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THE IMPACT OF ENVIRONMENTAL POLLUTION ON THE ENVIRONMENTAL OF FARM ANIMALS

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Abstract:
The study showed that the Iraqi environment is one of the most dangerous environments due to poor central planning, unbalanced population growth, the leakage of polluting materials such as fuel, liquid sulfur, and concentrated acids from industrial facilities, the disruption of electrical energy sources, and the destruction that befell oil refineries as a result of wars and the cessation of work, in addition to the great neglect of the issue of waste collection and recycling. And so on. Therefore, it is necessary to carry out some treatments, including providing adequate lighting. Natural light facilitates vision, encourages work, and helps kill microbes. It also ensures the safety of the roof, walls, and floor of the barns, as it is necessary that the walls be sound and free of cracks and openings that harbor insects. The roof should be made of heat-insulating materials and the floor should be easy to clean. It is also very necessary for this barn to receive the largest amount of warmth from the sun's rays, in addition to protecting the barn from extremely cold winds in the winter, especially. Choose a typical location for the barn so that it is far from areas Residential barns should be separated from each other to prevent the spread of diseases and epidemics. They should also be built from the side that allows sunlight to enter the interior to provide light in addition to warmth. Barns should be built in a way that opposes the gusts of wind, and it is preferable to create windbreaks, especially in the case of choosing an open barn. They should be The process of storing fodder properly, away from damp places, to prevent it from rotting, in addition to ensuring that the places are clean and not exposed to dirt, such as animal waste itself**.**

Key words: microbes, warmth and animal.

Introduction:

Research stations and animal husbandry fields are clearly and significantly affected by the surrounding environment to a large extent, for reasons related to the surroundings themselves firstly, to their assets secondly, and to the environment affected by polluted additives thirdly. Some or most of the wings of the station are exposed, and since the health and disposal of the assets' outputs are not managed 100%, the polluting additives will come to play an influential role. On these two pillars, leading to damage to the assets, whether they are animals or plants, especially animals, whether they are ruminants, fish or birds, these pollutants split to come from several fronts, namely water, air, food, and livestock, and in varying concentrations and quantities following the source coming from them. Water pollution includes the most important physical, chemical or chemical changes. Biological diseases that occur in the water lead to a change in the quality and cause damage to the environment, public health, and the aesthetic qualities of the water, making it a colony of many microorganisms. Al-Karmaki 2010 confirmed that water pollution occurs as a result of the use of water tanks in the oceans. The water is unclean and the lack of sanitation services. There are some intestinal diseases, malaria, and malaria. Cholera typhoid poisoning Hepatitis vasculitis.

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As for food contamination, it is considered one of the most important damages to the assets of agricultural stations. The most important of these pathogens transmitted through this pollution are fungi, especially the two types of algae-like fungi, the capsid fungi, the imperfect fungi, and the basidiomycetes. Al-Musleh 1990. On the other hand, many solid, liquid, and gaseous materials are transmitted through The air, in quantities that lead to physiological, economic, and vital damage to humans, animals, or plants, Al-Kayed 2011. The soil is home to many organisms that pose a real threat to the research stations, which negatively affects the assets of the research stations, which reflects negatively on their assets represented by cows, birds, and fish. The most important of these organisms is the earthworm. In addition, burrowing animals.

The first topic

- Environmental PollutionSecond: Environmental pollution:

Pollution in its concept is everything that affects all elements of the environment, including plants, animals, and humans, as well as everything that affects the composition of non-living natural elements such as air, soil, seas, lakes, and others. The concept of environmental pollution varies among environmental specialists, some of whom define it as every quantitative or qualitative change in the living and non-living components of the environment that ecosystems cannot absorb without disturbing their balance.

On the other hand, it is defined as the presence of a species at a concentration higher than the concentration permitted by local and global environmental standards, which causes harm.

As for climate scientists, they have shown that the scientific concept of environmental pollution is linked primarily to the ecological system, as the adequacy of this system decreases greatly and becomes completely paralyzed when there is a change in the harmonic movement between the various elements. The quantitative or qualitative change that occurs in the elements of this system leads to a defect in this system. the system(1).

