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Mazkur uslubiy qo‘llanma ingliz tili fanidan Sanoat Texnologiyasi fakulteti “Qishloq xo‘jaligi texnologiyasi” bakalavriat ta‘lim yo‘nalishining 2 - bosqich talabalarining ingliz tili fani amaliy mashg‘ulotlarda foydalanish uchun mo‘ljallangan.

Uslubiy qo‘llanma Xorijiy tillar kafedrasida 20____ yil “____” _____ № ___ majlis bayoni, fakultet uslubiy kengashida 20____ yil “____” ___ _____ № _____ majlis bayoni, institut uslubiy kengashi 20__ yil “____” _____ ___ № ___ majlis bayoni bilan tasdiqlangan va ko‘p nusxada chop etishga ruxsat etilgan.

Annotatsiya

Ushbu uslubiy qo‘llanma qishloq xo‘jaligi texnologiyasi yo‘nalishiga oid matnlar va terminlar, leksik-grammatik mashqlar va topshiriqlar, og‘zaki va yozma nutqni rivojlantirishga asoslangan mashqlar va topshiriqlardan tashkil topgan. Berilgan matnlar va topshiriqlar nafaqat talabalarning ingliz tilidagi bilimlarini oshirishda va balki ularning kelajakda tanlagan kasblariga yo‘naltirilgan bilimlar va qiziqishlarni egallashda yordam beradi. Uslubiy qo‘llanma qishloq xo‘jaligi texnologiyasi yo‘nalishi bakalavr talabalari uchun mo‘ljallangan.

KIRISH

Bugungi kunda mustaqil taraqqiyot yo‘lidan borayotgan mamlakatimizning uzluksiz ta’lim tizimini isloh qilish va takomillashtirish, yangi sifat bosqichiga ko‘tarish, unga ilg‘or pedagogik va axborot texnologiyalarini joriy qilish hamda ta‘lim samaradorligini oshirish davlat siyosati darajasiga ko‘tarildi. “Ta‘lim to‘grisida”gi Qonun va “Kadrlar tayyorlash milliy dasturi” ning qabul qilinishi bilan uzluksiz ta‘lim tizimi orqali zamonaviy kadrlar tayyorlashning asosi yaratildi.

O‘zbekistonning rivojlanib borayotgan iqtisodiyoti uchun tayyorlanadigan mutaxassislar rivojlangan mamlakatlar tilida batafsil muomala qiladigan kadr bo‘lib yetishishiga katta e‘tibor qaratilmog‘i lozim.

Nofilologik oliy o‘quv yurtlarida chet tillarni o‘qitishning maqsadi – tilni talabalar tomonidan amalda qo‘llay bilish va shu tilda muomala qilishga tayyorlashdan iborat. Chet tilini amalda o‘rganish jarayonida og‘zaki nutq va tilning fonetik, leksik va grammatik tomonlarini o‘rganishi va yozuv ko‘zda tutiladi.

Bakalavr darajasidagi har bir mutaxassis o‘zi tanlagan sohada atroflicha mutaxassisligi bo‘yicha chet tilida faoliyat ko‘rsata olishi kerak. Shu nuqtai nazardan olib qaralganda bugungi kun yoshlarini har tomonlama yetuk, raqobatbardosh kadrlar qilib tayyorlash davr talabi bo‘lib qoldi.

Ingliz tili fanidan tuzilgan ushbu uslubiy qo‘llanma Sanoat Texnologiya fakultetining ”Qishloq xo‘jaligi texnologiyasi” yo‘nalishi II - kursda ta‘lim oluvchi talabalar uchun mo‘ljallangan. Qo‘llanma o‘zida mutaxassislikka oid matnlar hamda terminlar, qiziqarli mashqlar va topshiriqlar, boshqotirmalarni mujassam etgan. Shuningdek, uslubiy qo‘llanmani tuzishda internet materiallari, pedagogik texnologiyarning interfaol usullaridan, o‘yinli metodlardan, qiziqarli topshiriqlardan foydalanildi. Bu esa, o‘z navbatida, dars samaradorligini oshirib, talabalarning ingliz tilini o‘rganishga bo‘lgan ishtiyoqini yanada kuchaytirishga, ta‘lim sifatini yaxshilashiga yordam beradi.

CONTENTS

LESSON 1 AGRICULTURE IN GENERAL

Vocabulary tasks:

Ex. 1 Read active vocabulary and translate them into Uzbek.

to be employed, fibre, ornamental, nourishment, diet, variety, to remain, fabric, yarn, device, to reduce, demand (for), raw materials, to replace, to aid, to inherit advance, excessive, to prohibit, nutrition, alfalfa, clover, hog, cereal grains, millet, sorghum, root crops, beets, flax, pulses, beans, peas, oil-bearing crops, soybeans, sugarcane, coconuts, turkey, shellfish, mussel, oyster, silkworms, natural rubber trout, cocoa beans; hide, castor oil, linseed oil, shrub, mink;

Ex. 2 Fill in the gaps using the words in the box.

employed, fabric, varieties, fibres, yarn, aid, demand, excessive, ornamental, nourishment,

1 How many people are_____ in your company?
2 The _____ in cheaper woolen fabrics are shorter.
3 The house was surrounded with a beautiful _____ garden.
4 A baby gets all the_____it needs from its mother's milk.
5 This dress is made of cotton_____.
6 The sweater is made of brown woolen _____.
7 Good specialists are always in great _____.
8 This project is designed to_____developing countries.
9 _____ exercise can sometimes cause health problems.
10 Scientists develop new _____ of crops.

Reading tasks:

Ex. 3 Read and translate the text into Uzbek.

Agriculture is the world's most important industry. It provides us with almost all our food. It also supplies materials for two other basic human needs – clothing and shelter. In addition, agriculture provides materials used in making many industrial products, such as paints and medicines. About half the world's workers are employed in agriculture – far more than in any other industry. Food is the most

important farm product. But farms also provide many other products, from natural fibres to ornamental flowers and trees. Some crops are used only to feed livestock. These forage crops include alfalfa, clover and many grasses. Forage crops are important because they make commercial livestock production possible. Farms provide almost all the world's food, including some fish and game. Most food products come from crops. The rest come from animals, especially cattle, hogs, poultry, sheep and other livestock.

The world's farmers grow about 85 major food crops. They can be divided into eight groups. The main group is cereal grains. Grain is grown on half the world's cropland and supplies much of the nourishment in the human diet. The chief grains are barley, corn, millet, oats, rice, rye, sorghum and wheat. Various root crops make up the second most important group of food crops. Cereal grains, root crops are grown throughout the world and are a basic food for many people. The leading root crops are potatoes, beets and sweet potatoes.

The six remaining groups of major food crops are: (1) pulses, which consist mainly of beans and peas; (2) fruits and vegetables; (3) oil-bearing crops, such as soybeans and coconuts; (4) sugar-bearing crops, especially sugar cane and sugar beets; (5) nuts; and (6) cocoa beans, coffee, and tea.

Cattle, chickens, goats, hogs, sheep, turkeys and other livestock are the main animals raised for food. Livestock are raised in every country and supply nearly all the world's meat, eggs and milk. Farmers also raise other animals for food. For example, many farmers keep bees for honey. Farmers on fish farms raise fresh water food fish, such as carp and trout, and saltwater shellfish, such as mussels and oysters.

Natural fibres come from a variety of plants and animals raised on farms. Factories use the fibres to make fabrics, yarn and other textile products. Cotton and flax together with some tropical plants are the chief plant fibres. Wool, the major animal fibres, comes mainly from sheep but also from such animals as goats and members of the camel family. Silk fibres are obtained from the cocoons of silkworms. However the development of synthetic fibres has reduced the demand for natural fibres in some countries.

Many farms provide other raw materials for industry besides fibres. These materials include natural rubber, animal hides which are used to make leather and such vegetable oils as castor oil and linseed oil. These oils are used in a variety of products, from paints to medicines. Many farmers grow tobacco. Others grow ornamental flowers, trees and shrubs. A few farmers raise such animals as foxes and minks for their fur.

Ex. 4 Define whether the following statements are true or false. Correct the false ones.

1 Basic human needs include clothing, shelter and entertainment.
2 Forage crops are ornamental plants grown to decorate houses and gardens.
3 Most food products are of animal origin.
4 Millet and sorghum don't belong to pulses.
5 Chickens, turkeys and hogs make up the group of livestock called poultry.
6 Mussels and oysters are not fish, but they are raised on fish farms.
7 The production of natural fibres is growing in the world.
8 Foxes and minks are raised for their fur.

Ex. 5 Answer the questions to the text.

1 What does agriculture provide people with?
2 What are the farm products besides food?
3 What are the main groups of food crops?
4 What kinds of animals are raised for food?
5 How are natural fibres obtained?
6 Why has the demand for natural fibres reduced?
7 What are the raw materials besides fibres?
8 Where are they used?

Grammar revision:

Ex. 6 Insert prepositions.

1) Various food products come _____ crops and animals.
2) All major food crops are divided _____ several groups.
3) Grain crops are the basic food _____ most people.
4) The group of pulses consists mainly _____ beans and peas.
5) Nowadays the demand _____ natural fibres is reduced.
6) Vegetable oils are used _____ various products.
7) Animals are raised mainly _____ food.
8) Yarn is obtained _____ wool.

Ex. 7 Present Simple or Present Continuous? (I do or I am doing?) Choose the correct sentences.

1 **a** Frank plays football every weekend.
b Frank is playing football every weekend.
2 **a** It is raining in Prague today. **b** It rains in Prague today.
3 **a** The sun is shining at the moment.
b The sun shines at the moment.

4 **a** James usually wears a shirt and tie.

b James is usually wearing a shirt and tie.

5 **a** They do their homework now. **b** They are doing their homework now.

Ex. 8 Put the verbs in brackets into the present simple or present continuous.

1. Jim usually (wake up) late on Sundays. 2. I (play) tennis at the moment. 3. Sheila (listen) to music in her free time. 4. The children (swim) now. 5. She (go) on a picnic every Sunday. 6. Bill (have) a shower right now. 7. Joe (not/watch) TV very often. 8. Excuse me, (you/speak) English? 9. George (drive) to work every morning. 10. He (walk) in the park now.

Speaking tasks:

Ex. 9 Prove that and discuss in pairs:

- agriculture is the world's most important industry
- farms provide almost all the world's food
- farms supply many industries with raw materials

Ex. 10 Talk in pairs about the history of agriculture. Discuss the following:

- domestication of plants and animals
- labour-saving technologies
- plant and livestock breeding
- agricultural chemicals

Ex. 11 Define which verb goes with which noun.

A	B
develop	soil
inherit	methods
enrich	data
provide	diseases
control	troughs
fill	production
improve	groundwork
run	hybrids
lay	machines
increase	damage
operate	characteristics
cause	equipment

Relax Yourselves

Ex. 12 Read and translate a few funny stories.

One day a farmer asked his son Bobby to go and count the pigs in the farmyard. Bobby came back and said, "Father, there are twenty pigs, but one little pig runs about so quickly that I cannot count it."

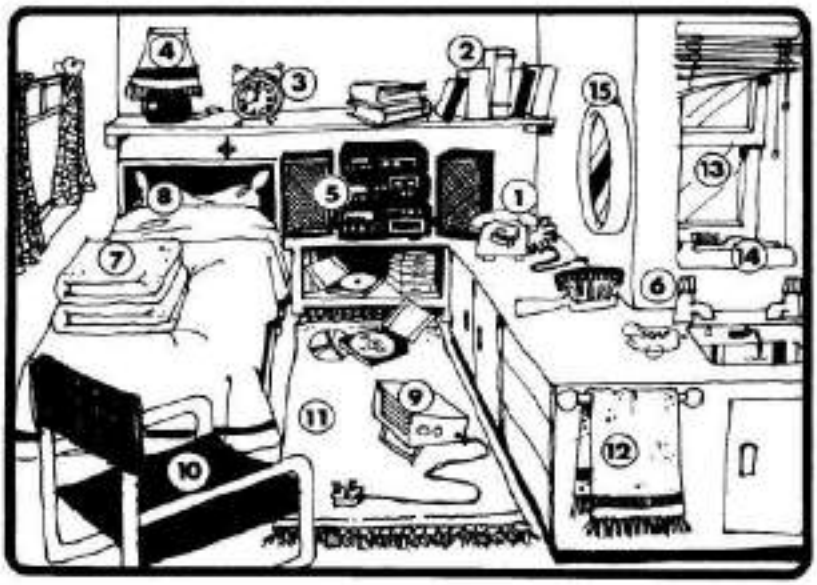
***

Two brothers came to a hotel in the country. They didn't like their room. "What does this pigsty cost?" asked one brother. "For one pig – two dollars, for two pigs – three dollars," was the quick answer.

QUIZ TIME

THE NAME GAME

How many things can you name?



1. It's a telephone.
2. They're books.
3. .....
4. .....
5. .....
6. .....
7. .....
8. .....
9. .....
10. .....
11. .....
12. .....
13. .....
14. .....
15. .....

LESSON 2 BASIC PRINCIPLES OF CROP PRODUCTION

Vocabulary tasks:

Ex. 1 Read active vocabulary and translate them into Uzbek.

nutrient, particle, mineral, to decay, to involve, accurate, to rely (on), thoroughly, entirely, extremely, to threaten, to endanger, resistant (to), separate, to stir, (to) harvest, proper, insufficient, (to) lack, to process, storage, to perform, preceding, to enrich, to attach, to spoil, to ship, facilities;

Ex. 2 Translate the following word combinations into Uzbek.

Essential nutrients, decaying plants, to involve scientific experiments, proper soil preparation, insufficient amount of food, to lack money, the lack of food, to rely on the equipment, an accurate forecast, to research the subject entirely, extremely difficult, to threaten the results of the project, to endanger one's life, to check thoroughly, resistant to infection, separate buildings, a rich harvest, to harvest fruit, to process vegetables, storage facilities, preceding chapter, to enrich the soil, to attach a cultivator to the tractor, to spoil quickly, to ship within a week, to provide facilities for, to perform an operating.

Ex. 3 Fill in the gaps with the words in the box.

threatened, particles, extremely, facilities, proper, resistant, lacks, stir;

1) Mineral _____ are involved in chemical reactions taking place in soil.
2) Crops require the _____ amounts of air and water for their healthy growth.
3) The soil in this area _____ water.
4) Irrigation is necessary in _____ dry areas.
5) Crops are_____ by weeds, plant diseases and insect.
6) The newest crop varieties developed by the scientists are more _____to pests.
7) Cultivators _____ the soil between rows.
8) A good farm must have all the necessary _____ for crop storage.

Reading tasks:

Ex. 4 Read the text and do the exercises that follow it. Translate it into Uzbek.

Basic principles of crop production

All crops require nutrients (nourishing substances) and water to grow. Soil supplies most of the nutrients. It also stores the water that the crops need. Crops differ, however, in the amount of nutrients and water they require for healthy growth.

A farmer must therefore make sure that the soil and water resources meet the needs of each crop. A farmer must also plant measures to control.

Pests, which could damage or ruin a crop: Most farmers plan their methods of soil and water management and of pest control well in advance of the growing season.

Soil management: Soil consist chiefly of mineral particles mixed with decaying organic (plant and animal) matter. Chemical reactions involving these substances produce most of the nutrients that crops need. To be fertile, therefore, soil must consist of the right mixture of minerals, organic matter and helpful microbes. It must also have the proper amounts of air and water.

After deciding which crops to grow, farmers analyze their soil to learn if any nutrients are insufficient or lacking. To get an accurate analysis, most farmers send samples of the soil to a soil-testing laboratory. The test results help farmers plan a scientific fertilizer program for their crops.

The richest soil lies at and just below the surface. If this topsoil is not protected, it may be blown away by strong winds or washed away by heavy rains – a process called erosion. Effective soil management, therefore, also includes methods of soil conservation.

Water management: Crops cannot grow without water. In most cases, Farmers rely entirely on rainfall for the necessary moisture. In extremely dry areas, however, farmers must irrigate their crops. Many farms often have too much water rather than too title. Then problems are great on low-lying land and on land crossed by streams or rivers. Fields that tends to collect water must have a drainage system.

Pest control: Agronomists use the “pests” in referring to weeds, plant diseases and insects that threaten crops. Most farmers control pests with chemicals called pesticides. For uses on farms all pesticides must be used with extreme care. If they are used improperly, they may pollute the environment or the food supply and so endanger people’s health.

Farmers also use other methods of pest control in addition to pesticides. For example, turning the soil with a plough or mechanical cultivator kills most weeds. However, special pesticides called herbicides control weeds more thoroughly than

soil turning does. Some herbicides remain activity in the soil for some time and so kill weed seedlings as they develop. Plant scientists have developed varieties of corn, wheat and other crops that are more resistant to diseases and insects than earlier varieties were.

Ex. 5 Define whether the following statements are true or false. Correct the false ones.

1) Plants can't grow without nutrients and water.
2) The amount of nutrients and water for healthy growth is different for every crop.
3) Chemical reactions involving mineral particles produce the nutrients that crops need.
4) The most fertile soil lies deep below the surface.
5) Farmers cannot always rely entirely on rainfall for the necessary moisture.
6) Even small amounts of pesticides pollute the environment and endanger people's health.
7) Some herbicides have a long lasting effect.
8) Pesticides using is not the most effective method of pest control.

Ex. 6 Answer the questions to the text.

1) How and when should farmers plan their methods of soil and water management and of pest control?
2) How are the nutrients produced by the soil?
3) What does soil fertility mean?
4) What do farmers need to do before sowing their crops?
5) Why must the topsoil be protected?
6) When are irrigation and drainage systems used?
7) What does the word "pests" mean?
8) Why must pesticides he used with extreme care?

Grammar revision:

Ex. 7 Insert prepositions where necessary.

