smoke. The site must have fire extinguishing equipment and water sources that easily pump water .

3-37

It is strictly prohibited to use empty pesticide containers for any other purpose, especially for water or food.

(Chemical fertilizers : “ storage - use – disposal ”)

3-38

A separate room that meets the previous requirements must be devoted to storing and preserving chemical fertilizers, and must be located far from the places where pesticides are stored .

3-39

The preceding preventive conditions mentioned in clause (3) must be applied to chemical fertilizers, whether when storing, using, or disposing of packages.

(Dealing with empty containers for organophosphorous compounds)

3-40

A) The containers must be washed from the outside with water that has been added to it with an industrial detergent.

B) These containers must be washed from the inside after removing any residues inside them. These residues are collected in one container, and the washing water is disposed of in a pit as per the conditions set forth in Article (3-3).

3-41

Adequate security precautions must be taken to store and use chemical fertilizers of all kinds to ensure that they are not tampered with or exposed to poor storage .

3-42

When storing nitrate fertilizers (which contain nitrates in particular, such as ammonia nitrate), the maximum number of bags to be stacked on each other must be seven and not more than that. The bags must be protected against high temperature because they are explosive.

Fourth : Storage of forest products

4-1

The wood storage yards must have fire extinguishing means while storage buildings must meet all safety requirements as per the regulations and instructions of the Civil Defense.

4-2

Insulating fire areas must be provided as passages between the stored wood piles. They can be used as a pathway for firefighters to help speed up firefighting process .

3-4

Wood storage yards must be located far from buildings and other open properties at least 50 meters .

4-4

Distances between paths or roads must be organized so that there is a network of roads with dimensions not exceeding 15 x 30 meters .

4-5

The width of the roads in the outdoor yards for storing wood must not be less than (5) meters minimum .

4-6

The height of the timber stored outside should not exceed (3) meters.

4-7

The sawn timber must be stacked under a canopy so that it is not exposed to direct sunlight. The stack must be lifted from the surface of the ground and the different layers must be separated by a long stick to facilitate the process of ventilation, thus helping dry the wood without causing any damage or infecting it with harmful pests .

4-8

To provide basic protection for wood storage yards from fire, a fire hydrant capable of supplying four hoses measuring (3.6) cm (approximately 5.2 inches) with water at one time (4000 liters per minute) must be installed. Exact specifications and determining the number of taps suitable for the site as per its area and the size of the stored materials. Fire taps must have operating tools, hoses and water canons as the requirements of the Civil Defense .

4-9

An adequate water source must be provided with suitable pressure machines to feed the fire hydrant network.

Fifth: storing agricultural crops .

5-1

All instructions and requirements for storing and preserving agricultural products issued by the Ministry of Agriculture and Water and its branches, or by the Civil Defense or by other relevant authorities must be implemented to ensure the safety of these products and prevent spoilage and pollution without prejudice to what was stipulated in the Saudi standard specifications related to the storage and preservation of agricultural food.

5-2

With regard to grains (such as wheat, barley, corn, rice and soybeans) and other grains and seeds, they must be stored in warehouses or silos designed for this purpose in accordance with the Saudi standard specifications and under supervision and knowledge of specialized technical authorities.

5-3

(Electrical Safety Instructions)

All electrical installations and equipment must be of safe types that are protected against thermal radiation or humidity, and be in conformity with the technical specifications issued by the Saudi Standards, Metrology and Quality Organization (SASO), especially the Saudi standard relating to “electrical installations in agricultural and horticultural real estate”. Necessary periodic maintenance must be carried out under supervision and knowledge of specialized technicians to correct any defect in a timely manner while taking necessary safety precautions for transformers and generators in accordance with the instructions of the Ministry of Industry and Electricity and the relevant electricity companies and the Saudi standard specifications issued in this regard .

5-4

(Instructions related to industrial safety)

Workers of grain and flour of silos and warehouses must observe the following :

- 1- Full knowledge of the risks that may result from the machines that may occur to the department and how to deal with them

- 2- Follow the safety instructions set by the administration and how to act in emergency situations
- 3- Wearing protective clothing and gear for work
- 4- Avoid actions that may cause sparks or overheating
- 5- Adequate knowledge of safety and fire equipment, fire extinguishers, their quality, how to use them, and methods of immediate intervention in case of fires and other accidents.

5-5

(Instructions related to industrial machinery)

- 1) Moving mechanical devices must be protected against penetration of dust
- 2) Machines must be lubricated to prevent thermal friction
- 3) The grain conveyance channels shall have holes in them to monitor and observe their workflow
- 4) Lifting and conveying belts must be equipped with devices that allow immediate fire detection
- 5) A maintenance card must be prepared for each machine specifying its quality, the dangers that may result from it, the maintenance to be performed, and the person assigned to do so.
- 6) In trucks transporting grain from the harvest places to the warehouses, it must be taken into consideration that the exhaust pipe must be upward and equipped with anti-sparks devices to avoid the occurrence of fires .