Or it may also be known as every quantitative or qualitative change in the components of the Earth in the chemical, physical or biological characteristics of the environmental elements. This means that every change exceeds the Earth's absorption capacity and results in damage to the life of living and non-living organisms (2).

The concept of environmental pollution in its broad and comprehensive sense means the presence of gaseous, solid, or liquid impurities in the environment (air, water, and soil) in concentrations that remain there for sufficient periods of time to cause harm to human health or property, or to animals or plants, or to interfere to affect a person's practice of his normal life. (3).

Because environmental pollution has a major impact on the life of every living being living on Earth, the problem of environmental pollution has emerged and begun to receive a large share of the attention of countries and international organizations since the second half of the last century, when the Stockholm Conference was held in 1972. This conference is considered an important basis for addressing the phenomenon of pollution. One of the most important outcomes of the conference is preventing and mitigating environmental pollution, preventing severe damage, and setting standards for environmental protection. The motivation behind choosing the research topic was because the Iraqi environment is currently considered one of the most dangerous polluted environments. The Iraqi environment is currently facing an environmental problem that has a severe impact on various types of

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life, and whose impact will not be limited to the current generation of Iraqis, but rather to future generations. Manifestations of pollution are widespread in every aspect of life. Aspects of Iraqi life, the Iraqi environment is due to poor central planning, unbalanced population growth, the leakage of polluting materials such as fuel, liquid sulfur, and concentrated acids from industrial facilities, the disruption of electrical power sources, and the destruction that befell oil refineries as a result of wars and the cessation of work, in addition to the great neglect of the issue of waste collection and recycling, and so on.

Study of pollutants affecting animal parts

Farm animal breeding stations were established as a necessary step to support projects related to the development of livestock in all countries. These stations developed from their simple, primitive form in poor countries to a more advanced form and organization in Western and developed countries to contain centers for work associated with reproduction between herds of domesticated animals, the method of their management, and the units attached to them. Specialized in collecting purebred animals, conducting laboratory analyzes and conducting research related to these stations. Research stations specializing in animal husbandry are built on a model basis through which the center or department increases the rate of production in all dimensions and horizontality. This requires special designs subject to an artistic style that is considered one of the conditions for establishing pens and animal husbandry stations. .

The following is a presentation of the most important pollutants to which breeding stations are exposed

First: climatic elements

Climatic factors are among the most influential non-living physical factors in the ecosystem through their influence on the spread and distribution of plant and animal organisms. They also affect the formation of the Earth's surface, the nature of plant and animal cover, and the distribution of populations and their various activities. Among the climatic elements that affect this are temperature, rain, relative humidity, and wind. The temperature varies from one place to another on the surface of the Earth, depending on the geographical and astronomical location of this place, and according to the amount of sunlight it receives. Usually, the amount of solar radiation reaching the surface of the Earth decreases. It is also known as the direction from the equator towards the poles, north and south, and also varies according to the distribution of terrain that is consistent with longitude lines (climatic non-uniformity). Sunlight and temperature differences also affect the change in the temperature of the global oceans, the movement of winds, and the values of atmospheric pressure, and are reflected in one way or another on weather and climate conditions. All of these factors affect the distribution of plants and animals on the surface of the Earth, and affect the processes of Photosynthesis and the degree of transpiration, evaporation, etc. (4).

Temperature directly affects the growth of animals, their functional and physiological performance, their comfort, and then their production, in varying proportions and according to the type of animal. Sheep, goats, and camels are less susceptible to the negative effects of temperature, both high and low, as they are primarily pastoral animals compared to cows and buffalo, which come first in terms of milk production. And its derivatives, as the quality of milk production is more affected than others by the changes that occur in temperature, especially since these animals try to gain heat through several means, including metabolic activities resulting from vital activities necessary for the animal's life, such as the

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circulatory, respiratory, and digestive systems, and movements resulting from the muscular system, as well as operations. Related to growth and milk production, but it is unable to lower its temperature resulting from previous activities, which causes diseases as a result of fungi and insects that are active in hot weather conditions (5).

Therefore, the rise and fall in temperatures causes the emergence of many viral, bacterial, and parasitic diseases, such as infectious abortion, tick infestation, and three-day fever, which appear in the summer and gradually decrease in the winter, while other diseases appear in the winter, such as respiratory infections, mastitis, smallpox, and scabies diseases. Which appears less frequently in the summer.