1) Crops differ ... the amount ... nutrients they require ... healthy growth.
2) Farmers plan their methods ... soil management well ... advance ... the growing season.
3) Soil consists chiefly ... mineral particles mixed ... organic matter.
4) The richest soil lies ... and just... the surface.
5) Farmers often rely ... rainfall... the necessary moisture.
6) The word "pests" is used ... referring ... weeds, plant diseases, and harmful insects.

7) Farmers also use other methods of pest control ... addition ... pesticides.
8) Scientists have developed varieties ... crops that are more resistant... diseases and insects.

Ex. 8 Find the synonyms to the following words in the text.
To need, to destroy, beforehand, substance, to contain, right, to include, ploughing, concerning.

Ex. 9 Open the brackets and put the verbs into the Future Simple Passive.
1 It's too hot, so all the food (keep) in the fridge.
2 The soil analyses (do) in a week.
3 Wheat (not / sow) on this field.
4 Not many vegetables (sell) this summer.
5 The combine (repair) by harvest season?
6 The fodder (supply) in time.

Speaking tasks:

Ex. 10 Read the given sentences and discuss them in groups. Are you agree or disagree with them.
1. Mineral particles are involved in chemical reactions taking place in soil.
2. Decaying organic matter plays an important role in nutrient production.
3. Crops require the proper amounts of air and water for their healthy growth.
4. The soil in this area lacks water.
5. Irrigation is necessary in extremely dry areas.
6. Crops are threatened by weeds, plant diseases and insects.
7. Improper use of pesticides may endanger the environment.
8. The newest crop varieties developed by the scientists are more resistant to pests.
9. The plant wastes from the preceding crop are scattered all over the field.
10. A harrow is attached to the back of a plough.
11. Cultivators stir the soil between rows.
12. A good farm must have all the necessary facilities for crop storage.

Ex. 11 Read and translate the funny stories. Discuss them in groups.
"The day will come," said a young scientist to a group of farmers, "when I'll have enough fertilizer in my pocket for a whole field." "And the whole crop in the other pocket," said an old farmer.

***

14-year-old George who helped the farmer in the garden wasn't a fast worker and he moved very slowly. One day Mr. Jones, the farmer, called out to him: "George,

is there anything you can do fast?" "Yes, Mr. Jones," George answered, "I get tired fast."

QUIZ TIME

doubles 1

Many words in English are made of two words.
Put the word from list A with the correct word from list B.

LESSON 3 BASIC STAGES OF CROP PRODUCTION

Vocabulary tasks:

Ex. 1 Read active vocabulary and translate them into Uzbek.

seedbed, to sprout, to take roots, tillage, to loosen, stalk, cover crop, harrow, (seed) drillar, furrow to uproot, to thresh, residues, ear, to mow, bale, hay baler, silage, airtight, silo, alfalfa, chunk, to groove, fodder, sorghum;

Ex. 2 Match the words with their definition.

silage	machine for cutting furrows in the soil and turning it up
hay	preparation of land for growing crops
plough	seed-bearing head of a cereal plant
barn	green moist fodder
mow	large farm building for storing grain
tillage	cut down the grass
ear	grass mown and dried for fodder

Reading tasks:

Ex. 3 Read the text and do the exercises that follow it. Translate it into Uzbek.

BASIC STAGES OF CROP PRODUCTION

Crop farming involves at least five separate operations: preparing the soil, planting, cultivating, harvesting and processing and storage. Modern farm equipment can perform each of these operations easily and quickly.

Preparing the soil: The main purpose of soil preparation is to make a seedbed – that is, an area of soil in which seeds can be planted and in which they will sprout, take roots and grow. Tillage involves digging the soil and mixing it. Tillage loosens the soil, kills weeds and improves the circulation of the water and air in the soil. The chief tillage devices are ploughs. At ploughing time, most farm fields are scattered with dead stalks, leaves, and other plant wastes from the preceding crop.

Other fields may have a cover crop, such as alfalfa or grass. Plant wastes and enrich the soil with nutrients if they are ploughed under.

Soil that has been completely turned over in ploughing often remains stuck together in large chunks. Most farmers, therefore, also use a device called a harrow. A harrow has sharp teeth or disks that break the chunks of soil into smaller pieces. Many farmers attach a harrow to the back of a plough. Farmers may add fertilizer to the soil during ploughing and harrowing.

Planting: Nearly all the field crops grow on the farms are planted by machines called planter or drills. These machines cut furrows (narrow grooves) in the soil, drop seeds into each furrow and cover the seeds with soil — all in one operation. Some fertilizers and pesticides are applied to the soil during planting. Equipment to distribute the chemicals may be attached to the seed drill.

Cultivating: Herbicides applied before or during planting kill many kinds of weeds, but not all. Some weeds may develop with the crops. Farmers control such weeds with cultivators. These devices stir the soil between rows and so uproot and bury any weeds.

Harvesting: Farmers harvest their field crops with machines. They use combines to harvest most grains and seed crops, including barley, corn, rice, soybeans and wheat. A combine performs several tasks. First, it cuts the plant stalks. Then, it threshes the cutting — that is, separates the grain or seeds from the straw and other residues. The combine returns the residues to the ground and collects the grain or seeds in a tank or bin. Some farmers harvest corn with special machines. The machines pick the ears from the stalks but do not remove the grain from the ears. Special machines are also used to harvest other field crops, including peanuts, potatoes and sugar beets. Some machines mow such crops, as alfalfa and clover. The mowed crops are left on the ground, where they dry and become hay. Machines called hay balers gather the hay and bind in into bales.

Processing and Storage: Crops raised to supply food for human beings are called food crops. Many food crops tend to spoil quickly, and so farmers ship these crops to market as soon as possible after harvesting. Food grains, however, can be stored for months on farms that have the proper facilities. Before grain is stored, it must be dried. Most farms that store large amounts of grain have grain-drying tools and large storage bins.

Crops raised to supply feed for livestock are called fodder crops. Hay, silage, soybeans, and such grains as corn and sorghum are the principal feed crops. Corn, wheat and soybeans are used for both food and livestock feed. Hay must be kept dry until it is used, and so it is usually stored in barns. Unlike hay, silage must be kept moist. Most farmers store it in airtight constructions called silos.

Ex. 4 Answer the questions to the text.

1) How many operations does crop farming involve?
2) What is the effect of tillage?
3) Are plant wastes helpful or harmful for soil?
4) How does a harrow work?
5) What kinds of machines plant the crops?
6) What tasks does a combine perform?
7) What other machines are used for harvesting?
8) What facilities must a farm have to store large amounts of grain?
9) How must hay and silage be stored?

Ex. 5 Define whether the following statements are true or false. Correct the false ones.

1) Most farms that store large amounts of grain have grain-drying equipment and large storage bins.
2) Modern farm equipment can perform each of these operations easily and fast.
3) Plant don't waste and enrich the soil with nutrients if they are ploughed under.
4) Farmers must add fertilizer to the soil during ploughing and harrowing.
5) Machines called hay tractors gather the hay and bind in into bales.
6) Plants raised to supply feed for livestock are called fodder crops.
7) Hay must be kept wet until it is used, and so it is usually stored in barns.
8) Corn, wheat and soybeans are used for both food and livestock feed.

Grammar revision:

Ex. 6 Answer the following questions using the word combinations from the table.

e.g. *– What's going on in the room? – A new film is being discussed.*

1. What is going on on the farm now?
2. What was happening on the farm when you arrived yesterday?

to feed the cattle	to milk the cows
to graze the sheep	to count the chickens
to wash the horses	

Ex. 7 Answer the questions as given in the example.

e.g. *– Have they settled the problem yet? – No, it's still being settled.*

1. Have they built the school yet?
2. Has he written the article yet?
3. Has he translated the novel yet?

4. Has she made a list of new words yet?
5. Have they completed the plan?
6. Has he published his new textbook yet?
7. Have they staged the play?
8. Has he looked the papers through?

Speaking tasks:

Ex. 8 Talk in pairs (in groups) about crop production. Discuss the following:

- soil and water management
- preparing the soil
- planting, cultivating and harvesting

Ex. 9 Read and translate the following proverbs. Discuss them in pairs.

1. A man of words and not of deeds is like a garden full of weeds.
2. Bare words buy no barley.
3. The tree is known by its fruit.
4. Fools are never sown – they grow on their own.
5. Early sow, early mow.

Ex. 10 Complete these sentences with the correct "general" word. Look at the example first.

Example: Apples, oranges and bananas are all types of fruit.

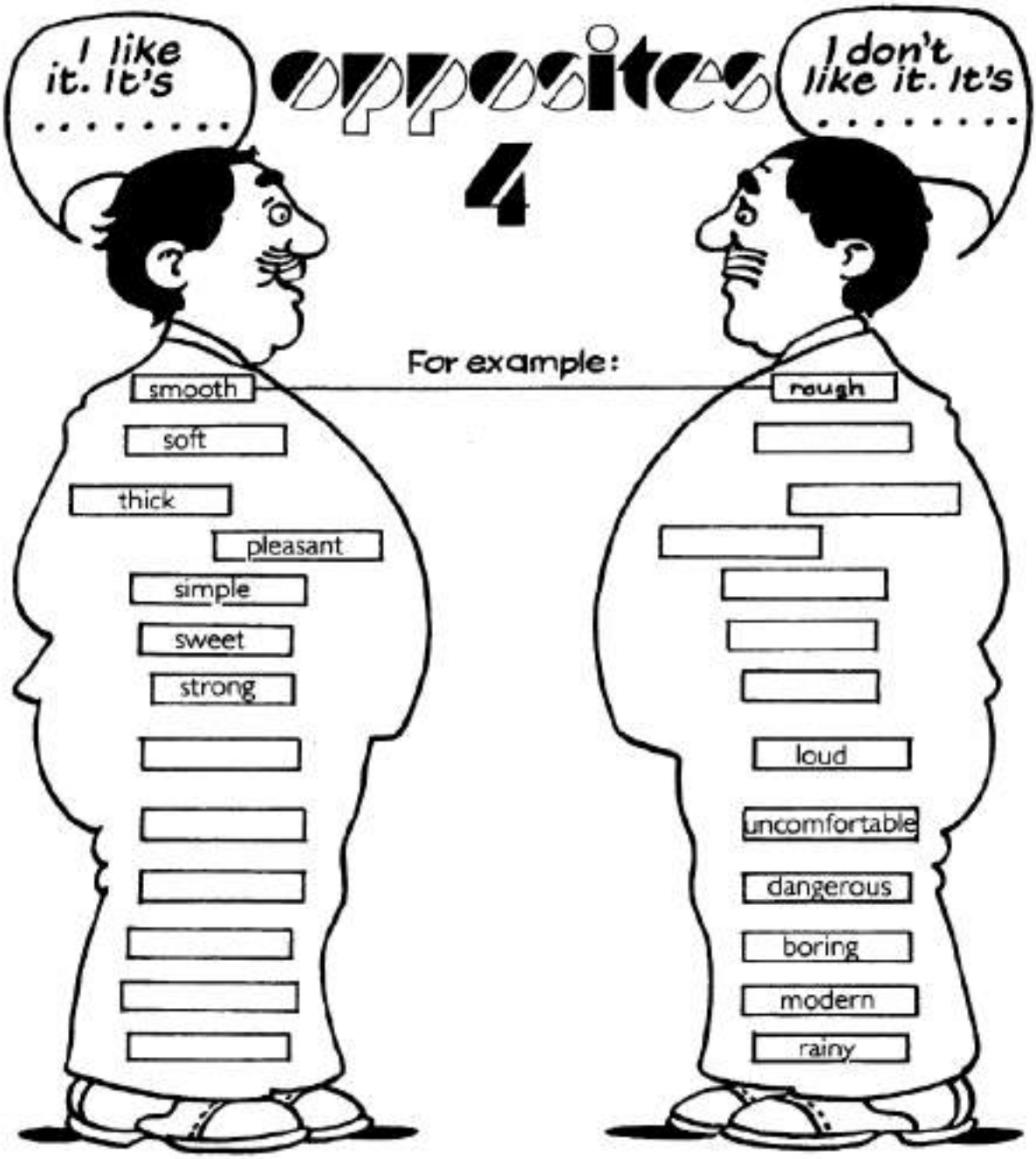
1. The most famous _____ are tomatoes, cabbages, carrots, cucumbers, onions, sweet pepper, potatoes, beets, radishes, rutabagas.
2. _____ is the general word for wheat, maize, barley, etc.
3. We use the word _____ as a general word for plants which are grown to be eaten.
4. Well-known _____ include vegetables, fruits, nuts, seeds, herbs, flowers and other ornamental crops.
5. _____ include cotton, flax, nettle, hemp and ramie.
6. The leading _____ are grain crops, legume seed crops, oil seed crops, fiber crops, forage crops.
7. The main _____ grown for their seeds are field beans, chick pea, lentil.

Ex. 11Read and translate the following sentences. Pay attention to the words and word combinations in italics.

1. One aspect of our business focuses on grain production.
2. Last year we lost a few crops to the cold.
3. We'll harvest next week if weather conditions are good.

4. It's risky business taking out a credit to seed a new field.
5. We use the best fertilizer possible on our crops.
6. We grow tomatoes in the greenhouse.
7. You should invest in some new land for grazing.
8. The nursery grows bushy plants and fruit trees.
9. Pesticides are very dangerous and should be used with caution.
10. We grow vegetables and fruit on our farm.

Puzzle time



rough interesting hard thin weak bitter fine
difficult unpleasant safe comfortable soft antique

LESSON 4 BASIC TYPES OF FEEDS

Vocabulary task:

Ex. 1 Read active vocabulary and translate them into Uzbek.

nutritional, to maintain, roughages, wheat bran, corn gluten meal, hull, ensiled, mature, residue, flaxseed, sunflower seed, supplements, beet pulp, beet molasses, palatable, legume, alfalfa, clover, digestible, digestibility, immature, sorghum, mangles/rutabagas/cassava, molasses;

Reading tasks:

Ex. 2 Read and translate the text into Uzbek.

BASIC TYPES OF FEEDS

Animal feeds include any feedstuff which is grown or developed for livestock and poultry. The main aim of a farmer is to provide animals with as highly nutritional diets as possible in order to maintain them healthy and ensure the quality of such final animal products as meat, milk, or eggs. Animal feeds are classified into two main groups: concentrates and roughages.

Concentrate feeds:

(a) **Cereal grains and their by-products.**

Barley, corn, oats, rye, and sorghum are grown mainly as animal feed. These grains are fed, whole or ground, either singly or mixed with high protein meals or other by-products, minerals, and vitamins, to form a complete feed for pigs, horses and poultry. By-products from commercial processing of cereal grains, for instance wheat bran, corn gluten meal, rice bran or hulls, are used as animal feeds in large quantities.

(b) **High-protein meals.** Vegetable seeds such as soybeans, flax-seeds, cotton seeds, sunflower seeds are valuable supplements to roughages or cereal grains and other low-protein feeds because they provide the protein needed for efficient growth of production.

(c) **By-products of sugar beets.** From the sugar-beet industry come beet tops, which are used on the farm either fresh or ensiled, and dried beet pulp and beet

molasses. These are all palatable, high quality sources of carbohydrates.
Roughages:
(a) **Pasture.** Various pasture grasses (timothy, Sudan grass) and legumes (clovers, soybeans, sorghum), both native and cultivated, are the most important single source of feed for cattle, horses, sheep, and goats. During the growing season they supply most of the feed for these animals at a cost lower than other feeds that must be harvested, processed, and transported.
(b) **Hay.** It is produced by drying different mature grasses or legumes (alfalfa, clover) when they contain the maximum quantity of digestible protein and carbohydrates but before the seeds develop. Hay is usually fed to animals when sufficient fresh pasture grass is unavailable.
(c)**Silage.** Silage is usually made from immature plants of corn, sorghums, grasses, legumes in a storage container. Storage may be in upright tower silos or in trenches in the ground. Ensiled forage can be stored for a longer period of time with lower loss of nutrients than dry hay.
(d) **Root crops.** Nowadays such root crops as mangles, rutabagas, cassava and sometimes potatoes are used less extensively as animal feed than in the past, for economic reasons. Roots are lower in dry-matter content than in most of the other feeds listed. They are relatively low in protein also and provide mostly energy.
(e) **Straw and hulls.** Quantities of straws that remain after wheat, oats, barley, are harvested and used as feed for cattle. Straw is useful in maintaining mature animals during periods of shortage of other feeds, but it is too low in quality in order to be satisfactory for long periods without adding supplements.

Ex. 3 Complete the sentences according to the text.

1) The main aim of a farmer is_____.
2) Animal feeds are classified into_____.
3) By-products from commercial processing of cereal grains _____.
4) From the sugar-beet industry come beet tops_____.
5) During the growing season they supply_____.
6) Hay is usually fed to animals _____.
7) Ensiled forage can be stored for_____.
8) Quantities of straws that remain after wheat, oats, barley _____.

Ex. 4 Say if the sentences from the text are true or false. Correct the false ones.

1) Animal feeds include any feedstuff which is grown or developed for livestock and poultry.
2) Barley, corn, oats, rye, and sorghum are grown mainly as poultry feed.

3) Vegetable seeds such as soybeans, flax-seeds, cotton seeds, sunflower seeds are valuable supplements to roughages or cereal grains.

4) Various fruits and vegetables are the most important single source of feed for cattle, horses, sheep, and goats.

5) Hay is produced by drying different mature grasses or legumes.

6) Silage is usually made from mature plants of corn, sorghums, grasses, legumes in a storage container.

7) Nowadays such root crops as mangles, rutabagas, cassava and sometimes potatoes are used less extensively as animal feed than in the past.

8) Straw is useful in maintaining mature animals during summer time.

Ex. 5 Answer the questions to the text.

1) What are two main groups of animal feeds?

2) What is mainly grown as animal feed?

3) What are valuable supplements to roughages?

4) Are beet tops used on the farm either fresh or ensiled?