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Smoking is strictly prohibited in warehouses and silos, sources of ignition or sparks are also prohibited. Warning signs in Arabic and English any other language must be displayed in visible places .

5-7

Cleanliness of the sites must be considered as well as the removal of all garbage and debris. Fire causes must be eliminated permanently .

5-8

(Firefighting methods)

Grain warehouses and silos must have the following :

1- It is necessary to establish an extinguishing network that feeds from a suitable source of water (a water tank or more tanks) equipped with machines (motors) suitable to pump water to the fire hydrants at the appropriate pressure. A sufficient number of fire taps must be installed on the network and provided with hoses, water canons , switches, and all the tools necessary to operate them.

2- The site must be provided with the appropriate number and quantity of manual fire extinguishers to be used as a frontline defense if a fire breaks out, God forbid.

3- The site must have an automatic alarm system, and the operating, machinery and places of danger must also be provided with an automatic extinguishing system, as the Civil Defense Department may deem fit.

5-9

The warehouse must have a telephone to quickly call the firefighting team and emergency services. Signs showing contact number of Civil Defense and Emergency must be set up. The respective employees must be aware of these numbers .

Sixth : Conditions for storing flammable liquids

6

1- This section applies to storing flammable liquids whose flash point is less than (93) degrees Celsius in farms or agricultural areas. These instructions do not apply to the storage, handling and use of petroleum tanks associated with devices running on liquid fuel or storing (95) liters or less than (95) liters or less than flammable and combustible liquids in containers whose capacity does not exceed (18) liters. This must be performed in line with the safety instructions described in the regulations of petroleum stations, washing and lubricating stations, issued by the Ministry of Municipal and Rural Affairs, as well as the safety instructions described in the regulations of safety conditions for fuel sale and distribution stations issued by the Civil Defense.

2- It is permitted to store flammable liquids as per the regulations and instructions of the Civil Defense and the relevant authorities.

Seventh : Prevention of forest and plant fires

7-1

Barriers for stopping and isolating fire must be set up to prevent spread of fire. Trees, weeds and any inflammable materials must be removed from the pathway at a distance of not less than (ten) meters or a width of (one and a half times) the height of the tallest full-grown tree in the forest or farm .

In the harvest season, the barriers must be made by the harvesting machine during the harvesting process, taking into account that the beginning of the harvest must be on the side opposite to the direction of the wind .

7-2

With regard to fire barriers located between farms owned by different owners, the width of the barrier must not be less than ten meters, so that the owner of each farm leaves five meters on the sides of his farm .

7-3

The area of the forest or farm must not exceed (16) hectares without being permeated with the fire barriers mentioned in Articles (1-7) and (7-2).

7-4

Provide fire beaters in farms at each 500 meters along the fire barriers. Each group must have 10 fire beaters at least.

5-7

Put up instructional signs every (500) meters along the fire barriers, especially in sloping forests and areas of forests with highly flammable trees, where there are signs saying (Danger! Do not start a fire in this area) (Do not throw burning cigarettes in the wood area). The signs must be in both Arabic and English and must have pictures expressing these warnings in writing .

6-7

Owners of forests and farms must ensure that waste is removed from their lands at all times, especially packages that contain remnants of combustible materials as well as highly inflammable waste such as: papers, wood and plastic materials .

7-7

It is prohibited to burn crop waste and residues in forest and farm areas. They must be transferred to a safe area to be burned, except for harvest residues where the necessary precautions for burning must be taken after consulting the Civil Defense and after fulfilling the conditions set forth in Article (2) of these regulations.

7-8

It is prohibited to throw litter in close proximity to farm trees and forests.

7-9

The owners of farms must open roads between their farms so that firefighters and Civil Defense and emergency equipment can reach any part of the farm in the event of an accident, God forbid .

7-10

The owners of farms must fence their farms with blocks or iron grid. It is prohibited to fence farms with any inflammable barriers such as palm fronds and others .

7-11

In the event there are multiple owners of a farm or the farm is rented, the person in charge of the farm or its tenant must be directly responsible to the Civil Defense for the implementation of safety requirements and for any violations that occur on the farm .

7-12

Some measures are taken on the long run to reduce the risk of forest fires and ensure the speed of handling these fires and prevent their spread according to the following:

- 1 - In case of re-afforestation, tree species must be carefully selected and trees that are less prone to fire must be planted.
- 2- Remove dry weeds and weeds periodically and regularly.
- 3- Establish a network of roads that leads to various parts of the forest and create emergency water tanks which helicopters can use to douse a fire.
- 4- Run patrols on the ground, or monitor the case from watch towers, or from the air.