A warm environment with high humidity and temperature in general is an undesirable environment and is characterized by many bad characteristics, including:

1. It is a suitable environment for the growth and reproduction of microorganisms, including germs, bacteria and microbes, and thus it is a source of pollution to the environment and the organisms that live in it.
2. It is a suitable environment for the growth of insects, other organisms, and internal and external parasites, especially in animals that live in open places and pens.
3. These conditions create a suitable environment above the skin for the growth of bacteria, fungi, and external parasites, and an increase in ulcers, wounds, boils, and external secretions.

High humidity and hot, humid weather greatly affect animals, especially if the animals are confined and placed in places and pens with high humidity as a result of poor ventilation and in confined places exposed to heat and humidity. The natural atmosphere also contains water vapor such that its percentage does not exceed and reaches the volume of air. About 4%, and the amount of water vapor the air contains is called atmospheric humidity.

Second: air pollution

Air pollution is defined as (the direct or indirect introduction of any substance into the atmosphere in such a quantity that affects the quality and composition of the external atmosphere that it results in harmful effects on humans, the environment, ecosystems, natural resources, or places that benefit from the environment).

Air pollution is considered one of the most dangerous types of pollution. It is one of the dangerous problems facing humans and threatening their lives. If it is possible to repair the soil after it has been polluted and treat polluted water, it is not possible to live (3) minutes in polluted air, and there is no easy way to purify it without obstructing human movement. And its daily work, polluted air is the air that contains in its components a substance in greater concentration because it leaves harmful effects on the health of humans, animals or plants (6).

What is meant by air pollution is changing the proportions of the natural components of the air by increasing or decreasing, and there is a qualitative change in the components of the air. It is considered air pollution, which is the entry of foreign substances into the air that were not present in the natural components.

The differences that occur in the main components, whether increase or decrease, or the addition of new components through various human activities such as industry and means of transportation, or from natural sources such as fires, volcanoes, sand and dust storms, as these activities, in addition to industrial sources, work on air pollution and increase levels of sulfur dioxide and sulfur dioxide. Carbon oxide

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and nitrogen dioxide, which is an irritating substance to the human respiratory system and causes narrowing of the airways when breathing in high concentrations. People with asthma are clearly more sensitive than normal people (7), and all of these gases cause irritation of the respiratory membranes, through which they are deposited inside the lung and cause diseases. Respiratory system.

Table (1)

The health damage that can be caused to human health when exposed to these pollutants

Pollutants	Harm
Sulfur oxides and nitrogen oxides	**- lung diseases.**
Suspended particles	**- Causing harm to animals and plants.**
Carbon monoxide	**- It corrodes materials used in buildings.**
Lead	**- Causes respiratory diseases.**
Smog	**- Affects the nervous system.**

Source: Sultan Al-Rifai, Environmental Pollution (Causes, Dangers, Solutions), Osama Publishing House, Amman, Jordan, 2008, p. 94.

Third: water pollution

Water pollution occurs either through agricultural soil contaminated with large quantities of accumulated pesticides, and this depends on the size of the agricultural land, the type of soil, and the type of pesticide. The factor also helps is the erosion of contaminated soil with irrigation and rain water, and results in the discharge of sanitary, industrial, and agricultural waste water directly into rivers and lakes, which may be Pesticide treatment is used to control water pests. Rainwater also carries pollutants that are present in the air. It has also been noted that groundwater, septic tank water, and irrigation water are also exposed to pollutants. Humans are one of the most important sources of water pollution through their behaviors, activities, and metabolic products, which are usually combined with many microscopic and pathogenic organisms that Once it reaches the water sources, it will contaminate it, or it may result from the waste of the factories he built, which generate liquid and solid organic and inorganic chemicals that may reach the water in various ways, not to mention his use of chemical fertilizers and pesticides, which will also reach the water sources and pose a threat to public health (8).