5) Various pasture grasses and legumes are the most important single source of feed for animals, aren't they?

6) How is hay produced?

7) Where is silage usually stored?

8) Are root crops lower in dry-matter content than in most of the other feeds?

Grammar revision:

Ex. 6 Read and translate the sentences in Present Simple Passive.

1. Smoking is not allowed here. 2. He is often sent parcels. 3. Coffee is imported from Brazil. 4. Clothes are washed at the launderette. 5. Films are shown at the cinema. 6. Bread is sold at the baker's. 7. Milk goes sour when it is left for three days. 8. The machines are inspected every day. 9. Flowers die when they are not watered. 10. Lost time is never found again. 11. This article is often referred to.

Ex.7 Give negative answers to the following questions using Present Simple Passive.

e.g. *– Does Mrs. Green* **deliver** ***the post****?*

– No, **the post** ***isn't delivered*** *by Mrs. Green.*

1. Does Mary type the documents?
2. Does the chief engineer sign the papers?
3. Does Jack repair the computers?
4. Does the boss write the letters himself?
5. Do the teachers prepare the lunch?

6. Does the secretary dictate the letters?
7. Do the salesmen inspect the machines?

Ex. 8 Change the following sentences from active into passive. Give two variants where possible.

e.g. *They often* ***show*** *us foreign films at the University.*

We ***are*** *often* ***shown*** *foreign films at the University.*

Foreign films ***are*** *often* ***shown*** *to us at the University.*

1. They grow rice in this area.
2. They import tea from India.
3. They sell shoes in that shop.
4. They speak Italian in Italy.
5. They produce butter on farms.
6. They often send us letters.
7. They don't allow us to smoke here.
8. They teach English, French and German at the University.

Speaking tasks:

Ex. 9 What do you call: Think and discuss them in groups.

1 the action of keeping something in a special place for future use?
2 a long period of time during which no rain falls?
3 a chemical which is toxic to plants and is used to eliminate unwanted vegetation?
4 the taste of food or a drink?
5 the ability not to be affected by something?
6 an illness which affects people, animals or plants?
7 a process regarded as a factor of evolution in which environmental or genetic influences determine which types of organisms thrive better than others?
8 a person who breeds animals or plants?
9 a cultivated plant that is grown for food, especially a vegetable, grain or fruit?
10 a characteristic feature or quality of a particular person or thing?

Ex. 10 Read the following proverbs and discuss them in pairs.

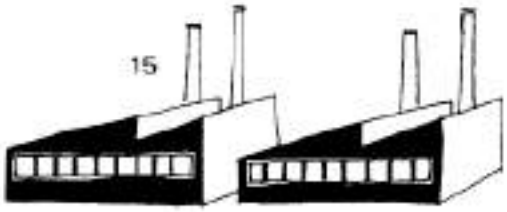
1. A good name is better than riches.
2. There is no friend so faithful as a good book.
3. Better untaught than ill taught.
4. An hour in the morning is worth two in the evening.

QUIZ TIME

Plurals

Look at the singular form and write the plural.

For example: 1 women



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woman tooth leaf comb bus foot watch
flower child policeman island car knife glass
factory

LESSON 5 THE IMPORTANCE OF PLANT PROTECTION AND PEST CONTROL MEASURES

Vocabulary tasks:

Ex. 1 Read active vocabulary and translate them into Uzbek.

appendix (appendices), cell, cilia, to derive, duct, fission, locomotion, pathogen, to penetrate, pulp, to retard, tissue, vascular, vessel, wilting, yield, to affect, protect, bacterium, blight, (to)cause, to cure, (to) damage, protection, (to) decay, to rot, to detect , to derive, disease, drainage, germ, to injure, to measure, mildew, pest, to multiply, nematode, to reduce, to resist, to retard, to secure, (to)supply, provide;

Ex. 2 Translate the following phrases into Uzbek.

To derive from certain organisms, water duct, cell fission, disease pathogen, penetration, pulp mass, retardation, the vascular system of plants, plant vessels, wilting of plants. Some bacteria have cilia for the purpose of locomotion. Some bacteria destroy plants tissue. A cell is a basic unit of all living things. Some bacteria have so-called cilia.

Reading tasks:

Ex. 3 Read and translate the text into Uzbek.

The importance of plant protection and pest control measures

A decisive factor for securing yields is the protection of agricultural crops. Day by day cultivated plants and supplies in store rooms are threatened by thousands of pests and disease pathogens. Every year millions of tons of produce are lost and plants and animals retarded in growth and development or the products derived from these organisms are affected both quantitatively and qualitatively. Control of these pests and disease pathogens must become the greatest task for all scientists, technical engineers and farmers responsible for the production of agricultural products.

What is meant by a pest or disease pathogen? They are animal or plant organisms which damage either cultivated plants or the products derived there

from. They directly or indirectly influence the health of man and domestic and useful animals.

Bacteria as Disease Pathogen. Bacteria, unlike higher organism, consist of a single cell only. Some of the bacteria possess thread-like appendices, socalled cilia, for the purpose of locomotion. These cilia are fixed either at one end of the cell or are arranged over the whole surface of the cell. The size of the cells is microscopic, the pathogen thus being visible with the aid of a microscope only.

Bacteria multiply by simple fission. Bacteria diseases, so-called bacterioses, are usually caused by the penetration of bacteria into injured plant parts. By excreting certain chemical agents bacteria break up cell units, loosen them or kill part of the cells.

This is followed by decay of plant parts, the infected plant tissue turning into a soft pulpy mass. Such disease symptoms are termed "wet rot". Some bacteria penetrate deeper into the tissue reaching the water ducts within the plant and plant vessels and destroy the tissue. This leads to the blocking of the vascular system. The exhibited disease symptoms, known as "vessel bacteriosis", lead to an interruption of the sap flow within the plant, followed by wilting and death. The infection of the plants with bacteria primarily takes place at plant wounds. Insects also act as carriers of bacteria.

Ex. 4 Complete the sentences according to the text.

1) Cultivated plants and supplies in store rooms_____.
2) Control of pests and disease pathogens must become _____.
3) Pests and disease pathogens directly or indirectly influence_____.
4) Some of the bacteria possess_____.
5) The size of the cells is_____.
6) Bacteria diseases are usually caused by_____.
7) By excreting certain chemical agents bacteria_____.
8) This is followed by decay of_____.
9) "Vessel bacteriosis" leads to_____.

Ex. 5 Say if the sentences are true or false. Correct the false ones.

1) The protection of agricultural crops is a decisive factor for securing yields.
2) Every year thousands of tons of produce are lost.
3) Disease pathogens are animal or plant organisms which damage either cultivated plants or the products derived there from.
4) Higher organisms consist of a single cell only.
5) Cilia are thread-like appendices.
6) The pathogen could be seen without a microscope.

7) Bacteria multiply by simple fission.
8) Bacteria don't penetrate into the tissue.
9) Insects also act as carriers of bacteria.

Ex. 6 Answer the questions to the text.

1) Why are millions of tons of produce lost every year?
2) What measures must be taken to protect agricultural plants and supplies?
3) What is meant by a pest or disease pathogen?
4) Bacteria consist of a simple cell only, don't they?
5) What are cilia? How are they fixed?
6) How do bacteria multiply?
7) What are bacterial diseases usually caused by?
8) What is "wet rot"?
9) What leads to the blocking of the vascular system?
10) What does "vessel bacteriosis" lead to?
11) Where does the infection of the plants take place?

Grammar revision:

Ex. 7 Fill in prepositions where necessary.

1) A decisive factor … securing yields is the protection … agricultural crops.
2) Cultivated plants are threatened … thousands … pests and disease pathogens.
3) Every year millions … tons … produce are lost and plants and animals are retarded … growth and development.
4) They influence … the health of man.
5) Bacteria consist … a single cell only.
6) Some … the bacteria possess thread-like appendices … the purpose … locomotion.
7) These cilia are fixed either … one end … the cell or are arranged … the whole surface … the cell.
8) The pathogen is visible … the aid … a microscope only.
9) Bacteria multiply … simple fission.

Ex. 8 Make up sentences. Put the words in right order.

1. Bacteria, as, insects, of, act, carriers.
2. Oxygen, want, why, living, things, do, all?
3. Influence, man, disease, of, health, domestic, the, animals, and, pathogens.
4. Plants, pests, cultivated, damage.
5. Is, size, microscopic, the, cells, the, of.
6. Fission, bacteria, by, multiply, simple.

Speaking tasks:

Ex. 9 Prove that:

– control of pests and disease pathogens must become the greatest task for all scientists, technical engineers and farmers responsible for the production of agricultural products;
– disease pathogens influence the health of man and domestic animals;
– bacteria destroy and kill plants;
– cultivated plants are more liable to disease than wild plants;
– it's better to prevent a disease rather than to cure it.

Ex. 10 Speak on the topic "Plant Protection" according to the plan.

1. The importance of plant protection in agriculture.
2. Disease pathogens.
3. Plant diseases.
4. Control of plant diseases.

Ex. 11 Fill in the blanks with the names of objects used in the laboratory. Use the words below.

microscope, barometer, test-tube, funnel, burner, stand, thermometer, scales

1. … is a device for supporting things during experiments.
2. … is an instrument for measuring temperature.
3. … is a device for supplying heat.
4. … are an instrument for weighing things.
5. … is a device for pouring liquids.
6. … is a device for holding chemicals during experiments.
7. … is an instrument for looking at very small things.
8. … is an instrument for measuring atmospheric pressure.

Ex. 12 Read the English proverbs and think of their Uzbek equivalents. Use the proverbs in situations.

1. The evil field will evil yield.
2. There is no rose without a thorn.
3. As you sow, so shall you reap?
4. No garden without its weeds.
5. The rotten apple spoils its companions

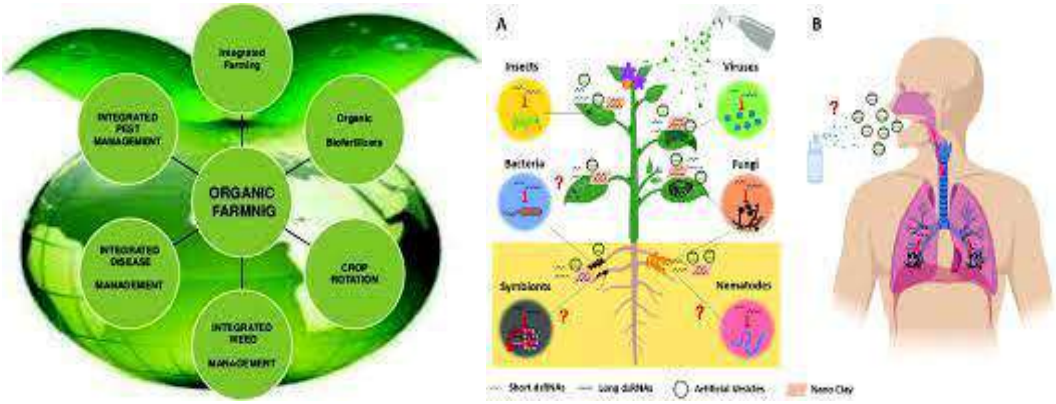
QUIZ TIME

Odd One OUT 1

Look at these groups of words.
Which word does not fit?

For example:

LESSON 6 CONTROL OF PLANT DISEASES



Vocabulary tasks:

Ex. 1 Read active vocabulary and translate them into Uzbek.

concentrate, rust fungi, copper sulphate, lime, sulphur, bordeaux mixture, mildew, rot, carbon disulphide, chloropicrin, mature, germs, by disease in plants is meant, liable to disease, storage loss, brought about, functional disturbances, root, tuber, bulb stem, most to be feared;

Ex. 2 Learn the new words and word phrases in Ex.1 by heart and make up sentences.

Reading tasks:

Ex. 3 Read the text and translate it into Uzbek.

Plant Diseases

By disease in plants is meant some disturbance in the normal life-processes which affects either a particular organ or the entire plant, and which sometimes leads to premature death. Cultivated plants are usually more liable to disease than wild plants.

The losses caused by plant diseases are sometimes enormous, and cultivation of certain crops in some countries had been abandoned in the past owing to the ravages of diseases.

Storage losses through disease may be severe. Diseases in plants may be brought about either through attack by some kind of parasite or by some autonomous, functional derangement. Abnormal moisture conditions, peculiarities of soil, extremes of temperature, and many other factors cause functional disturbances. Many different groups of organisms attack plants parasitically. Nematode worms of microscopic size often invade plants, and living parasitically therein, cause serious diseases in roots, tubers, bulbs, stems, and leaves. Highly

infectious diseases of the virus type are now recognized to be among the most serious that affect plants; they are often transmitted by insects.

The fungi include an immense number of forms parasitic on plants which are often extremely injurious. The diseases most to be feared are those which are epidemic in character, i.e. those which develop almost simultaneously and universally throughout a crop.

Plant diseases establish in such a manner that they are often well developed before they can be detected. By the time the disease is evident it is rarely possible to cure it. The plant pathologists, therefore, concentrate their efforts on the prevention of disease rather than its cure. The use of disease-resistant varieties is one of the most effective means of reducing disease in cultivated plants. It is also very important to destroy the sources of infection. Fire is the most effective way in this case.

The elimination of host plants plays an important part in the control of some disease caused by rust fungi. Efficient drainage of the soil helps in checking diseases which attack the tissues at the ground level. Fungicides now play a very important part in the control of plant diseases.

They are often applied in liquid or powder form. Spray mixtures are used for the control of some diseases especially those that attack orchards. Copper sulphate, lime, sulphur and Bordeaux mixture are used to control some of the rots, blights and mildew diseases. Carbon disulphide and chloropicrin are used for treating soil against nematodes. By planting at a particular time some crops can be grown and mature before the disease germs become active.

Ex. 4 Complete the sentences according to the text.

1) By the time the disease is evident…
2) The plant pathologists concentrate their efforts on…
3) Fire is the most effective way…
4) Efficient drainage of the soil helps in…
5) Fungicides now play a very important part in…
6) Spray mixtures are used for…
7) Copper sulphate, lime, sulphur and Bordeaux mixture are used to…

Ex. 5 Say if the sentences are true or false. Correct the false ones.

1) Plant diseases establish in such a manner that they are often well developed before they can be detected.
2) It is always possible to cure a disease.
3) The use of disease-resistant varieties isn't an effective means of reducing disease in cultivated plants.
4) It is also very important to destroy the sources of infection.

5) Fungicides are applied only in liquid form.
6) Copper sulphate is used for treating soil against nematodes.
7) Some crops can be grown and mature before the disease germs become active provided they are planted at a particular time.

Ex. 6 Answer the questions to the text.
1) What do the plant pathologists concentrate their efforts on?
2) What is the most effective means of reducing disease in cultivated plants?
3) What is the best way of destroying the sources of infection?
4) What plays an important part in the control of some diseases caused by rust fungi?
5) What is spray mixtures used for?
6) What is used to control some of the rot, blights and mildew diseases?

Speaking tasks:

Ex. 7 Add more information to the statements.
1) Plant diseases affect either a particular organ or the entire plant.
2) The losses caused by plant diseases are sometimes enormous.
3) Diseases in plants may be caused either by some kind of parasite or by some functional derangement.
4) Many different groups of organisms attack plants parasitically.

Ex. 9 Make a summary of the text. The following will help you:

The plan for retelling the text	*The expressions to be used while retelling the text*
1. The title of the text (article).	The title of the text is… The text is entitled… The text comes under the title…
2. The main idea of the text.	The main idea of the text is… The text is about… The text is devoted to… The text deals with…
3. The contents of the text.	According to the text… The author touches upon (illustrates, raises a problem of, describes)… In conclusion… The author comes to the conclusion that…

Grammar revision:

Ex. 10 Define the types of Subordinate Clauses. Translate the sentences.

1. The place where we stopped to rest was really beautiful.
2. That is what I want to ask you.
3. I am sorry you can't come.
4. What you don't understand is that he'll never agree to this plan.
5. You can take any seat you like.
6. When I woke up it was raining hard.

Ex. 11 Add the missing link word.

1. I don't know ___ to do.
2. He has forgotten ___ to go.
3. She can't understand ___ to do the exercise.
4. Tell me ___ to be there, and I won't be late.
5. Have you decided ___ to invite to the party?
6. Can you tell me ___ ___ this book costs?

Ex. 12 Give a short definition of the following words, using "who", "that" or "which".

e.g. fruits ***Fruits*** *are plants* ***that (which)*** *are used as food.*

1) a university;	2) a veterinary surgeon;	3) soil;	4) a student;
5) a root;	6) an agronomist;	7) beef;	8) tomatoes;
9) fertilizer;	10) a farmer.		

Ex. 13 Make sentences with *either … or* and *neither … nor*. Remember that in negative sentences two variants are possible.

e.g. *Tom was busy at work, so he couldn't come to the party. And Jane didn't come because she had to visit her sick friend. –* ***Neither*** *Tom* ***nor*** *Jane came to the party.*

1. I'm not sure where he is from. Maybe he is Spanish, and maybe he is Italian.
2. The hotel wasn't clean and it wasn't comfortable.
3. Is that man's name Richard? Or is it Robert? It's one of the two.
4. I don't have the time to go on holiday, and I don't have the money.
5. We can leave today or we can leave tomorrow – whichever you prefer.
6. George doesn't smoke and he doesn't drink.

Ex. 14 Complete the sentences with *either/neither*.

1. "Do you want tea or coffee?" ".... I really don't mind."
2. You can go ... way to the city centre: by the river or along the main road.
3. It wasn't a very good football match. ... team played well.

4. “Which of the two films did you prefer?” “Actually I didn’t like ... of them.”
5. ... of my parents is English. My father is Polish and my mother is Italian.
6. “Is today the 18th or the 19th?” “.... It’s the 20th.”

QUIZ TIME

DOUBLES 2

Look at each picture. Then put one word from column A with another word from column B to form a compound which describes the picture. It may be one word, 2 words, or hyphenated.