5- That the civil defense provide foot and passenger safety patrols equipped with the necessary equipment and devices to fight fire.

7-13

In order to protect farmers' lives and protect their properties, coordination and cooperation must be made with all the following authorities that contribute to extinguishing farm fires, namely:

- 1- Civil defense teams and centers and emergency departments.
- 2- Volunteers from neighboring cities and villages.
- 3- Nearby military sectors in case the fire is not under control.
- 4- Military aircraft equipped with water tanks in addition to Civil Defense helicopters.
- 5- Police forces to organize traffic movement and protect deserted property.

7-14

The weeds and trees are removed along the aerial cable lines (high -voltage electricity) that pass through the forest lands with a width of 25 meters on both sides of the cable boundaries.

Eighth : Safety conditions for water wells

8-1

Safety precautions must be taken as per the following :

General precautions for old and new wells :

- 1- The abandoned old wells must be backfilled in a proper manner in line with the specifications of the Ministry of Agriculture and Water.
- 2- Caution must be taken to ensure that water wells or their wellheads do not collapse by using wells side support systems, provided that the design must be implemented by a specialized technical authority.
- 3- Adequate barriers are required around the wellhead from falling and to reduce the potential for water pollution
- 4- Take into account that the ground surface around the wellhead is higher than the areas adjacent to it.

5- The Ministry of Agriculture and Water must examine a sample of water before using it for human or agricultural consumption to ensure that it is free from biological, chemical or radiological contamination.

8-2

Precautions to consider before drilling wells :

- 1) A license to dig a well must be obtained from the Ministry of Agriculture and Water.
- 2- The operation must be carried out by a specialized technical authority after carrying out the necessary designs and tests.
- 3- Before starting drilling the water well, it is necessary to ensure that the underground drilling area is clear of sewage pipes, telephone cables, electricity or any other obstructions.
- 4- In the event that explosives are used in excavation works, the necessary permits must be obtained from the Public Security Authority and other relevant authorities.

8-3

The following precautions must be considered when starting to drill wells:

- 1 - When drilling a water well or helping someone go down to the bottom, it is necessary to use a device for measuring oxygen and asphyxiating gases.
- 2- Wearing protective clothing for the body and a helmet during the drilling process.
- 3- Exercise care, caution, and full attention during the drilling process.
- 4- Designing the drilling rigs in a way that does not cause hazards to workers while using drilling machines .

8-4

A) The following measures must be taken when someone goes down a well, namely :

- 1- A vest and seat belt must be tightened around and attached to it.
- 2- Two ropes must be used and tied around a person and must be strong and tight to bear the weight.

3- One of the two ropes is used to help the person descend while the other is used to receive the signals coming from him and sent to him. It is preferable to use a wireless device between the two persons.

B) The safety signals for the second rope are as follows:

- Violent pulls on the safety rope made by the person down the well mean (pull me up quickly).
- Violent pulls from the person on the top to the person down the well mean "there is danger and we will pull you up quickly."
- One strong pull means (lift me slowly).
- Two consecutive pulls mean (Get me down slowly).
- Three pulls from the surface to the person down the well mean (Are you ok?).
- Three pulls from the person down the well mean (I am ok).

C) Contact the General Directorate of Civil Defense and other relevant authorities to take their advice when discovering the presence of gases or lack of oxygen . No person is allowed to approach the well, and the drilling work must be stopped.

Ninth : Safety precautions when using agricultural machinery and tractors

9

The following precautions must be taken:

- 1- The age of the operator of tractors and agricultural machinery must not be less than (18) years.
- 2- The operator of tractors and agricultural machinery must have a license from a competent authority.
- 3- Pay attention to the warning signs on the machinery and adhere to them.
- 4- Ensure that the place around the engine, the battery and electrical connections is clean from residues, waste, dry crop residues, excess grease and combustible materials.
- 5- Ensure that all maintenance is carried out in accordance with the operating manuals of tractors and agricultural machinery.

- 6- Make sure to stop the engine and refrain from smoking while filling up fuel.
- 7- Provide two extinguishing devices, one of which is carbon dioxide while the other is a dry powder.
- 8- Transfer the threshing machines and equipment, upon their end of operation, to a suitable place for storage.
- 9- Provide safety and security equipment to the workers in the repair shop.
- 10- Before operating, it must be ensured that there are no personnel in front or behind the tractor.
- 11- It is not permitted for an individual to sit next to the operator.
- 12- Do not drive the tractor at a speed higher than (20) km per hour.
- 13- Do not remove the safety cover of the tractor's moving parts.
- 14- Take into account that there might be weights in front when using plows or heavy agricultural equipment.
- 15- The operator of the mobile agricultural machinery must wear a costume suitable for work instead of normal clothes.
16. Avoid standing between the tractor and the machine in case of engagement or disengagement.
- 17 The power must be switched off and the motor must be stopped before performing any maintenance to the pivotal irrigation machine.
- 18- It must be ensured that the ground wire is properly connected at the base of the sprinkler device.
- 19- Children must be prevented from approaching or climbing the pivotal irrigation machine.
- 20) Be careful not to open the radiator cover of the machine while it is hot so as not to cause harm to the person near it.
- 21- Ensure that the brake pedal is a single unit for use when traveling on public roads.
- 22- Traffic rules must be adhered to while operating agricultural equipment on public roads.