Water resources in Iraq, of all kinds, suffer from pollution from various sources. This problem has two causes and has two aspects: (the quantitative aspect), meaning scarcity and paucity, and (the qualitative aspect). Pollution of the quantitative aspect of water, which means that the amount of fresh, liquid water reaching Iraq suitable for human use has begun to decrease. Year after year, under the control of upstream countries, which increases the risk of water pollution in Iraq. As for the qualitative aspect, it results from human misuse of water and the throwing of industrial, agricultural and domestic waste into it. Therefore, man here is responsible for the problem of water pollution in both its qualitative and quantitative aspects, and what exacerbates the problem of water pollution is the drought (cycles) that occur periodically, with repeated years, in Iraq, which causes a lack of surface resources, which leads to an increase in the concentrations of pollutants in it (9).

The sources of pollutants that seep into the water are from sewage networks in cities, as well as from various factories, mines, and mining centers, as well as agricultural lands that use chemical fertilizers and pesticides, and from sewers, irrigation networks, and dead animals.

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Table (2)

Explains the World Health Organization standards for drinking water

Subject	Its ratio
the color	nothing
Taste and smell	nothing
Total dissolved inorganic substances	500 mg/L
pH	Not less than 0.6 and not more than 8.5
Total dissolved organic matter	-Andrin does not exceed 1 mg/l
Turbidity	- Aldrin does not exceed 17 mg/l
Dangerous toxins	- Ddrin is not more than 17 mg/L
Subject	- DDT not more than 42 mg/L

Fourth: Food and soil pollution

It is the result of the accumulation of pesticide residues used in agricultural soil for varying periods of time, such as pesticide (TDD), which gradually accumulates in the content of the plant material grown within this land. On the other hand, in addition to this is the contamination of milk and its products, successively, through livestock eating alfalfa and jet treated with pesticides, and foods are also contaminated in a way. Directly with chemical fertilizers that contain impurities such as cadmium, copper, iron and lead.

Also, the spread of particulate matter in the air may settle in the leaves, stems and fruits of cultivated plants, especially on the side of the road or near industrial areas and areas of traffic congestion.

Table No. (3)

It explains the effect of reclaiming damaged, highly acidic mine lands on the two processes of metastasis and reverse metastasis and on the numbers of nitrate-reducing bacteria.

Damaged mine land	pH	Mineralized (microgram - kg - hour) N		Measures (opposite of tast)	
Location of bare protuberances		**nitrate**	**Ammonium**	**MPN\g DEAµg\kg\h**	
Not improved	**3.8**			**3**	**5**
Improved	**6.8**	**3**	**21**	**180**	**11**
Location (Osage)		**38**	**38**		
Not improved	**2.7**			**6**	**11**
Improved	**5.2**	**8**	**33**	**980**	**68**

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Table No. (4):It shows the number and density of the biomass of animals and microorganisms in the surface horizons of the land

Objects	preparation		Biomass density As volume/ha
Soil animals	**per gram**	**per m3**	
Earthworms	**1**	**200- 2000**	**110 -1100**
Nematodes	**410 - 510**	**710 - 810**	**11 – 110**
And others		**variable**	**17 - 170**
Microorganisms			
Bacteria	**810 - 910**		**450 – 4500**
Actinomycetes		**710 - 810**	**450 – 4500**
Mushrooms		**510 - 610**	**1120 – 11200**
Algae		**410 - 510**	**56 – 56-**
Protozoa	**1010 - 1110**	**410 - 510**	**17 – 170**

1-Pesticides

They are chemical compounds of varying toxicity that are injected into the biosphere to treat the imbalance that has befallen it (). The consumption of some pesticides by farm animals is due to human error in most cases, which may lead to the contamination of animal feed with a pesticide. Such a thing happens when pesticides are sprayed from the air or during storage or transportation. It is worth noting that there are a number of pesticides that have been banned from circulation, but some On the other hand, their effect disappears quickly, so their harm is less deadly than others. Herbicides are generally considered less dangerous than insecticides, but there are some dangerous herbicides. We find that herbicides (after being sprayed and absorbed by the plant) are transformed into new substances that lead to a change in In genetic characteristics (mutations) if the animal ingests them, and this transformation occurs within the plant system before it reaches the animal. Spraying or treating animals with some pesticides may lead to the death of the animal. Examples of this include some anti-parasitic treatments such as the compound (which leads to the death of the animal). A condition called ruminal bloating (in ruminants), which may lead to the death of the animal. Also, the use of some wood treated with materials or pesticides, such as pentachlorophenol, for the purpose of making fodder, etc., can be a reason for the animal's exposure to pesticides, which results in significant damage. Its aftermath. It can be said that all pesticides have toxic and harmful effects on animals, but they vary in their degree of toxicity. Some of them are acutely toxic and lead to death if consumed by the animal, even in proportions less than: milligrams/kg of animal weight (ppm), and some are slightly toxic, such as Herbicides such as chlorophenoxy, as the animal needs to consume 5 mg/kg of its weight to cause acute toxicity. On the other hand, the metric effects on the toxicity of pesticides, if they do not lead to the death of the animal, lead to it losing its stature, which results in a decrease in food consumption and a decrease in growth rates, if not a decrease in weight as well. In an experiment conducted on dairy cows, exposure to pesticides led to a sharp decline in their milk production rates. The length of the period of low production