For example : 1. Boarding pass.

A	B
BOARDING	RING
THUNDER	HANDED
EVENING	SHADE
YOUTH	BULLETIN
SECONDARY	STORM
LEFT-	MADE
OPENING	HAND
FALSE	PASS
NEWS	CLASS
HOME-	HOURS
TIME	HOSTEL
SECOND-	CHARGE
SERVICE	SCHOOL
EAR	TEETH
LAMP	TABLE

LESSON 7 FRUITS AND VEGETABLES

Vocabulary tasks:

Ex. 1 Read the active vocabulary of the lesson and translate them into Uzbek.
edible, herbaceous,herb, root, stem, Brussels sprouts, beet, cauliflower, radish, celery, kohlrabi, rhubarb, tuber, spinach, spinage, sprout, egg-plant, onion, corn, bulb, squash, garlic, pepper, leek, (to) seed, lettuce, seeding, artichoke, broccoli, bean, pod, concern, seedling, nursery, occasionally, tissue, pistil, apricot, grape, bush, corn grains, pear, plum, mature,maturity, blackberry, strawberry, cherry, pineapple, (to)harvest, to spoil, to transplant, ripe. pulpy, fleshy, ovary, succulent, mulberry, fertile, fertilizer, fertilization, propagation, dietary, spoilage;

Ex. 2 Fill in the words.

edible fertilization root spoilage seeding

1) Don't let sheep eat leaves of those trees, they are poisonous … .
2) Radishes and turnips are … vegetables.
3) Farmers prepare a field before … plants.
4) He studied the effect of … on grain yields.
5) Some vegetables are subject to quick … .

Reading tasks:

Ex. 3 Read the text and translate it into Uzbek.

Fruits and vegetables

A vegetable is any kind of plant life or plant product. The term "vegetable" usually refers to the fresh edible portion of herbaceous plant-roots, stems, leaves, flowers or fruit. These plant parts are either eaten fresh or prepared in a number of ways.

Vegetables are usually classified on the basis of the part of the plant that is used for food. The root vegetables include beets, carrots, radishes and turnips. The stem

vegetables include asparagus and kohlrabi. Among the edible tubers are potatoes. The leaf vegetables include Brussels sprouts, cabbage, celery, lettuce, rhubarb and spinach. Among the bulb vegetables are garlic, leeks and onions. The flower vegetables include artichokes, broccoli and cauliflower.

The fruits commonly considered vegetables by virtue of their use include beans, cucumbers, eggplants, sweet corn, squash, peppers and tomatoes. Most fresh vegetables have water content in excess of 70 percent, with only about 3.5 percent protein and less than 1 percent fat. Vegetables, however, are good sources of minerals, especially calcium and iron, and vitamins, principally A and C. Most vegetables are planted by seeding in the fields where they are to be grown, but occasionally they are germinated in a nursery of a greenhouse and transplanted as seedlings to the field.

Vegetables may be washed, sorted, cut and packaged for sale as fresh products. Fresh vegetables are subject to quick aging and spoilage, but their storage life can be extended by such preservation processes as canning, freezing or pickling.

A fruit is the fleshy or dry ripened ovary of a plant, enclosing the seed or seeds. Thus apricots, bananas and grapes, as well as bean pods, corn grains, tomatoes and cucumbers are all technically fruits. Popularly, however, the term is restricted to the ripened ovaries that are sweet and either succulent or pulpy. A fruit is the usually sweet-tasting part of a tree or bush which holds seeds which can be eaten. Oranges, apples, pears, plums, bananas are all types of fruit. A fruit is a mature ovary. It usually contains seeds. There are two broad categories of fruits: fleshy fruits such as oranges, cherries, blackberries, strawberries, pineapples and mulberries and dry fruits such as nuts.

In general, the chief concerns of fruit cultivation are the propagation and improvement of varieties; the improvement of the microclimatic conditions and soil conditions; fertilization and pest control; the development of harvesting and postharvest practices. Fruits are important sources of dietary fibre and vitamins (especially vitamin C). Although fresh fruits are subject to spoilage, their shelf life can be extended by refrigeration. Fruits can be processed into juices, jams and jellies and preserved by canning and pickling.

Ex. 4 Answer the following questions.

1) What does the word “vegetable” mean?

2) What does the word “fruit” mean?

3) What does usual classification of vegetables depend on?

4) Are vegetables good sources of minerals?

5) How many categories of fruits are there?

6) Are fruits important sources of dietary fibre and vitamins?
7) What is usually done with fruit and vegetables used for sale as fresh products?

Ex. 5 Read the text and say if the sentences are true or false. Correct the false ones.

1) A vegetable is a plant that is used as food, particulary in savoury dishes.
2) The potato is the most popular vegetable in France.
3) The current trend for healthy eating has led to a rise in demand for fresh green vegetables.
4) In winter we tend to eat more root vegetables, such as carrots and parsnips.
5) Raw vegetables contain more potassium than cooked ones.
6) Barbara and Got created a vegetable garden at the back of the house and sold their produce at the local market.
7) For a healthy diet you should eat at least one piece of fresh fruit every day.
8) For this recipe you need summer fruits, such as raspberries, red currants and blackberries.
9) A fruit salad is not a mixture of pieces of different types of fruit, which is usually served at the end of a meal.
10) Mary made a fruit salad for dessert using strawberries, kiwis and pineapples.

Ex. 6 Make a list of vegetables and fruits mentioned in the text and memorize them.

Speaking tasks:

Ex. 7 Do you know when to harvest: Read the passage and discuss in groups.
Apple – There is no sure method for home gardeners to determine maturity for all varieties. If picked prematurely, the fruit is likely to be sour, small and poorly coloured; if picked overripe, it may develop internal breakdown and store poorly. To harvest apples correctly, you must be familiar with the term "ground colour". Ground colour is the colour of an apple's skin. When the ground colour of red varieties changes from leaf green to creamy, the apples are ready to harvest.

Apples will improve in storage if they are picked when hard but mature. Most apples have brown seeds when ready for harvest.

Cherry – The size of the fruit increases until mature. Sample the fruit to determine the proper time to harvest. It should be fully coloured and flavourful as quality will not improve after harvesting.

Currant – Harvest currants for jelly when they are slightly underripe for high pectin content. Pick them fully ripe to use for jams or if they are to be stewed.

Fully ripe currants are coloured, juicy and beginning to soften.

Gooseberry – Pick when the berries are firm and greenish-yellow with darkened seeds. The fruit of some varieties often turns very light to dark red when mature. An over mature fruit is purplish. Quality does not improve after harvest.

Pear – Harvest when the ground colour changes from dark green to yellowish green and before the fruit is tree- ripe. Additional guides to proper harvesting time are when the fruit separates from the twig.

Plum – Harvest when the flesh is soft. The skin changes its colour before the fruit is mature.

Raspberry – Harvest when the fruit is full colour and separates easily from the centre.

Strawberry – Harvest when uniformly red and beginning to soften. Harvest with the cap.

Beet – Harvest when roots are 11/ 4 to 2 inches in diameter. Some varieties may maintain quality in larger sizes.

Cabbage – Harvest when heads are solid, but before they split.

Carrot – Harvest when 3/ 4 to 1 inch in diameter or smaller when thinning. For storage, leave carrots in soil until a light frost occurs.

Cucumber – Proper harvesting size is determined by product use. Leave a short piece of stem on each fruit. Harvest daily and don't allow fruit to mature.

Onion – Correct harvesting stage is determined by the type and product use. Harvest onions when they are 6 to 9 inches tall for immediate table use. Onions grown for fresh use should be harvested when the bulbs are 1/4 to 1 inch in diameter. Harvest seed grown onions for boiling when the bulbs are 11/2 inches in diameter. Harvest for storage when the tops have weakened and fallen over and the bulbs are 2 or more inches in diametr. Harvest before hard frost.

Pepper, green – Harvest when fruits are full sized and firm. Allow peppers to remain on the plant until they become completely red. This usually requires additional 2 to 3 weeks.

Potato – For storage, harvest when full sized with firm skins. Tubers continue to grow until the vine dies. For new potatoes, harvest at any early stage of development. This is usually when tubers are 11/4 to 11/2 inches in diameter.

Pumpkin – Harvest pumpkins when they are full coloured and the skins have hardened enough to resist the fingernail test. Harvest before a killing frost.

Squash, summer type – Harvest when the fruit is young and tender. Your fingernail should easily penetrate the rind. Long-fruited varieties, such as zucchini, are harvested when 11/2 inches in diameter.

Squash, winter type – Harvest when mature. The rind should be firm and glossy and not easily punctured by your thumbnail. The portion that contacts the soil is cream to orange when mature. Harvest squash before a heavy frost.
Tomato – For peak quality, harvest 5 to 8 days after fruits are fully coloured. Tomatoes lose their firmness quickly if they are overripe.

Ex. 8 Agree or disagree with the following statements. Correct the false ones.
1. You should pick gooseberries when they have light seeds.
2. There is a definite method to determine maturity for all varieties of apples.
3. Harvest beets when roots are 11/ 4 to 2 inches in diameter.
4. It's time to harvest pears when the ground colour changes from yellowish green to dark green.
5. Harvest cabbages when heads are not large and as soon as they split.
6. You should not leave carrots in soil until a light frost occurs.

Ex. 9 In each list all the words except one have something in common. Which is the odd one?
1. Currant, maple, raspberry, gooseberry, cherry.
2. Potato, cucumber, carrot, spinach, pear.
3. Apple, grape, peach, eggplant, plum.

Ex. 10 Do people usually eat the leaves, roots, seeds or fruit of these plants? Make four lists according to what is eaten:

Leaves roots seeds fruit

Green pepper, sunflower, bean, carrot, grapes, mustard, cabbage, potato, spinach, lettuce, tomato, beetroot, pea, onion, brussels sprout, peach.

Ex. 11 Read the following proverbs and compare them with their Uzbek equivalents.
1. A black plum is as sweet as white.
2. He that would eat the fruit must climb the tree.
3. Shake the tree when the fruit is ripe.
4. Every vegetable has its season.
5. As the tree, so the fruit.
6. The apple never falls far from the tree.
7. Where there's an apple on the ground there must be an apple tree around.

QUIZ TIME

Odd One OUT 1

Look at these groups of words.
Which word does not fit?

For example:

LESSON 8 MECHANIZATION OF AGRICULTURE

Speaking tasks:

Ex. 1 Think and answer the following questions. Discuss them in groups.

1) Where are cars used? What cars are used on farms?
2) Have you ever been to the Minsk Tractor Works?
3) What production is it famous for?
4) What famous car companies do you know?
5) Are there any famous corporations in your country?
6) Do they produce only cars?

Ex. 2 Add more information to the statements.

1) Today all agricultural processes are mechanized.
2) The tractor is the most important machine on the modern farm.
3) Farm tractors may be divided into two groups: wheeled and tracklaying.

Vocabulary tasks:

Ex. 3 Read and translate the active vocabulary of the lesson into Uzbek.

to attach, to bind, crawler, device, to dig, drill, to grind, harrow, hay, intricate, manure, to mow, (to) plough, to reap, to roll, seed-bed, to shear, (to) silage, to sow, stationary, to thresh, enable, halogen, efficiently, unique, acoustical, reliability, absorber, truck, manufacture, acoustic system, cab, mount, enhance, work lights, climate control filters, refinement, due to;

Ex. 4 Complete the text using the words given below.

crops, threshes, combine harvester, reap, cut, dig, seed drill, plough, implements, sow, attached, harvesting.

Farm machinery

The tractor is the most important machine on the modern farm. It pulls many kinds of farm … that cultivate the soil, and that cultivates the soil, and that plant and harvest …. One of the most useful implements the tractor pulls is the …, which

breaks up and turns the soil. The tractor also pulls other implements: cultivators, harrows, and rollers. When farmers … seeds, they use a … to the tractors. Many kinds of machines have been developed for … different crops. Some … potatoes or sugar beet. Some … grass for hay or silage. Others … wheat or other cereals. A … is used to gather wheat, oats and other cereals. It cuts the crop and … the grain from it as well. Farm machines have made farming easier and helped to produce more food.

Ex. 5 Fill in the words.

dig, sowed, seed-bed, reap, binders, threshes.

1) Some agricultural machines … potatoes or sugar beets.
2) Some machines … wheat or other cereals.
3) Long ago man prepared a … using a hoe only.
4) Farmers … the field with wheat.
5) A combine harvester cuts the crop and … the grain.
6) Self-… replace manual labour in agriculture.

Reading tasks:

Ex. 5 Read and translate the text.

MECHANIZATION OF AGRICULTURE

At the beginning of the 20th century mechanization of such basic processes as ploughing, sowing, and grain-harvesting was still by no means complete. Now we can say that it is. The thing now is the full-scale mechanization of jobs requiring more intricate machinery, such as harvesting of sugar-beets, cotton, potatoes, mowing of hay crops, silaging and livestock care.

Agricultural implements and machines are now very numerous and diversified and may be divided into five main groups:

1) prime movers, i.e. engines of all kinds, tractors, etc.;
2) cultivating machinery, including ploughs of all kinds, harrows, rollers, manure-distributors, drills, etc.;
3) harvesting machinery, including mowers, self-binders, threshing machines, elevators, potato-diggers, etc.;
4) stationary or barn machinery, including such food-preparing machines as chaff-cutters, grinding-mills, root-cutters, etc.;
5) dairy machinery, including milking-machines, separators, sterilizing machines;

In addition there are some other machines, including sprayers and sheep shearing machines.

The Ford Company is known as a technologically advanced manufacturer of vehicles. For many years the Ford Company has been deeply involved in the manufacture of tractors, cars and trucks. Ford tractors enable farmers to work quickly and efficiently. The cab is a comfortable land efficient workplace. Modern acoustic systems have greatly reduced noise levels inside the cab. The driver's seat turns easily and gives the driver a more comfortable view. Air filtration, efficient heating and ventilation with air-conditioning further enhance comfort and the driver's efficiency. There's more. Individually adjustable halogen work lights have been installed into the cab.

These tractors have also been equipped with climate control filters. Ford tractors are famous for their unique combination of outstanding performance, high reliability and cost efficiency. They have been continually improved since their introduction. Dozens of features and refinements have been added during recent years. Ford tractors have been trusted by generations of farmers due to their high quality.

Farm machinery: Needless to say, one of the most vital industrial achievements for farmers today is the introduction of agricultural tractors in their work. Horses and men have been almost entirely replaced by tractors in many heavy and time-consuming tasks that are carried out on the land. A tractor performs the work of numerous horses and, what is of greater importance, it doesn't need any rest. If necessary attention is paid to its lubrication and it's constantly supplied with fuel, it will work on indefinitely. During the years since its introduction a huge progress has been made in developing a more efficient machine. Modern tractors have been constructed to meet all requirements of space, comfort, vision and safety. Many devices have been incorporated in the mechanisms of the tractor for this purpose. The 6-cylinder engines have been installed in them for improved productivity and reliability. Some tractors have been equipped with a hydraulic system, which gives the driver the choice of the right power for every operation.

Nowadays there exists a wide range of different types of tractors. Let's say, the most common type today is the general-purpose wheeled tractor that is used on most farms and has an engine of up to 100 h. p. (horsepower). The Minsk Tractor Works is the world's leading manufacturer of agricultural equipment. Since 1953 thousands of universal wheeled tractors under the manufacturer's brand "Belarus" have been produced. The well-known advantages of these tractors are their low fuel consumption, long service life and simplicity. The modern tractors have been fitted with six-cylinder diesel engines. Thus they can develop the sufficient horsepower under most unfavourable conditions and show a high efficiency. The

nine-speed gearbox provides a wide range of speed for performance of all types of farm operations. The comfortable, safe and noise-proof cab provides excellent visibility and together with an adjustable soft seat, tinted glass, cab air filtering and a heating device ensures comfort for the driver throughout the whole working day. All the features of "Belarus" tractors meet the international standard specifications.

Ex. 6 Answer the following questions from the text.

1) What agricultural processes are mechanized today?
2) Agricultural implements and machines are now very numerous and diversified, aren't they?
3) What groups may they be divided into?
4) What cultivating machinery do you know?
5) What harvesting machinery can you name?
6) Is there any dairy machinery?
7) What is the Ford Company famous for?
8) Has the Ford Company been deeply involved in the manufacture of tractors, cars and trucks?
9) Ford tractors have everything to work quickly and efficiently, don't they?
10) What have these tractors been equipped with?
11) Why have Ford tractors been trusted by generations of farmers?

Ex. 7 Say if these statements are true or false. Correct the false ones.

1) The tractors are used instead of horses in many heavy tasks.
2) A tractor performs the work of one horse.
3) A tractor needs some time of rest.
4) If the tractor's lubrication system is maintained in good condition, the tractor will work for a long time.
5) The hydraulic system in the tractor enhances the driver's safety. The cultivator is attached to the tractor.
6) Various cultivating devices supplement manual labour.
7) When farmers sow seeds, they use a seed drill.
8) They do less harrowing than they did some years ago.
9) Most agricultural processes require more intricate machinery.
10) A plough breaks up and turns the soil.
11) The tractor pulls many implements: cultivator, harrows and rollers.
12) Mowing machines cut grass for hay or silage.

Ex. 8 Add more information to the statements.

1) Today all agricultural processes are mechanized.
2) The tractor is the most important machine on the modern farm.
3) Farm tractors may be divided into two groups: wheeled and tracklaying.

Grammar revision:

Ex. 9 Make the positive verbs negative. Make the negative verbs positive:

Example: I didn't know the answer. I knew the answer.

1. My aunt gave me a birthday present.
2. It didn't rain yesterday morning.
3. I didn't drink the coffee, but I ate the cake.
4. She brought a bottle of wine.
5. I wasn't tired, so I didn't go to bed early.
6. He lost his passport.
7. The coat didn't cost a lot of money.
8. I didn't have a lot of money, so I didn't go shopping.