Tenth : Safety precautions for livestock pens and their waste

10

Livestock pens are set up far from warehouses and other agricultural machinery and equipment, and must be designed so that they prevent the escape of animals and do not pose a danger to people, taking into account the following safety conditions:

- 1- Notify the concerned authorities (the nearest branch of the Ministry of Agriculture and Water in the region) in case of any infectious and epidemic animal disease or common diseases.
- 2- Use pesticides periodically and regularly to combat insects that transmit animal diseases.
- 3- Isolate sick animals from the rest of the herd in designated isolation places.
- 4- Do not allow sick animals to drink from basins from which healthy animals drink.
- 5- Notify the concerned authorities (the nearest branch of the Ministry of Agriculture and Water in the region) in the event of any outbreak of animal diseases, especially common diseases.
- 6- Use pesticides periodically and regularly to combat insects that transmit animal diseases.
- 7- Isolate sick animals from the rest of the herd in designated isolation places.
- 8- Do not allow sick animals to drink from basins from which healthy animals drink. Wash the drinking basins regularly each week.
- 9- Do not throw animal carcasses near farms or residential and animal areas and roads.
- 10- Burn or bury animal carcasses but do not drag their carcasses on the ground. It is necessary to block their external openings with cotton and spray strong disinfectant solutions. The carcasses must be transported on a cart which must be disinfected after transportation.
- 11- Do not slaughter animals except in slaughterhouses designated for this purpose, where veterinarians supervise them to determine whether they are suitable for human consumption.

12- Dry animal waste and periodically inspect the floors of the barns to ensure they are exposed to sunlight and transfer the waste to pits while it is transported outside the farm.

13- Spray animal waste with disinfectants and insecticides to prevent the spread of insects that transmit pathogens. The water resulting from washing must be drained to the sewage on the southern side of the farm to take advantage of the wind factor in removing the unpleasant odors emanating from that waste.

14- Cover trucks designated for transporting dung to prevent it from being spreading in the air during transportation.

15- Visitors and children are prohibited from approaching animals, especially raging, dangerous and sick animals.

Eleventh : Safety precautions for poultry pens

11

1. Poultry pens must be separated from the rest of the farm.

2. Adequate safety precautions must be taken regarding heating of pens, whether they operate with electricity, liquid fuel or gas, as per the following:

a) Heating devices and means, as well as all the connections and extensions and switches must be safe and approved by the Saudi Standards, Metrology and Quality Organization (SASO).

b) All heating devices must have circuit breakers, safety valves and the necessary alarms. Gas-operated heating devices must have an automatic gas cutting device when the flame goes out.

c) The ventilation of the barns must be good quality to ensure that no harmful, flammable or explosive gases or vapors are formed.

d) Heating devices must have labels showing instructions for use and maintenance.

e) It is prohibited to smoke or set a fire inside pens.

Twelfth : Firefighting means and equipment

Without prejudice to what is stated in Clause 4 (Articles 4-8, 4-9) and what is stated in Clause 5 (Article 5-8), the following conditions must be implemented :

- 1- Any agricultural establishment must have a special water tank for extinguishing purposes suitable for its size and purposes, provided that it is always filled with water.
- 2- An extinguishing network must be installed from fire hydrants or movable hose reels, and the network must have a machine or machines to compress water.
- 3- The site has manual fire extinguishers appropriate to the type of fire.
- 4- The authorities responsible for the site must notify the competent Civil Defense Department to determine the appropriate firefighting equipment after inspecting the site on the spot.

The following must be observed :

- 1- It is important to declare a state of emergency.
- 2- Evacuate the building or place where the fire broke out.
- 3- Limit the fire and separate the electric current and gas.
- 4- Notify the nearest Civil Defense Center of the occurrence of the fire and the most important information about the location and nature of the fire and the materials stored in it, etc.
- 5- Use appropriate extinguishing devices for the type of fire (until the arrival of the firefighting squad).
- 6- A first-aid kit must be provided and have materials and supplies for first-aid treatment of wounds, minor burns, poisoning, and insect bites, as well as gauze bands, plasters, eyewash solutions, some antidotes, and other first-aid materials and equipment. A leaflet must be placed inside the kit explaining how first-aid is administered.