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varies depending on the type of pesticide. Some of them have an effect that disappears after one or two days (or after several weeks). Among the effects of pesticides is that they lead to a reduction in the degree of palatability of food, especially in the case of green pastures when sprayed with pesticides. It has been found that sheep or cows avoid Grazing on pastures sprayed with pesticides, except in cases of extreme hunger. Then consumption decreases, which results in reduced production. It is worth noting here that spraying with herbicides may increase the possibility of pasture animals grazing on toxic weeds (because they are not palatable in the first place), and thus the damage in this case is caused by the poisonous plants and not directly by the pesticide. Another important point: It was found that spraying with pesticide (D, 2,4) leads to an increase in the concentration of nitrates in weeds, the latter of which is toxic to animals. Some pesticides contain compounds that are considered very toxic, more than the pesticide itself. For example, pesticide D, 2,4, is very toxic and may lead to fetal deformities or cancer, and it is also difficult to remove from the environment.

Table No. (5)
Explains the types of pesticides used to combat unwanted pests

Exterminator	Control
Herbal mebicides	**It prevents the growth of harmful weeds in agricultural crops, gardens, golf courses, etc., or is added directly to growing harmful weeds.**
Pesticide	**It kills or combats harmful or unwanted insects that live on plants, animals, or in buildings**
Fungicides	**It protects plants from fungal invasion and is usually used before conditions are suitable for the disease to grow**
Bactericides	**It fights bacteria that cause damage to fruits or cause ulcers in plants**
Nematode pesticides	**Plant roots are protected from microscopic soil worms that sicken plants and feed on their roots**
Spider pesticides	**It resists weevils, spiders, or moths that invade or damage agricultural crops or ornamental plants**

2-organic fertilizers

Organic fertilizers consisting of animal waste in projects for raising poultry, cows, and sheep, despite their benefit in improving soil properties and thus increasing soil production, may be a source of soil contamination with pathogenic microscopic organisms. Therefore, using organic fertilizers in the incorrect manner and in quantities that are not required will lead to The composition of the physiological groups of microorganisms (bacteria) changes, as well as the enzymatic activity in the soil, and

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appropriate conditions are created for the development and reproduction of harmful bacteria in the soil that were not prevalent before. The use of fertilizers also leads to a reshaping and deviation in the proportion of the basic microbiological groups in the soil. Soil, it would be wrong not to take it. . Taking into account the role of microbiological activity in the soil in those conditions in which organic fertilizers are used extensively and continuously. This is because the soil microorganisms, including bacteria, not only participate in the process of liberating nutrients from the organic matter of the soil, but also play an important role in the physical and biochemical processes. Which in turn leads to an increase in the number of bacteria in the soil and their reproduction. On the other hand, the yield of fertilizers used and crop productivity (10).

Fifth: Poisonous plants

Poisonous plants form part of the green groups that grow naturally, but they are concentrated in some areas more than others, depending on many factors such as climate and soil. Animals that graze in pasture are considered more exposed to poisonous plants than others, and although such plants are not palatable at all, the animal eats them with its food if that food contains it, or as a result of extreme hunger, etc. Examples of poisonous plants include (lupine, arnica, arnica, and halogyton).