Ex. 10 Open the brackets using either Past Simple or Past Continuous:

1. I (not want) to get up this morning. It (rain) and it was cold, and my bed was so warm.
2. When Rosie (skate) on the pond, she (fall) and (break) her leg.
3. I (listen) to the news on the radio when the phone (ring).
4. I said “Hello” to the children, but they didn't say anything, because they (watch) TV.
5. Margareta (meet) her future husband while she (learn) English in Cambridge.
6. He (not drive) fast when the accident (happen).
7. Ann still (wait) for me when I (come). She was really angry.
8. What (you/read) when I (come)?
9. I (take) an umbrella, because it (rain).
10. Where (you/go) when I (see) you?

Ex. 11 Use the present continuous or present simple. All the sentences are future.

1. I (go) to the cinema this evening.
2. (the film/begin) at 3.30 or 4.30?
3. We (have) a party next Sunday. Would you like to come?
4. I (not/go) out this evening. I (stay) at home.
5. ‘(you/do) anything tomorrow morning?’ ‘No, I’m free. Why?’

6. We (go) to a concert tonight. It (start) at 7.30.
7. I (leave) now. I've come to say good-bye.
8. The English course (finish) on 10 May.
9. Helen, I (go) to the supermarket. (you/come) with me?
10. I'm bored with this program. What time (it/end)?

QUIZ TIME

OPPOSITES QUIZ

Write the opposite of these words by adding these beginnings:

dis... un... im... in...

correct	comfortable	honest	accurate
2 +2 5 X 1. incorrect	2.....	3.....	4.....
expensive	**lucky**	**polite**	**satisfied**
REAL PEARLS £2.50 5.....	13 6.....	7.....	COMPLAINTS 8.....
sufficient	**possible**	**fair**	**patient**
9.....	10.....	11.....	12.....

LESSON 9 FARM ANIMALS

Vocabulary tasks:

Ex. 1 Read the active vocabulary of the lesson and translate them into Uzbek.
animal husbandry, to breed, dairy cattle, beef, nutritious, to feed, manure, raw materials, wool, fat leather, feather, draft animals, domestic, livestock, breeding of farm animals, dairy cattle, poultry, to be bred throughout the world, a source of food, milk, to produce eggs, feeding livestock, maintenance, to supply with wool, feather, a domestic animal.

Ex. 2 Give the missing form.

Verb	Adjective	Noun
to breed - - - to manure - to domesticate	- - - feeding - fertile -	- production milk - - - -

Ex. 3 Complete the sentences using the right word.

a) **milked milk milkmaids**

1 Cows are … by electricity.
2 Girl students worked as … .
3 Dairy cows produce … that may be used in making dairy products.

b) **products productive production produced products**

1. The United States export most of the corn … .
2. Alfalfa may grow for many year … nutritious forage for farm animals.
3. The countries leading in wheat … are Russia, the United States, China, Canada, India, France and Italy.
4. Farm animals are kept for the production of nutritious … as meat, milk and eggs.
5. Karakul sheep are used in breeding high … sheep in India.

c) **fertile fertility fertilizers**

1. The increases in yields are obtained by application of proper amount of … .
2. Legume crops are known to improve soil … .
3. Clay soil is not … .

d) **feeding fed feed**

1. Alfalfa is a good winter … for different classes of cattle.
2. Different farm crops are used in … farm animals.
3. Farm animals must be … properly.

e) **bred breed breeding**

1. There are many farms where farmers grow some crops and … farm animals.
2. The … of farm animals is one of the branches of agriculture.
3. Dairy and beef cattle, hogs, sheep and poultry are widely … throughout the world.

Reading tasks:

Ex. 4 Read the text and translate it into Uzbek.

The Importance of Farm Animals

Animal husbandry is a branch of agricultural production. It includes the breeding of farm animals and their use. Dairy and beef cattle, hogs, sheep and poultry are bred throughout the world. Farm animals are highly important sources of food for man. They produce meet, milk and eggs. These are highly nutritious products. Animal husbandry is closely connected with plant growing. Different plants as grasses, grain crops and some vegetables are used in feeding livestock. At the same time manure produced by livestock is an important source for the maintenance of soil fertility.

Animal husbandry supplies industry with such raw materials as wool, fat, leather and feather. These raw materials are used by man for many purposes. Cattle have been the most important draft animals in agriculture. Now more than half of the world uses horses and cattle as draft animals. Domestic animals have been important in the economy of most countries for thousand of years. They are very important as the sources of the animal protein.

Farm Animal: Animal husbandry, a branch of agricultural production, includes the breeding of farm animals and their use. Farm animals are highly important sources of food for man. They are known to produce highly nutritious products such as milk, meat and eggs. In addition, the skin of animals, down and feather of poultry and wool of sheep are used as raw materials to produce clothing and for many other purposes. The most important group of farm animals is cattle. There are four types of cattle. They are: dairy cattle, beef cattle, draft cattle and dual-purpose cattle. Dairy cattle, that is, dairy cows provide milk that may be used in making various dairy products. Beef cattle are the producer of beef. One can raise dual-purpose cattle producing milk and meat. Draft cattle and horses are almost everywhere replaced by agricultural machinery. Important sources in producing human food are sheep and hogs. Sheep are raised for two purposes: wool and mutton production. The production cycle of hogs is much shorter that of cattle or sheep. In other words, unlike other farm animals hogs are rapid growing ones. They may be fattened in less then six months. That is why hog breeding is one of the most important and economic ways of solving the problem of supplying the population with meat.

Ex. 5 Make a report using the plan.

a) farm animals;
b) products and raw materials produced by farm animals;
c) crops grown for producing forage;
d) keeping farm animals all the year round;
e) domestic animals;
f) farm buildings for keeping animals;
g) draft animals;
h) farmers' work

Ex. 6 Answer the following questions from the text.

1. What farm animals are bred throughout the world?
2. Why do people breed farm animals?
3. What is manure used for?
4. What farm animals do we use as draft ones?
5. What products and raw materials do they provide?

Ex. 7 Use the words in capitals at the end of each line to form a new word that fits in the space in the same line.

Example: Most of the poultry … in the USA comes **PRODUCE** from commercial farms. - Most of the poultry **produced** in the USA comes from commercial farms.

1. In Britain cows are … all the year round. **PASTURE**
2. There are two types of … selection and crossing. **BREED**
3. This method of … enables farmers to raise stock without **FEED** a large number of workers.
4. There are more than 800 breeds and varieties of … sheep throughout the world. **DOMESTICATE**
5. Medium-… breeds are the Cheviot, No-Tail, Oxford, Tunis. **WOOL**

Ex. 8 Fill in the chart. Put each of the following words in its correct place in the passage below and then retell it.

domestic	nutritious	beef	eggs
pastured	productive	farm	breeds
sheep-pens	poultry	pigsties	cattle

Domestic Animals

The animals that are bred by man are known as … animals. Those animals that are used in agriculture are known as … animals. …, sheep, pigs and … supply us with meat, milk and … All these products are very important for the diet of people because they are highly …

In winter farm animals are kept in special farm buildings. They are cowsheds, …, … and poultry houses. Pasture is very important for the animals during summer. In warm regions the animals are … in winter too. There are many different … of dairy and … cattle and of other farm animals. Some of them are high … and some are not.

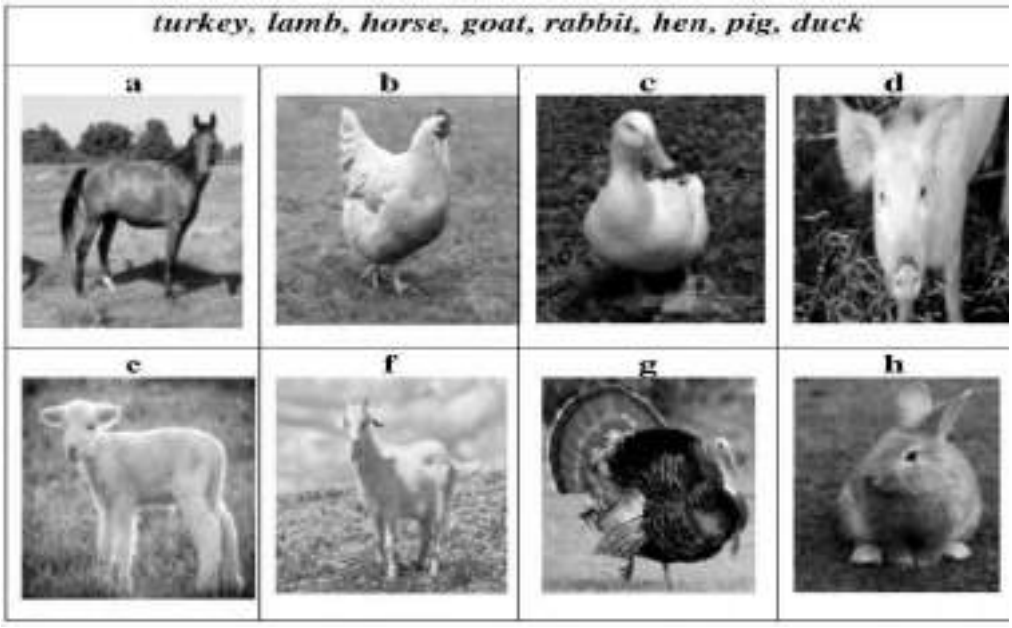
Ex. 9 Answer the following questions.

1. What farm do we call a mixed one?
2. What crops are used for producing forage?
3. When are the cattle kept in cowsheds?
4. When are the cattle pastured?
5. Where do animals grow and develop better: on pastures or in the cowsheds?
6. What farm animals does the farmer breed?
7. What are these animals kept for?
8. Where are they kept?
9. Is there much work to do on the farm?

Speaking tasks:

Ex.10 Match the pictures a-h to the words. How many other farm animals can you think of?

turkey, lamb, horse, goat, rabbit, hen, pig, duck



Ex. 11 a) Make up word combinations using a word or phrase from each pairs.

b) Use the word combinations you've made to complete the sentences below.

a)

1. formulated **a.** farming **2.** husbandry **b.** consumption

3. ruminant	**c.** breeding
4. regular	**d.** land
5. grazing	**e.** food
6. selective	**f.** animals
7. lamb	**g.** style
8. turkey	**h.** diets

b) 1. _____ for meat production is very popular than egg production from turkey.
2. The committee also said a reduction in beef and _____ _____ would lead to a rise in the consumption of plant-based food, as well as chicken and pork.
3. People have used _____ to make bigger horses to do heavy work.
4. Goat farming can be very suited to production with other livestock such as sheep and cattle on low-quality _____.
5. You can feed rabbits by our _____ which is available in our house like mix vegetables, mix fruit, etc.
6. _____ such as cattle, sheep, and goats convert large quantities of pasture forage or harvested roughage into meat, milk, and wool.
7. The activities on a pig farm depend on the _____ of the farmer.
8. Ducks are given specially _____ and are provided with access to drinking water.

Ex. 12 Work in small groups. Answer the questions based on the text "Livestock farming" and share your opinion with other groups.

1. What is livestock farming?
2. What is animal breeding concerned with?
3. What are the different types of livestock?
4. What does it mean to raise livestock?
5. What is livestock used for?
6. What is another word for livestock?
7. What do animal food products supply?
8. What does a balanced ration for farm animals contain?
9. In what cases can livestock farming be highly profitable?
10. What should every farmer learn before purchasing the equipment?

Ex. 13 Complete one or more of the following phrases and prepare oral reports describing these ideas.

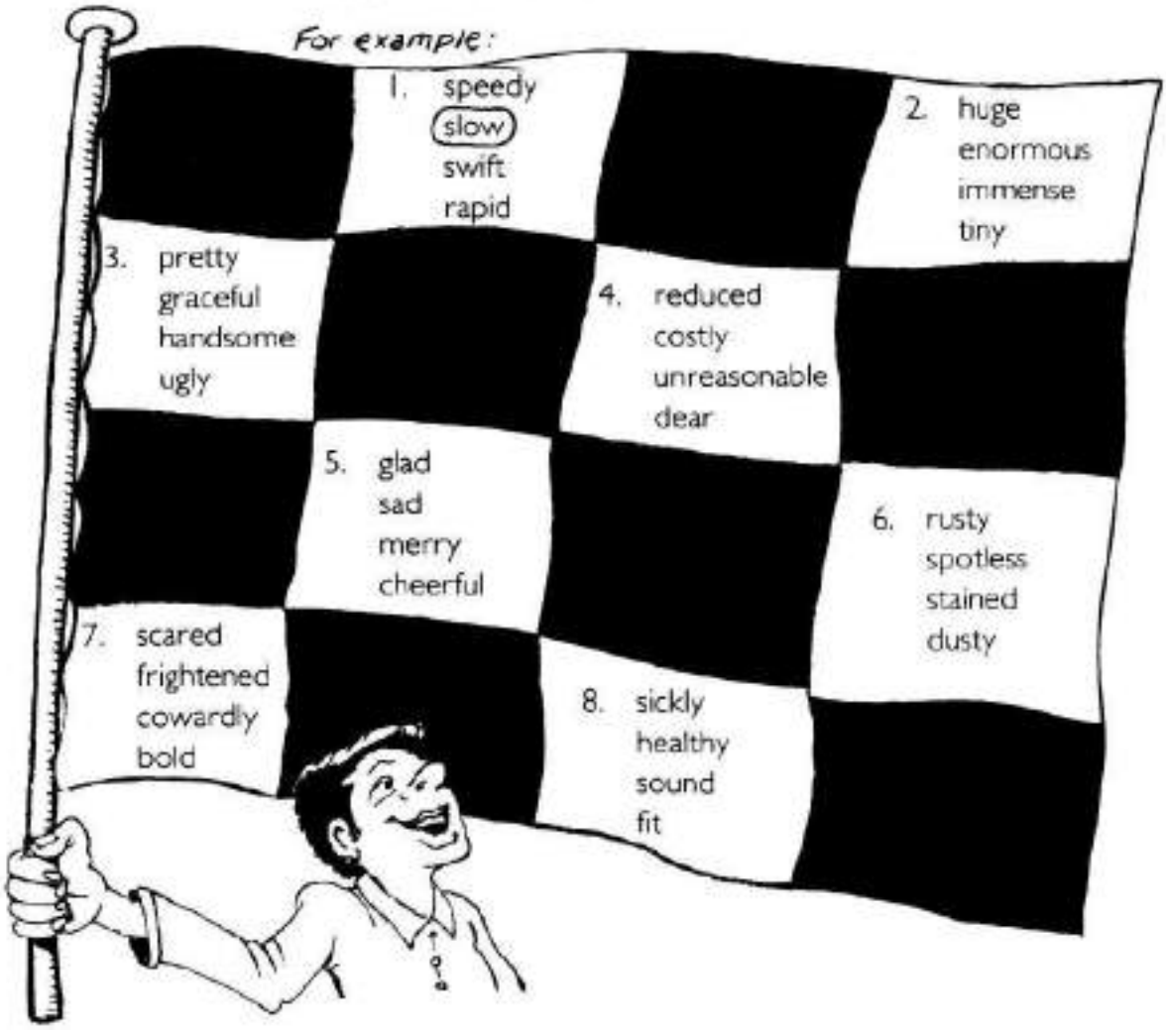
1. Livestock farming is important to me because ...
2. Livestock production is connected to the environment through...
3. Animal husbandry is connected to ... because ...
4. The livestock breeding sector is mainly represented by ...
5. Animals are bred and raised for ... .

6. Dairy animals produce ... .
7. We make clothing and furniture with ... .
8. Modern farm is ... .

QUIZ TIME

Odd One OUT 3

Here are 8 groups of adjectives.
Which word is the odd one out in each group?



LESSON 10 BEEF PRODUCTION FARM


Vocabulary tasks:

Ex. 1 Read and translate the active vocabulary into Uzbek.

be under pasture, care, management, to keep, paddock, to graze, scarce, alfalfa, hay, legumes, calf (calves), to wean, to castrate, to consume, veal, whole milk, gain, shed, rotational grazing, pasture grasses, beef production, pasture land, pasture forage, corn silage, grass silage, alfalfa class, soil fertility, age group, a male calf, veal production, the birth weight, a calf house, to be under pastures, proper feeding of cattle, to be kept on cultivated pastures, pastures are grazed in turn, pasture forage, keeping calves, weaning of calves, male calves, consuming a great amount, a shed divided into sections;

Ex. 2 Complete the following sentences using the active vocabulary.

1. Cattle _____ in green pastures and on the plain.
2. _____ cattle are raised for their meat.
3. Meat from calves that are less than 3 months old is called _____.
4. Hogs may be _____ in less than six months.
5. The animals are _____ in pens.
6. In the fall the calves are_____.
7. High beef and milk production is obtained by proper _____and _____.
8. In winter this farmer feeds his cows with _____ and _____.
9. At weaning time pigs should _____ 35 to 40 pounds or more.
10. To make rapid _____ pigs must be fed liberally from birth.
11. _____ helps to control diseases and parasites.
12. Grazing land is usually divided into _____.
13. Some hogmen are known to _____ pigs entirely on grain.
14. Corn silage, grass silage or carrots may be used in ration of breeding cows when they are not on pasture or when pasture forage is _____.

Reading tasks:

Ex. 3 Read the text and translate it into Uzbek.

Text Beef Production Farm

The area of the farm is 287 acres. Most of it is under pastures. Beef production is the most important part of the farm's economy. High beef production is achieved by proper care and management as well as proper feeding of cattle. They are kept on both natural and cultivated pastures. The pasture land is divided into paddocks which are grazed in turn. Such system of using passtures is known as rotational grazing.

When pasture forage is scarce or when cattle are not on pasture, they are fed with corn silage, grass silage or high quality clover or alfalfa hay. Corn and legumes are the crops grown by the farmer for fattening cattle. Growing legumes, the farmer supplies the animals with highly nutritious feeds as well as increases the soil fertility.