Table No. (6)
Explains the food substance and the toxic substance contained in it

Foodstuff	An example of the toxic substances contained in it
All grains	**Tricine enzyme inhibitor**
Protein sources 1- Soybeans 2- Cotton seeds 3- Rapeseeds	**Gossypol, Tanin** **Cycloprophenoid ASD** **3-Eric acid**
Feed 1-Scissors 2-White clover 3-Red clover 4-Sweet clover	**Trypsin inhibitor** **Saponin** **Cyanide** **Coumarin**

It is worth noting that some plants are toxic to a specific type of animal but do not affect another type. Some poisonous plants may affect the fetus if a pregnant female ingests them, leading to miscarriage, as in the case of the madness plant, or fetal deformity, such as the ragwort and ragwort. If a pregnant ewe ingests this plant after 14 days of pregnancy, the fetus will be born with one eye and the condition is called. As for a ewe eating this plant, If a pregnant woman is pregnant with ragwort, it gives the fetus an enlarged heart, spleen, and thyroid gland. There are plants that contain compounds that may lead to cancer, such as the fern plant. A high rate of bladder cancer was found in animals that ate these plants (11).

Sixth: Toxins resulting from fungi

Mycotoxins are secondary metabolites produced by fungi that are genetically capable of producing

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toxins when they have the environmental and nutritional conditions to produce their toxins. Suitable conditions for fungal growth include:

1- An atmosphere of at least 70% relative humidity

2- Varying temperature depending on the type of mushroom, which is considered suitable for the growth of the fungus or the production of toxins. It has been found that a temperature of 20-25 is suitable for the growth of the fungus (Fusaria), while a temperature of 15°C or less is suitable for the production of toxins from those mushrooms (12).

Contamination of food and feed with these substances is considered one of the most dangerous and complex types of food poisoning with such compounds. What increases the importance of these substances is their danger because most of them have been found to have a carcinogenic effect on most vital systems, and most plants secrete these toxic substances that may kill the fungi that attack plants. Which subsequently leads to the death of the fungus and the plants get rid of it, especially if the plant is resistant to that fungus.

In addition, there is a risk of green feeding to animals as a result of poisoning with aprosic acid (hydrocyanic acid). Some plants, such as yellow corn, Sudanese grass, and many other fodder and pasture plants, such as yellow corn, millet, Egyptian clover, barley, and white clover, contain alkoxides, such as the well-known type (Duron), and the latter is found in high concentrations. Relatively in plants belonging to the genus (Sorghum) compared to other plants. It is non-toxic in nature, but it decomposes hydrolytically in the rumen of animals to give a toxic substance, which is (hydrocyanic), and it can kill some animals, such as cows, goats, and sheep, if these animals ingest large quantities of feed containing glucosides, as this substance, after its decomposition, affects the hemoglobin in the animal's blood.

In general, the lethal effect of this acid depends on the concentration of the acid reaching the lethal dose in the blood, which in turn depends on several overlapping factors such as (the type of feed, the concentration of the acid, the amount of feed that the animal consumes in one go, the speed of the animal's intake of feed, the speed of absorption of the acid, and the speed of neutralization of its toxicity). (13).

Recommendations

1- Providing adequate lighting. Natural light facilitates vision, encourages work, and helps kill microbes.

2- The safety of the roof, walls and floor of the barns, as it is necessary that the walls be sound and free of cracks and openings that harbor insects. The roof should also be made of heat-insulating materials and the floor should be easy to clean.

3- It is also very necessary for this barn to receive the largest amount of warmth from the sun's rays, in addition to protecting the barn from the extremely cold winds in the winter, especially.

4- Choose a typical location for the barn so that it is far from residential areas and separates the barns from each other to prevent the spread of diseases and epidemics. It must also be built from the side that allows sunlight to enter the interior to provide light in addition to warmth.

5- Barns should be built against the wind, and it is preferable to create windbreaks, especially in the case of choosing an open barn.

6- The process of storing feed must be done correctly, away from damp places to prevent it from rotting, in addition to the places being clean and not exposed to dirt such as animal waste itself.