As to the calves they are kept in groups separated by 10 days age. Keeping calves in age groups allows the farmer to feed them according to their age. Weaning is usually done at the age of eight weeks. Male calves are castrated at about a week old. Most of the calves are sold as veal. Calves raised for veal production are generally ready for marketing at the age of 6 or 8 weeks. At this age they weigh about 200 to 300 pounds. The best veal is obtained by liberal feeding of whole milk. Calves consuming a great amount of whole milk grow and develop properly and the quality of meat is high. The total amount of milk required during the period of vealing will depend on the birth weight of the calf. About 10 pounds of milk are required for one pound of gain. A shed divided into four sections is used as a calf house. New calves are to be put into this house in age groups.

Dairy Farming: Dairing is one of the most important branches of agriculture. One reason for the importance of dairyng is the high nutritive value of dairy products. Milk is one of the best sources of calcium, the mineral which is so essential for the growth of the skeleton of the animals. High-quality milk also contains considerable quantity of phosphorus and iron. Milk is a good source of vitamins A, D and B1. Different dairy products are obtained by man from milk. On dairy farms farmers grow crops, grasses and legumes in rotations. Dairy cows use large quantities of forage and at the same time help to maintain soil fertility. To get best results farmers should have high-yielding cows, proper buildings and proper feeds.

The area of the farm is 420 acres, 350 of each is in grass. There are about 250 cows and about 250 calves on the farm. The farm has 20 bulls as well. The heifers are kept in age groups of 20 to 30 in each. Two or three bulls are provided for each group. All the cows kept on the farm belong to high-productive breeds.

The average milk yield obtained from a cow increased from 600 to 800 gallons per year. Dairy cows are milked twice a day. As to the high-yielding cows they have to be milked three times a day. Cows are not milked by hand. They are milked with special machines.

As the climate of the region is mild the cattle are kept on pasture both in summer and in winter. Permanent as well as temporary pastures are very good here, because the soil is fertile. The main pasture grasses are clover and alfalfa. The pasture land is divided into 75 paddocks. Each paddock is not more than four acres. The pastures are commonly grazed at about 100 cows to the acre and the interval between grazings is rather long. When supplementary feed is necessary, it is given to the dairy cows in the form of concentrates or root crops and sometimes in the form of silage. The amount of feed consumed by the cow per day varies with the amount of milk produced by the cow and her live weight.

Ex. 4 Answer the following questions from the text.

1. What is the most important part of the farm's economy?
2. What way is high beef production achieved by?
3. What pastures are usually cattle kept on?
4. What kind of system is known as rotational grazing?
5. What are cattle fed with when pasture forage is scarce or when cattle are not on pasture?
6. What crops supply animals with highly nutritious feed?
7. Why do farmers keep cattle in age groups?
8. What age are generally calves weaned at?
9. What age are male calves castrated at?
10. What are calves raised for?
11. When do farmers get the best veal?
12. How much milk is required for one pound of gain?
13. Why is dairying very important?
14. What farm animals does the farmer keep?
15. What is the area of a farm?
16. What element is milk rich in?
17. What breeds do all the cows kept on the farm belong to?
18. What is the average milk yield obtained from a cow?
19. How often are dairy cows milked?
20. Are cows milked by hand?
21. Why the cattle are kept on pastures all the year round?
22. What are the main pasture grasses?
23. What is pasture divided into?

24. How many cows are grazed to the acre?
25. What form is supplementary feed given to the dairy cows?
26. Does the amount of feed consumed by the cow per day vary or not?

Ex. 5 True or false? Correct the false statements.

1. High beef production is achieved by proper fattening.
2. Paddock system of using pastures is known as rotation.
3. When cattle are kept in barns they are fed with grass.
4. At the age of 6 or 8 weeks calves raised for veal production weigh over 200 pounds.
5. Calves are weaned at the age of eight months.
6. Legumes are highly nutritious feeds.
7. Calves consuming a lot of whole milk have high quality meat.
8. For one pound gain more than 12 pounds of milk are required.

Ex. 6 Put each of the following words in its correct place in the text below.

Dairy	bred	paddocks	poultry	silage
keeping	collect	cowshed	eggs	pasture
market	high-quality	yield	grass	grazing
legume	feed	milk	clean	hay
milking	kept	supplies	acres	

Dairy Farm in East Lancashire

The typical small … farm in Lancashire is a small family farm of about 40 … with 18 to 20 … cows. The farmers keep … as well. It is … for eggs. Most of the milk and … are marketed. The land is all … . Half of it is used for … and the other half for … . The area used for grazing is divided into … . The quality of … grasses is good. Summer pasture provides … and exercise for the cows. Poultry is … only in the house. This method is known as intensive method of poultry… . There are three kinds of farm buildings on the farm. They are the hay barn, a … and a poultry house.

As it is a small family farm, the farmer has to do all the work on his farm himself. He must feed the animals, … the cows, … eggs and … the cowshed and the poultry house. He himself takes the milk and eggs to the … . Most of the farm work is done with machines. The principle winter feed is a … hay. … making is not popular here.

The annual milk … per cow is about 750 – 800 gallons. The farmer … the cows with 3 1/2 pounds of concentrates per gallon of milk. These concentrates are provided for cows because it is difficult to make … hay.

Ex. 7 Make up sentences. Follow the pattern.

MODEL: Is | this | high-yielding | breed | dairy. This dairy breed is high-yielding.

1. be | silage | from | good | can | legume | made.

2. requires | cow | much | a | water | dairy.
3. farmers | their | in | cows | the | winter | keep | the | cowsheds | in.
4. tomorrow | the | will | pigsty | cleaned | be.
5. milk | much | different | require | to | cows | produce | nutrients.

Ex. 8 Put questions to the following sentences.

1. Now the soil is plowed with a tractor. (What?)
2. There are about 53500 farms in England. (How many?)
3. Most farms in our region breed hogs and dairy cattle. (What?)
4. In the Southern states the Jersey is more popular than other dairy breeds raised here. (Where?)

Ex. 9 Match the words with their definitions.

1. cow	a) a young cow which has not yet given birth to a calf
2. feed	b) a small field where cows or horses are kept
3. pasture	c) a young cow
4. bull	d) an area of grass on which farm animals graze
5. heifer	e) a large female animal kept on farms for its milk
6. farm	f) food that is given to an animal
7. calf	g) a male animal of the cow family
8. paddock	h) an area of land consisting of fields and buildings where crops are grown or animals are raised

Speaking tasks:

Ex. 10 Think and answer the following questions.

1. Would you like to be a farmer?
2. What type of farm would like to have?
3. What farm animals would you like to raise?
4. What about the size of the farm?
5. How many farm animals would you like to have?
6. What feeds will you use to feed far

Ex. 11 Read the passage and discuss it in groups.

Cattle are among the most important farm animals. We eat the meat of cattle as roast beef, veal, hamburger and hot dogs. We drink the milk of cattle and use it to make butter, cheese and ice-cream. The hides of cattle provide leather for our shoes. Cattle also furnish materials for such useful items as medicines, soap and glue. In some countries cattle supply a main source of power by pulling plows, carts and wagons. In the USA the word cattle usually means cows, bulls, steers, heifers and calves. A cow is a female and a bull is a male. Steers are males whose

reproductive organs have been removed by an operation. A young cow is called a heifer until she gives birth to a calf. A calf is a young heifer or a bull. The mother of a calf is called a dam, and a father is called a sire. A group of cattle is known as a herd.

Ex. 12 Do the quiz.

LESSON 11 LIVESTOCK BREEDING PART I

Vocabulary tasks:

Ex. 1 Read and translate the active vocabulary of the lesson into Uzbek.
succulents, roughages, roots, laxative, stock, straw, fibre, scours, protein, leafy, digestible, mature, bedding, cake, bran, digestible, indigestible, adequate, able, inadequate, inable, efficient, inefficient, fertile, infertile, edible, inedible, sanitary, insanitary, effective, ineffective, possible, impossible.

Ex. 2 Find the odd word in each line.

1. feed, silage, grass, roots, gallon.
2. pig, cow, heifer, bull, calf, dam, size, father.
3. cowshed, pigsty, poultry house, herd, sheep pen.
4. cheese, butter, horse, milk, ice-cream, whole milk, eggs, wool, meat.
5. to keep, to raise, to breed, to feed, to plow, to milk, to fatten.
6. stage, clover, alfalfa, wheat, legumes, oats.

Ex. 3 Open the brackets and translate the words and word combinations into English.

(Питательные вещества) and Cow Productivity

To produce much (молоко) cows require different (питательные вещества). Cows require (углеводы), because they (снабжают) most of energy necessary for the (производства) of milk. Fats in the (рацион) are also used as a (источник) of energy. But too much fat may result in digestive disturbances.

When there is not enough (белка) in cow ration the (количество) and the quality of milk are reduced. Protein may be provided by (кормление) both (концентратами) and (грубыми кормами), such as (сено из люцерны и клевера), cereal grains, (зеленые корма) and others. Minerals and (витамины) are important for milk production. They may be provided by feeding (коров) with good quality (корма) and (сбалансированных рационов).

Ex. 4 Pair the words from the column A with those from the column B and use them in the sentences of your own.

A	B
green fibre roughage digestible pasture succulent mature root indigestible valuable	feeds crops grasses content nutrients

Ex. 5 Choose the correct word.

1. Good (protein, silage, bedding) can be made from (legumes, straw, fibre) if they do not contain much water.
2. Barley (crops, straw, flour) will not be used for (paddocks, breeding, bedding).
3. Wheat straw contains large amount of (valuable, indigestible, high-quality) fibre. That is why farmers use it for bedding.
4. Cow should be supplied with (a cowshed, heifer, protein), the amount varying with their productivity.
5. When cattle are kept in cowsheds they are fed with corn (straw, silage, legumes) and high-quality (hay, minerals, fibre).
6. Fat supply more heat and energy than (water, carbohydrates, food).
7. (Protein, concentrated, wheat) feeds such as oats, barley, corn, rye are high in carbohydrates.
8. Hay made from alfalfa is higher in (nutrients, cakes, bran) than that made from grasses.

Ex. 6 Fill in the chat about feeds.

Groups of feeds	Forms	Low in	High in	Disadvantages

Ex. 6 Choose the correct alternative to fill each space in the text.

Feeds are classified into three groups, depending on their fibre content and [1]_____. They are roughages, [2]_____ and [3]_____ supplements. The primary characteristics of [4]_____ is its high fibre [5]_____. Roughages may contain from 25 to 40 per cent [6]_____. They may be classified according to the methods

they are fed. They may be [7]_____ or dry. Succulent roughages include [8]_____ or pasture [9]_____. The most common forms of [10]_____ roughage are [11]_____ and straw. Good hay is the one that contains much green [12]_____. Hay being made from grass in the early [13]_____ stage, its feeding [14]_____ is higher than that from [15]_____ grass. [16]_____ are high in energy and all classes of farm animals are fed with such [17]_____. The main [18]_____ feeds are different kinds of cereals.

1. a) quality	b) nutritive value	c) protein
2. a) dry	b) digestible fibre	c) concentrates
3. a) fat	b) fibre	c) protein
4. a) roughage	b) wheat	c) bedding
5. a) energy	b) fat	c) content
6. a) fibre	b) vitamins	c) straw
7. a) leaf	b) succulent	c) hay
8. a) barley	b) silage	c) straw
9. a) feeds	b) oats	c) grasses
10.a) succulent	b) dry	c) high-quality
11.a) hay	b) ration	c) concentrated
12.a) color	b) flowering	c) leaf
13.a) weaning	b) flowering	c) fattening
14.a) content	b) nutrition	c) value
15.a) mature	b) early	c) natural
16.a) alfalfa	b) sources	c) concentrates
17.a) feeds	b) food	c) vitamins
18.a) feeds	b) concentrated	c) oats

Reading tasks:

Ex. 7 Read and translate the text. Do the tasks that follow.

Text Livestock Breeding

Classification of Feeds: Various feeds are used by man in feeding livestock. They are classified into three groups: succulents, roughages and concentrates. Succulent feeds are pasture grasses, silage and root crops. Roots contain large quantities of water and are laxative to stock. They are low in protein, but comparatively high in carbohydrates. Being fed together with hay or straw, roots provide good rations for sheep and cattle. Green grass should be grazed when it is 4–8 inches high. Young grass is very rich in protein and animals eat it readily but its low fibre content may cause scours. The feeding value of grass is the highest in spring and early summer. Silage is made from a variety of plants. Good silage is the one that is green in

colour. Silage should be made from young leafy grass and clover. Having been prepared in this way, silage is always of high feeding value. Roughages are feeds. They are high in fibre content which is poorly digestible. For this reason they are not suitable for pigs, but one can give large quantities of roughages to cattle and sheep. Good hay is one that contains plenty of green leaf. The quality of hay varies with the kind of grass and the stage of growth at which it is cut. Hay made from grass in the early flowering stage is better than the one made from mature grass.

Oat straw is a valuable feed for providing bulk in the rations of beef animals and low-yielding dairy cows. Barley straw is sometimes fed to beef cattle. It is more digestible than wheat straw. Wheat straw is high in indigestible fibre. Most of it is, therefore, used for bedding. Concentrates are feeds which are rich in either protein or energy or both. Being high in easily digestible nutrients and low in moisture and indigestible fibre, concentrates are very valuable in feeding all classes of animals.

General grains, cakes and bran are illustrations of concentrates. Having supplied the animals with the proper kind and amount of feed, the farmer will obtain good results.

Most Important Problem in Livestock Breeding: There are many problems in livestock breeding. Some of them are diseases, good or bad breeds, the availability of proper buildings for winter management, feed supply being the most important of them. Feed transportation costs are so great, that it is recommended to breed farm animals only in areas where there is enough feed. The factors that affect feed production indirectly affect milk, meat and egg production. Much forage is usually obtained where there is enough rainfall and where soil fertility is high to provide all the necessary nutrients, air and water.

Pastures: Pasture grasses belong to succulent feeds. Hay made from grasses belongs to roughage feeds. Pastures are classified into natural and cultivated. Cultivated pastures are classified into permanent and temporary. Temporary pastures are used only 2 or 3 years. They may be used during one season as well. Permanent pastures are used for many years. In the Northen areas where winters are cold pastures are used only in summer. In the warm areas cattle and other farm animals may be kept on pasture all the year round.

The best pastures are in spring and in early summer when grass is young and high in protein. Young grass also contains much calcium and vitamins, especially carotene. Green grass is consumed by farm animals in large amounts. When pasture grasses become scarce cattle, sheep and hogs should be fed high-quality roughages and concentrates.

Ex. 8 Read the text again and answer the following questions:

1. What types are pastures classified into?
2. What areas may cattle be kept on pasture all the year round?
3. When do farmers have the best pastures?
4. What do farmers feed their cattle when pasture grasses become scarce?
5. What groups are feeds classified into?
6. When is the feeding value of grass the highest?
7. What are roots high and low in?
8. What are pasture feeds?
9. What is silage made from?
10. Why are roughages not suitable for pigs?
11. What does the quality of hay vary with?
12. Is straw a valuable feed?
13. What straw is high in indigestive fiber?
14. What are concentrates rich and low in?
15. When do farmers obtain good results?

Speaking tasks:

Ex. 9 Tell your groupmates about the types of pastures. Tell about different types of feeds and give their characteristics.

Ex. 10 You run a dairy farm. Tell about:

a) feeds you use;
b) why you use these feeds;
c) types of pastures;
d) plants you grow to make silage (hay).

Ex. 11 Read and answer the following questions. Discuss them in groups.

1. What feeds do farmers use in Uzbekistan?
2. What plants do they use to make hay (silage)?
3. Do they use straw for bedding?
4. What kind of straw do they use for bedding?
5. What types of pastures are there in our country?
6. Which of them is the most productive?
7. Are pastures used all the year round in Uzbekistan? Why?
8. What concentrates do Uzbek farmers use?
9. Do they always provide cattle with necessary amount of feeds and nutrient?
10. Do Uzbek farmers have the problem of the lack of feeds? When?