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http://magellanes.com/

References:

1- Sultan Al-Rifai, Environmental Pollution, Its Causes, Dangers, Solutions, Amman, Osama Publishing House, 2008.
( ) Salman Shamsa, Adnan Jawad Ali, The Environment and its Pollution by Acid Rain, ELGA Publications, Valletta, Malta, 1988.
2- Umm Houli and others, translated by Issam Abdel Latif, Man and the Environment, The Small Encyclopedia, 39 publications of the Ministry of Culture and Arts, Freedom Printing House, Baghdad, 1979.
3- Niran Muhammad Salman, The effect of the different levels of discharges of the Tigris River on changing the living ecosystem in the river between the Muthanna Bridge and the mouth of the Diyala River, unpublished master's thesis, College of Arts, Department of Geography, Baghdad, 2004.
4- Sameh Gharaibeh, Yahya Farhan, Introduction to Environmental Sciences, Dar Al-Shorouk for Publishing and Distribution, Jordan, Amman, 1st edition, 1987.
5- Abdel Rahman Al-Saadani, Thanaa Meligy, Recent Developments in Ecology, Environmental Problems and Practical Solutions, Dar Al-Kitab Al-Hadith, Cairo, 2008.
6- Saeed Muhammad Al-Haffar, Towards a Better Environment (Concepts, Issues, Strategies), House of Culture, Doha, Qatar, 1985.
7- Khalil Hathal Kanoush, Fodder Crops and Pastures, Comprehensive Agricultural Library, University of Mosul, 2019.
8- Widad Al-Ali, Environmental Awareness in the Gulf Cooperation Council Countries.
www. Ecdogies. net Php3? article/Marco
9- Abdul Hussein Madfoun Abu Rahil, Abdul Saheb Naji Al-Baghdadi, Radioactive Environmental Pollution, Journal of Geographical Research, published by the College of Education for Girls, University of Kufa, Issue 4, 2004.
10- Jabr Ibrahim Al-Rawi, International Liability for Damage Resulting from Environmental Pollution, Local Will Press, Baghdad, 1983.
11- Hakman Abbas and Raad Hashem, Environmental Science, a book written for students of agricultural colleges and scientific departments.
12- Abd al-Rasoul Khidr al-Bayati and Safaa Zakaria Bakr al-Tikriti, Identifying fungi growing on cottonseed and the toxins resulting from them, Tikrit University Journal, Volume 5, Issue 1, 2005.

13- Muhammad Majmoud Salman, Geography and Environment, Publications of the Syrian General Authority for Books, Damascus, 2009.
14- Mahmoud Badr Al-Samie and Awad Aboud Matar, Natural Problems We Face in Raising Ruminant Animals in the Najaf Governorate, Kufa Journal of Literature, Issue 1, Volume 37, 2018.
15- Majid Musafir Obaid Al-Aboudi, Climate and its relationship to livestock diseases (ruminants) in Al-Muthanna Governorate, published master's thesis, Al-Muthanna University, 2020.
16- Suha Hanna Habib, Al-Dora Refinery and its Impact on Air Pollution, unpublished master's thesis, College of Arts, University of Baghdad, 2001.
17- Ali Ahmed Ghanem, Applied Climate, Dar Al Masirah Publishing House, Amman, 2010.
18- Ahmed Abdel Wahab Abdel Jawad, Air Pollution, Dar Al Arabiya for Publishing and Distribution,

ISSN:1624-1940
DOI 10.6084/m9.figshare.26196290
http://magellanes.com/

1991.
19- Muhammad Mahmoud Al-Abji, Food Poisoning and Chemical Pollutants, Dar Al-Arabiya for Publishing and Distribution, 1st edition, 1999.
20- Imad Mutair Khalif, Nihad Khader Kazem, Fathi Dardar, Environment and Pollution, A Study of Environmental Pollution in Iraq, Dar Al-Kutub and Documents, Baghdad, 2012.
21- Zidan Al-Hindi Abdel Hamid, Food Poisoning and Chemical Pollutants, Arab House for Publishing and Distribution, Cairo, 1999.
22- Mahmoud Badr Ali and others, Human characteristics and their role in bacteriological contamination of soil in Najaf Governorate, Kufa Journal of Literature, Issue 1, Volume 31, 2017.

23- Adnan Al-Shuqair, The impact of manufactured and natural toxic substances on livestock, Bethlehem Magazine, No. 23, 1985.
24- Sinai Walid and Khawla Ibrahim, Mycotoxins and their Risks, Biological Research Unit, University of Baghdad, 2016.
25- Department of Environmental "A Gibe Risk Assessment and Risk Management and Risk7-Management for Environmental Protection" HMSO, London, U.K., 1997.