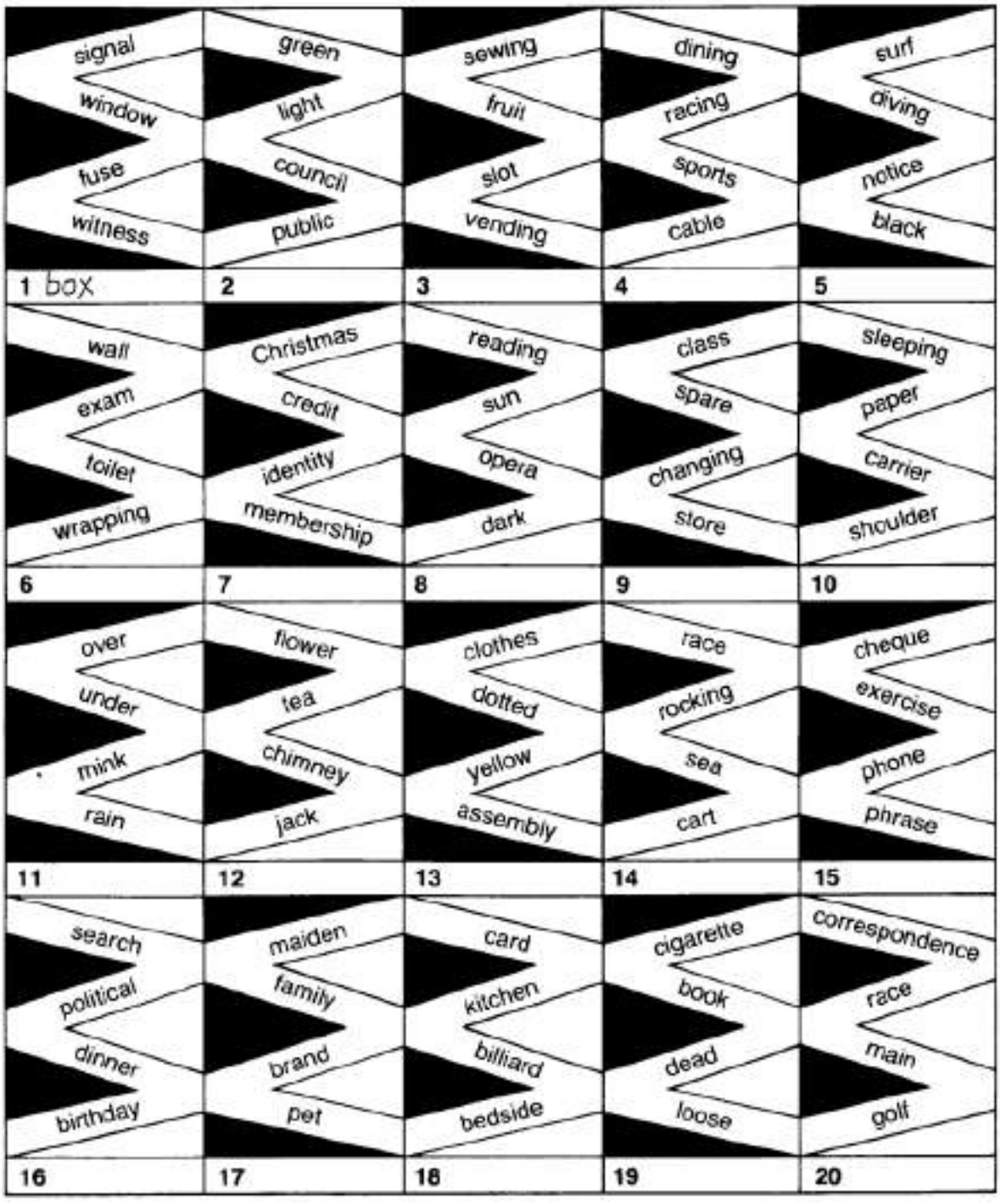
QUIZ TIME

Four of a Kind

Follow the zigzag down and find the noun which can go with all 4 words.

For example: 1 box

(4 kinds of box : signal box, window box, fuse box and witness box)



LESSON 12 LIVESTOCK BREEDING PART II


Vocabulary tasks:

Ex. 1 Read the active vocabulary and translate it into Uzbek.

to manage, to mature, to fatten, drought, favourable, rate of gain, dry, to supply, shelled corn, to be fair flesh, dry lot, to keep, favourable, unfavourable, attentive, unattentive, profitable, unprofitable, productive, unproductive, necessary, unnecessary, to feed, feeding, feeds, to fatten, fattening, fattened, to breed, breeding, breed, to graze, grazing, grazed, to mix, mixing, mixture, to keep, keeping, kept, to maintain, maintaining, maintenance.

Ex. 2 Make up sentences using the following words.

1 Is, this, breed, high, dairy, yielding.
2 Feeds, for, not, hogs, roughage, are, hogs, good.
3 Much, dairy, require, water, cattle.
4 Some, hogs, we, of, breeds, raise.
5 Dual, raise, farmers, often, cattle, purpose.

Ex. 3 Give Uzbek equivalents of the following English words and word combinations:

Do well with little care; be healthier; a common practice; to raise cattle; systems of fattening beef cattle; the quality of pasture; be mainly practiced; to increase the use of pasture; reserves of hay; unfavourable winter weather; sufficient in quantity; to keep up to midseason; mixed hay; highly nutritious feeds.

Ex. 4 Use the words capitals at the end of each line to form a new word that fits in the space in the same line:

1. Corn is widely used in … hogs. **FATTERN**
2. Selective breeding, better housing and more … have resulted in improvements in hogs. **NUTRIENT**

3. Good feeding and … condition will increase milk yields. **MANAGE**
4. There are two main systems of … pigs. **KEEP**
5. The amount of milk and butter fat produced each year by a cow can be … by a proper diet. **INCREASE**
6. Rotational … of pasture helps to control diseases. **GRAZE**
7. A smaller amount of bulls is needed and consequently more rigid methods of selecting bulls can be … . **PRACTICE**
8. Cattle … of Schleswing Holstein in Germany also helped to develop the breed. **RAISE**
9. Many cattle are heavy enough before they reach … . **MATURE**

Ex. 5 Complete the sentences.

1. Hogs are bred to supply the largest amount of _____ products at the lowest cost for the breeder.
2. The principal kinds of specialized livestock farms include cattle and sheep ranches, feed_____ , poultry and egg farms.
3. Cattle are _____ on ranches until they are to be slaughtered.
4. Feed lots_____ cattle for market much faster than on the range.
5. Dairy farm specializes in_____ milk cows.
6. Beef cattle have also been bred to _____ earlier than dairy cattle.
7. Exhibitors such as 4 H Club members start developing show cattle as soon as the calves are _____.
8. Dairy cattle add to our of beef and _____.
9. Hereford requires less _____.
10. One of the ingredients in hog feed is _____.
11. _____ and other _____ crops supply needed _____ .
12. Lean meat is a good source of high quality _____ .

Reading tasks:

Ex. 6 Read and translate the text. Do tasks that follow.

Fattening Cattle

Unlike dairy cattle beef animals may do well with very little care. But like all other animals they are healthier and produce higher quality beef provided they are properly fed and managed. Best beef breeds are known to be those that mature early are fattened rapidly and whose quality of meet is high. The fattening of cattle is a common practice on farms where both beef cattle and corn are raised. Some other grain crops are suitable for feeding beef cattle as well. They are wheat, barley and sorghum. There are many different systems of fattening beef cattle. The

method to be used depends on many factors. Some of them are the region, the age of the cattle to be fattened, the quality of pasture to be used and others. The system of fattening on grass is mainly practised in regions where pasture provides most of the feed throughout the year. In recent years the use of pasture in fattening cattle has been increased in the United States. Even in areas where winter grazing is possible, reserves of hay or other roughages or some concentrates to be fed during the periods of drought or unfavourable winter weather should be provided. Pasture and other roughages should be both high in quality and sufficient in quantity to maintain the rate of gain of 1 pound or more per day.

There are many farmers who follow another method of fattening cattle. Cattle are kept on good pasture up to midseason. Then they are properly fed dry feeds for 3 or 4 months. They are to be supplied with legure or mixed hay, shelled corn or other grains and sometimes high-protain feed. This system is known as fattening in the dry lot. Having been fattened by this method cattle will be in fair flesh provided they are supplied with highly nutritious and high-quality feeds. Unlike the system of fattening cattle on pasture, the system of fattening in the dry lot is more effective though it is a more expensive one.

The fattening of cattle is a common practice on farms where beef cattle are bred and corn is raised. The length of fattening period may vary from two to twelve months, depending on the age and condition of the animals. The cattle that are more than two years old may be fattened in four or eight months. Some farmers fatten calves in nine months or longer. Cattle should not be given too much grain at the beginning of the fattening period. Late in summer when grass is poor it is recommended to provide cattle with some legume hay or protein concentrats. A mineral supplement should be provided if cattle are fed with crops grown on the soil deficient in calcium, phosphorous or other necessary minerals. Animals should have water and salt all the time.

Ex. 7 Say whether the following statements are true or false. Correct the false ones.

1. The fattening of cattle is a common practice where both dairy cattle and corn are raised.
2. The length of the feeding period depends on the age and condition of the cattle.
3. Cattle can’t be fattened quickly.
4. It is unprofitable to feed calves nine months or longer.
5. At the beginning of the fattening period it is not desirable to give cattle much grain.
6. Legume hay and protein concentrates are given early in summer.
7. Silage is used when pasture forage is scarce

Ex. 8 Answer the following questions.

1. When are animals healthier?
2. What is a common practice on farms where both beef cattle and corn are raised?
3. What grain crops are used to feed beef cattle?
4. What systems of fattening are there?
5. Where is the system of fattening on grass mainly practiced?
6. Why do farmers provide cattle with hay and roughages where winter grazing is possible?
7. What is the second system of fattening?
8. What feeds do farmers use in the ration of cows when pasture forage is scarce?
9. What feeds are cattle fed under this system?
10. What system is more effective?
11. What does the length of the fattening period depend on?
12. How many months is it required for fattening cattle? Calves?
13. When should cattle be supplied with much grain?
14. When is mineral supplement provided?

Ex. 9 Put each of the following words in its correct place in the text.

grain	ration	raised	good condition
silage	high-quality forage	scarce	phosphorous
profitable	maturing	calves	salt
fattening	feeding period	supplement	legume hay

The (1) … of cattle is a common practice on farms where both beef and corn are (2) … . The length of the (3) … may vary from two to twelve months, depending on the age and condition of the cattle. The cattle that are more than two years old may be fattened quickly if they are in (4) … . (5) … that are less than two years old may be fattened in four to nine months. Sometimes it is (6) … to feed calves nine months or longer. Cattle should be given not too much (7) … at the beginning of the fattening period. Some farmers use less grain and more (8) … during a longer feeding period. Sometimes it is profitable to give the cattle some (9) … or protein concentrates late in summer when grass is (10) … . Corn silage, grass (11) … or carrots may be used in the (12) … of breeding cows when they are not on pasture or when pasture forage is (13) … . A mineral (14) … should be provided if cattle are fed with crops produced on the soil that is known to be deficient in calcium, (15) … or other essential minerals. Animals should have plenty of water and (16) … when they are being fattened.

Speaking tasks:

Ex. 10 Tell your groupmates about fattening cattle in Uzbekistan using the following plan.

1) crops used for fattening cattle;
2) systems of fattening;
3) length of the feeding period;
4) fattening on grass;
5) fattening in the dry lot.

Ex. 11 Answer the following questions and discuss them in groups.

1. Is fattening cattle a common practice in Uzbekistan?
2. What crops are used in Uzbekistan for feeding beef cattle?
3. Are there different systems of fattening beef cattle in Uzbekistan?
4. What are they? 5. Which of them is used more widely? Why?
6. When is fattening on grass mainly practiced?
7. Do Uzbek farmers graze cattle all the year round?
8. When is fattening in the dry lot mainly practiced?
9. What system is more affective in Uzbekistan?
10. When do Uzbek farmers use roughage and concentrates?

Ex. 12 Role play.

1) You are an Uzbek farmer, your neighbour is an American farmer. You both run hog fattening farms. Discuss fattening sheep in Uzbekistan and in the USA.

2) You are an Uzbek farmer, your neighbour is an American farmer. You both run cattle fattening farms. Discuss fattening cattle in Uzbekistan and America.

3) You and your neighbour are Uzbek farmers. You run a cattle fattening farm, your groupmate – a sheep fattening farm. Discuss fattening sheep and cattle in Uzbekistan and problems you face.

Ex. 13 Translate the following text without using a dictionary.

Management of Cattle on Pasture

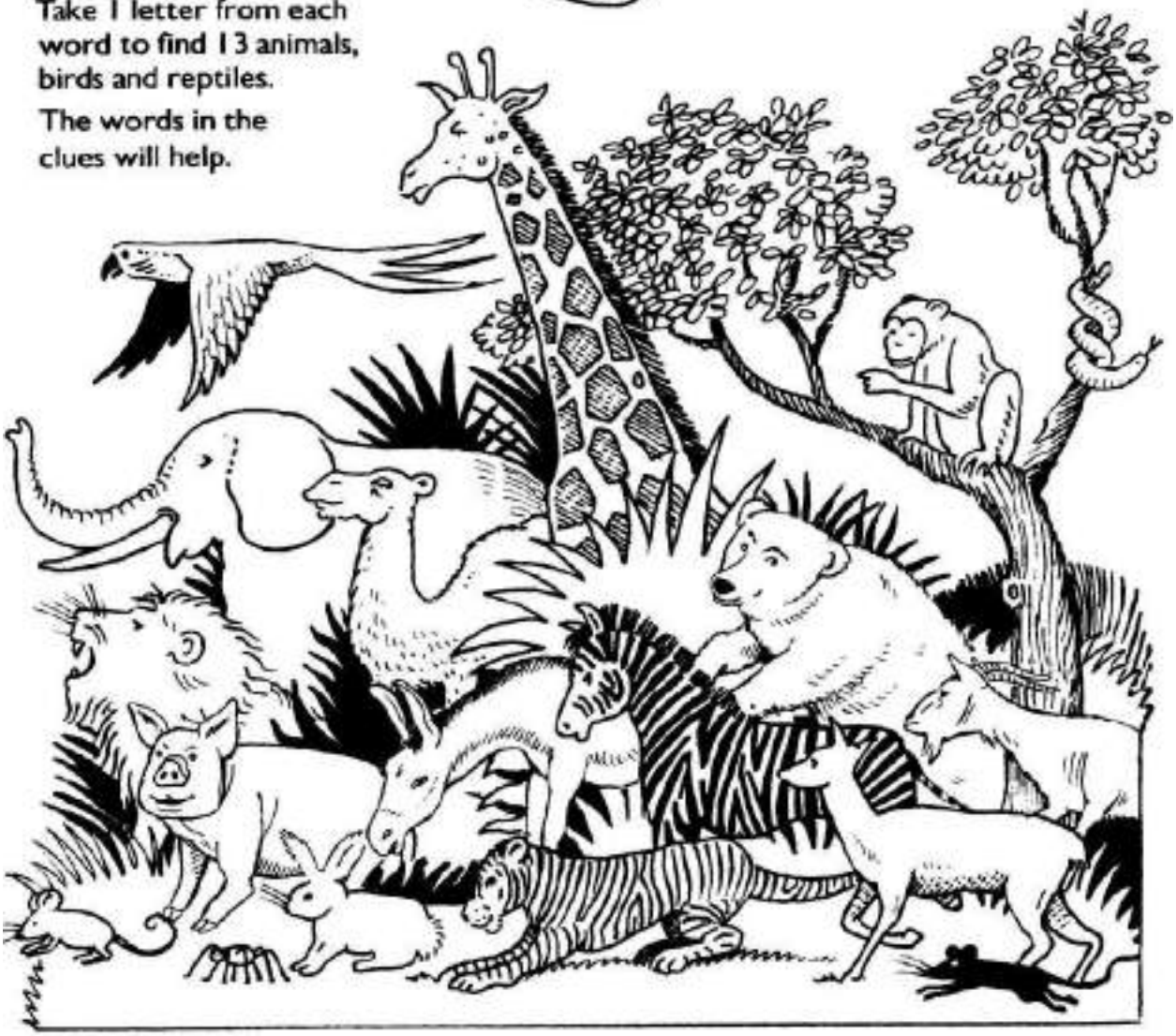
It is generally best to give the cattle a good feed of hay or oat straw in the morning before turning them out to pasture for the first time. Sometimes cattle are turned out for 3 or 4 hours during the day time for the first week. Large fields are better divided into smaller areas and grazed either by smaller groups of cattle in each or by the rotational grazing system, when the whole herd is put into one enclosure for a week or 10 days and then moved to the next one. By such grazing each area is heavily grazed and manure is concentrated upon it. In late summer and autumn the grass become scarce and the cattle should be provided with hay or various green succulents such as maize, cabbage, roots and others.

It is important to begin giving supplementary feeding in time, for cattle may lose their weight before supplementary feeding starts.

QUIZ TIME

The Living World

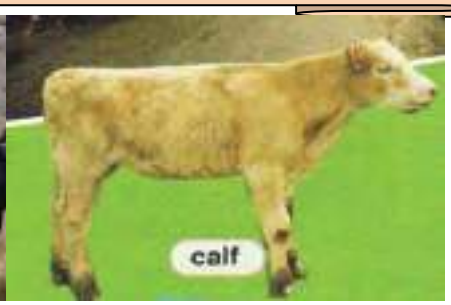
Take 1 letter from each word to find 13 animals, birds and reptiles. The words in the clues will help.



For example: 1. R-A-T = rat.

1. brown tail bite
2. speak gay tropical feathers multi-coloured pet
3. golden king roar jungle
4. black forest large fur
5. hunt striped growl fierce courageous
6. timid speedy gentle herd
7. ears grass babies burrow field fast
8. carry aggressive jump desert long-necked
9. poison long scales quick tongue
10. pink dirty greedy
11. small nervous quiet cheese hole
12. angora horns hair mountains
13. loud cross stubborn back hooves grey

LESSON 13 CARE AND MANAGEMENT OF BEEF CALVES



Vocabulary tasks:

Ex. 1 Read and translate active vocabulary of the lesson into Uzbek.

calf, heifer, maturity, to nurse, colostrum, to secrete, to calve, to suck, dam, stall, pail, udder, scours, skim milk, to come into heat, to breed, creep, the management of a dairy cow, a daily process, the birth of a dairy calf, heifer calves, cattleman, a new-born calf, after calving, put into another stall, to feed whole milk, the udder of the cow, at regular intervals, milk substitute, supplementary feed;

Ex. 2 Match the words with their definition.

1. milk	a) the organ that hangs below cow's body and produces milk
2. colostrum	b) to draw liquid into the mouth
3. udder	c) a bucket made of wood or metal
4. pail	d) to produce a liquid substance (especially of an animal or plant organ)
5. to suck	e) the first milk after giving birth a calf
6. stall	f) the white liquid produced by cows and goats which people drink and produce butter and cheese
7. to secrete	g) an enclosure for one animal in a barn or stable

Ex. 3 Choose the correct item.

1. In winter the farmers will keep … in the cowsheds.
   a) pigs b) cows c) pasture d) milk
2. Dual-purpose cattle provide both meat and … .
   a) cheese b) colostrum c) milk d) roast beef
3. … from dairy breeds also provide excellent beef.
   a) pail b) heifers c) concentrates d) udder
4. Meat from … that are less than 3 months old is called veal,
   a) calves b) pigs c) cattle d) quality
5. Some think that the Angus is not large enough at … .
   a) nursing b) suck c) weaning d) maturity

6. Shorthorns and Polled Shorthorns are used for … .

a) beef production b) hamburgers c) feeding d) calf

7. A cow carries her … in her body for nine months before she gives birth.

a) dam b) calf c) bull d) pig

8. In the fall the calves are … .

a) weaned b) processed c) fed d) adapted

Reading tasks:

Ex. 4 Read the text and translate it into Uzbek.

Text Calf

Cattle are kept for two main purposes: beef production and milk production. The management of a dairy herd differs markedly from that of beef producing animals, for milk production is a daily process. The life of the dairy cow may be divided into three periods. The first period is the one that lasts from birth of a dairy calf up to about the age of 6 months. The second period lasts 6 months until the heifer calves for the first time, usually at about 2.5 years of age. The last period is a period of the maturity of a dairy cow.

The calf being normal after birth, the cattleman should leave it with its mother. Being healthy, the calf will soon get to its feet and start nursing. The first milk, colostrum, is very important for the new-born calf. It is secreted by the cow for 4 or 5 days after calving. The calf usually sucks its dam for about a week.

Then it should be put into another stall and taught to drink milk from a pail. Calves should be fed whole milk at the same temperature as milk from the udder of the cow, the rate being about 1 to 1.5 gallons a day. Feeding cold milk or too much milk will cause scours. Feeding at irregular intervals may cause digestive troubles, too.

Calves being three years old, other feeds containing fibre should be given. All calves at this age should have access to a small amount of good quality hay and clean water. Whole milk is to be given until calves reach 8 to 10 weeks of age. Calves reaching this age, whole milk must be gradually decreased and skim milk or milk substitute is given. From this age dry feeding is increased while milk is decreased.

Calves should be turned out to pasture in spring as early as possible. Being kept on good pasture in summer, calves do not require any other supplementary feed. Calves being on poor grass, large amount of hay, roots and a small amount of concentrates are necessary in addition to pasture. In winter calves should receive legume or grass hay. The quantity of grain is different, depending on the quality of

hay fed to the calves. Young heifer reaching about 18 to 20 months of age, a careful watch is kept upon them and when they come into heat, they are bred.

Care and Management of Beef Calves: Beef calves generally need little attention when they are with their mothers on good pasture. A few days after birth, however, it is often best to take calves away from their mothers if the cows are to be milked. The calf should have its own mother's milk for 4 or 5 days. Then it may drink milk from a pail. A calf needs 3 or 4 pounds of whole milk daily for the first day or two after it is weaned. Sometimes a calf doesn't drink from a pail. When this takes place one should not feed the calf until it gets hungry. When the calf gets hungry it will drink milk readily.

Skim milk may be given to the calf when it is two weeks old. As skim milk is low in vitamin A it is necessary to provide the calf with the feed rich in this vitamin until it begins to eat hay, silage or grass. Calves should be turned out on pasture as soon as possible. If pasture is not available when calves are a month old, a growing crop may be cut and fed to them. A small quantity of silage may be fed until pasture is available. On some farms beef calves are kept with their mothers on pasture; in this case calves may be given some supplementary feed in a creep.

Ex. 5 Say whether the following statements are true or false. Correct the false ones.

1. The management of a dairy cow doesn't differ from that of beef producing animal.
2. After birth a calf is put into another stall.
3. The first milk is called colostrum.
4. A calf usually sucks its dam for about a month.
5. Calves should be fed at regular intervals.
6. Calves are provided with whole milk until they reach 5 weeks of age.
7. Dry feeding starts from the age of 10 weeks.
8. Being on poor grass in summer, calves don't require any other supplementary feed.
9. Heifers can come into heat at the age of 20 months of age.
10. Heifers are bred when a careful watch is kept upon them.

Ex. 6 Answer the following questions from the text.

1. What purposes are cattle kept for?
2. Does the management of dairy herd differ from that of beef producing animals?
3. How many periods is the life of the dairy cow divided into? What are they?
4. Is the new-born calf weaned from its mother?
5. What do farmers usually feed new-born calves?

6. Where are new-born calves put into after weaning?
7. What feed are they provided with after weaning?
8. How many gallons of milk are they given a day?
9. Why are they given milk at the same temperature as milk from the udder of the cow?
10. When are they provided with hay?
11. What is dry feeding?
12. What age is dry feeding increased from?
13. What feeds are given when calves are on pasture?
14. When are young heifers bred?
15. Do beef calves need little or much attention when they are with their mothers on good pasture?
16. What age are they taken away from their mothers?
17. What may they drink milk from after weaning?
18. What should be done if a calf doesn't want to drink from a pail?
19. What age are they given skim milk?
20. Why is it necessary to provide beef calves with additional feed when they are given skim milk?
21. What feed are they provided with?
22. When should they be turned out to pasture?
23. What do farmers provide beef calves with if pasture is not available?
24. When are calves given supplementary feed in a creep?
25. Are there any differences in management of dairy and beef calves?

Ex. 7 Fill in the gaps with the words or word-combinations from the text. See the prompts below.

Some days after birth calves … (1) from their mothers. Irregular feeding causes … (2). After weaning calves drink milk from a … (3). Calves … (4) their dams for about a week. Colostrum is very important for a … (5) calf. … (6) milk is low in vitamin A. Milk is … (7) with the … (8). Calves should be … (9) to pasture in spring. When a calf is taken away from its mother, it should be put into another … (10). At the age of 18-20 months young heifers being watched carefully come into … (11). Sometimes beef calves are given some supplementary feed in a … (12).

Prompts: newly-born, are taken away, turned out, scours, creep, suck, heat, pail, secreted, skim, stall, udder.

Ex. 8 Use the words given in capitals at the end of each line to form a word that fits in the space in the same line.

1. Many … use a process called artificial insemination to improve the quality of their stock. **TO BREED**
2. Beef cattle have also been bred to … earlier than dairy cattle. **MATURITY**
3. Hereford also require less care and … than many large breeds. **ATTENTIVE**
4. Shorthorns and Polled Shorthorns are used for beef … . **TO PRODUCE**
5. After the birth of the calf, the cow usually gives … for about 10 months. **TO MILK**
6. When cows no longer give milk, they usually are sent to a livestock market for … into beef. **TO PROCESS**
7. The farmer or rancher sells the … calves to farmers. **TO WEAN**
8. Hogs today … faster on less food and produce more lean meat than were raised in the past. **GROWTH**
9. The grain is mixed with protein …, such as soybean, meal or meat by-products. **SUPPLEMENTARY**
10. To improve the offspring only …, vigourous rams are chosen for breeding purposes. **HEALTH**
11. Little grain is fed to the ram when … are good. **TO PASTURE**

Grammar revision:

Ex. 9 Read and translate sentences paying attention to the function of Participle I.

1. North California is a chief-producing state. 2. Milking cows in special buildings, farmers obtain clean milk. 3. The farmer raises from 20 l a few hundred cheep keep in them in fenced pastures. 4. Farmer milk in cows in special building obtains clean milk. 5. Some pork producer sell their hogs directly to meat-producing plant. 6. Rams' weight, including a heavy coat of wool, ranger from 150 tn. 350 pounds.

Ex. 9 Read and translate the sentences paying attention to Absolute Participle Construction.

1. Cow being not on pasture, hay and silage are fed tn. them.
2. Young animals requiring special care and protection, farmers usually keep them in special buildings.
3. Spring grass being high in water cows shouldn't eat it too much.
4. Wheat straw containing large amounts of indigestible fibre, the farmers use it for bedding.
5. Cows should be supplied with protein, the amount varying with their efficiency.
6. Calves being 3 weeks of age, other feeds containing fibre should be given.
7. Roughage feeds being high bin fibre, hogs are not fed with such feeds.
8. Feeds being of high quality, animals grow and develop well.

Ex. 10 Insert necessary prepositions.

1. In summer cows are kept … pasture. 2. In addition … milk a calf is given silage or grass. 3. Calves should be fed … regular intervals. 4. Some feeds are low … vitamins. 5. When calves are put … another stall, cattleman teaches them to drink milk … a pail. 6. Newly-born dairy calves are taken … … their mothers at the age of 7 days. 7. Whole milk should be … the same temperature as milk from the udder of the cow. 8. When heifers are kept well they come … heat at the age of 20 months. 9. In spring calves are turned ... to pasture as soon as possible.

Speaking tasks:

Ex. 11 Express your opinion about the following questions.

1. Do Uzbek farmers wean or keep the new-born calf with its mother?
2. What feed are new-born calves given?
3. How long do new-born calves suck their mothers?
4. Are they put into another stall?
5. Are they fed whole milk?
6. Do Uzbek farmers face the problem of scours?
7. What are intervals between feeding?
8. What age are they given additional feeds?
9. When are calves turned out to pastures in Uzbekistan?
10. Are they given any additional feeds being kept on good pasture in summer?
11. What age are they bred in Uzbekistan?

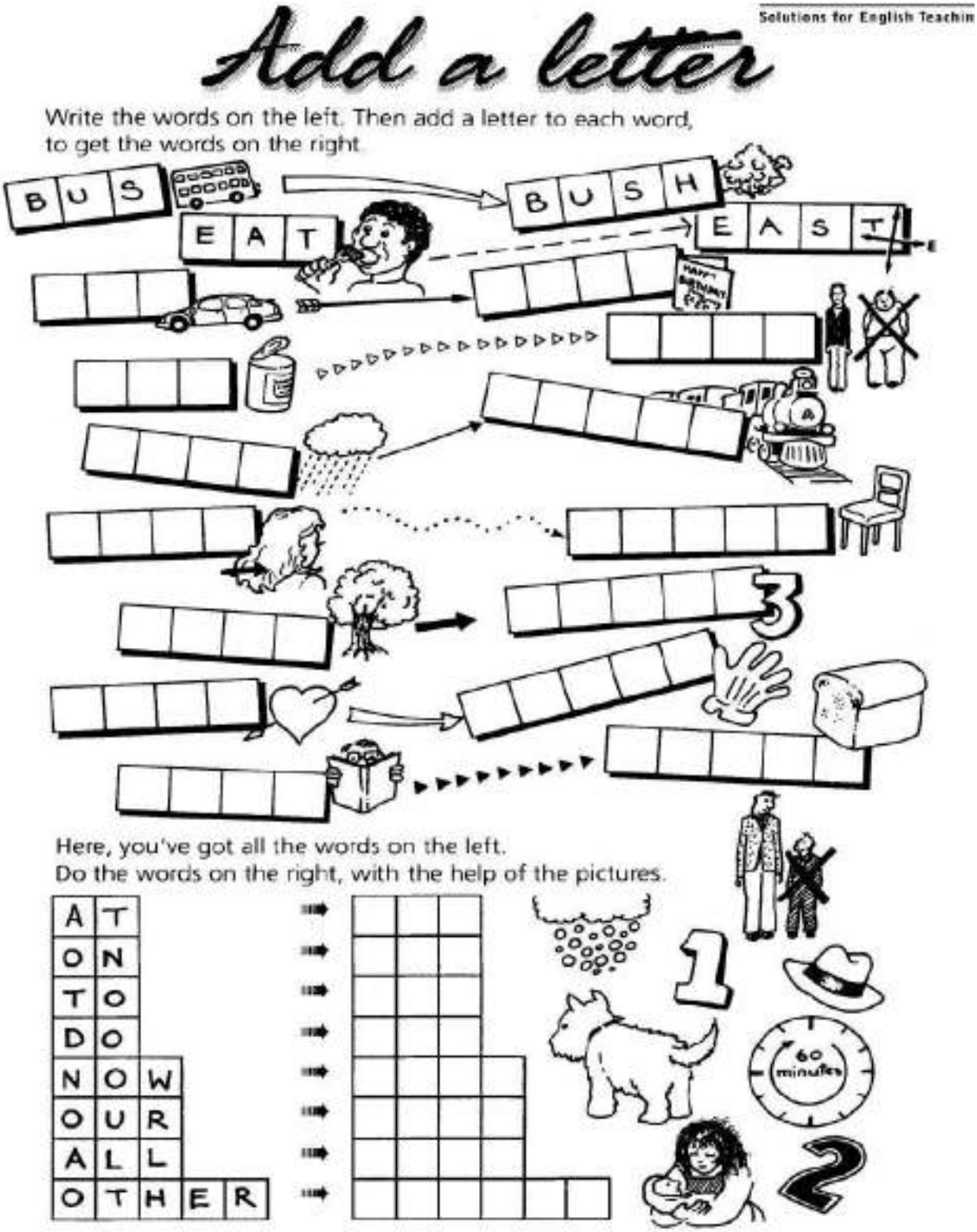
Ex. 12 Say about calf's management and care in Uzbekistan.

Ex. 13 You are a private farmer. A newspaper correspondent came to see your farm. Answer his questions.

1. How many cows do you have?
2. Do you keep cattle for beef or milk production?
3. What breeds do you keep?
4. How much milk do they produce?
5. Do you milk them by hand or use milking machines?
6. Do you face the problem of mastitis?
7. Where do you keep your cows in winter? In summer?
8. Do you breed your cows?
9. Do you wean a newly-born calf or leave it with its mother? Why?
10. What age do you put a calf into another stall?
11. What feeds do you use for calves?
12. When do you turn your calves out to pasture?

13. How long are they kept on pastures?
14. Are they given any supplementary feed?
15. Do you buy any feeds? What do you buy feeds?

QUIZ TIME



LESSON 14 POULTRY INDUSTRY

Vocabulary tasks:

Ex. 1 Read and translate active vocabulary of the lesson into Uzbek.

free-range roasters, poultry litter, primary breeder, pullets, rooster, chick, layer, hatchery, hen, intensive farming, broiler, female, male, consultation, poultry, egg;

Ex. 2 Match the words (1-7) with the definitions (A-G).

1 ____ rooster	**A** a baby chicken
2 ____ layer	**B** a female chicken that produces eggs
3 ____ hen	**C** a female chicken
4 ____ broiler	**D** a male chicken
5 ____ chick	**E** a facility where eggs are hatched
6 ____ hatchery	**F** a medium-sized chicken sold for food
7 ____ intensive farming	**G** a method for raising chicken indoors

Ex. 3 Fill in the blanks with the correct words and phrases from the word bank.

Word bank: free-range, roasters, poultry, litter, primary breeder, pullets

1 _____ chickens exercise more than confined chickens.

2 _____ is the waste produced in a coop.

3 Robert's Farm is the _____ for most local farms.

4 Chicken is a major _____ product.

5_____ cost a lot because they are so big.

6 Those _____ will be layers soon.

Reading tasks:

Ex. 4 Read the passage and translate it into Uzbek.

Welcome to Cluck Farms. We are a primary breeder of twenty-seven varieties of commercial chickens. We provide hens and roosters to over four hundred operations nationwide.

Depending on your needs, we can provide you with chickens ranging from one-week old chiks to one –year-old pullets.

In addition to breeding, we operate a small production facility. Our layers produce only the best eggs. All of our broilers and roasters are raised in a free-range manner.

We are available to consult with poultry operations in neighbouring states. With sixty years' experience, we can advise you on intensive farming methods, free-range techniques, and effective litter removal. Call us to take a tour of our hatcheries.

Ex. 5 Read the passage again. Then, choose the correct answers.

1 What is the purpose of the website?

A to describe a business

B to explain product prices

C to compare breeding methods

D to give advice on chicken farming

2 Which type of chicken produces eggs?

A pullets **C** layers **B** roasters **D** roosters

3 Which service is NOT provided by the farm?

A consultation for nearby farms

B breeding of commercial chickens

C production of poultry products

D removal of farm litter

Speaking tasks:

Ex. 6 Read the following a conversation between a breeder and a farmer. Then discuss it in groups.

Breeder: Thanks for calling Cluck Farms. How may I help you?

Farmer: Hi, I'd like to order some chicks.

Breeder: Is there a particular breed you're interested in?

Farmer: I'm not exactly sure. I have a small farm, and I'd like to raise a dozen or so chickens free-range.

Breeder: Well, we have a few good options. Meat or egg production?

Farmer: Could you say that again?

Breeder: Are the chickens going to be used for meat or egg production?

Farmer: Probably both. I want the hens to lay eggs for a few years. But I'll occasionally slaughter them for meat. Maybe one or two a year.

Breeder: In that case, I'd recommend Iowa Blue or Delaware. Both produce excellent eggs and grow into roasters quickly.
Farmer: Did you say roosters or roasters?
Breeder: Roasters. Both breeds can grow rather large. They make good roaster chickens.
Farmer: Oh, I see. Well then, I'll take half a dozen chicks of each.

Ex. 7 Read the conversation again and mark the following statements as true (T) or False (F).

1 ____The farmer wants advice on raising free-range chickens.
2 ____The breeder recommends two chicken breeds.
3 ____ The farmer will buy a dozen roosters.

Ex. 8 Complete the conversation with suitable words.

Farmer: Hi, I'd like to order some chicks.
Breeder: Is there a particular breed you're interested in?
Farmer: I'm (1) ____ ____ ____. I have a small farm, and I'd like to raise a dozen or so chickens (2)_____ - _____.
Breeder: Well, we have a few good (3)_____. Meat or egg production?
Farmer: Could you (4)_____ _____ _____?
Breeder: Are the chickens going to be used for meat or egg production?
Farmer: (5) _____ _____. I want the hens to lay eggs for a few years. But I'll occasionally slaughter them for meat. Maybe one or two a year.
Breeder: In that case, I'd recommend Iowa Blue or Delaware. Both produce excellent eggs and grow into (6) _____ quickly.
Farmer: Did you say roosters or roasters?
Breeder: Roasters. Both breeds can grow rather large. They make good roaster chickens.
Farmer: Oh, I see. Well then, I'll take half a dozen chicks of each.

Ex. 9 Read the questions and answer them. Discuss them in questions.

1 What products come from the poultry industry?

2 How common is poultry in your country?

USE LANGUAGE SUCH AS:

Hi, I'd like to order some chicks.

Are the chickens for meat or egg production?

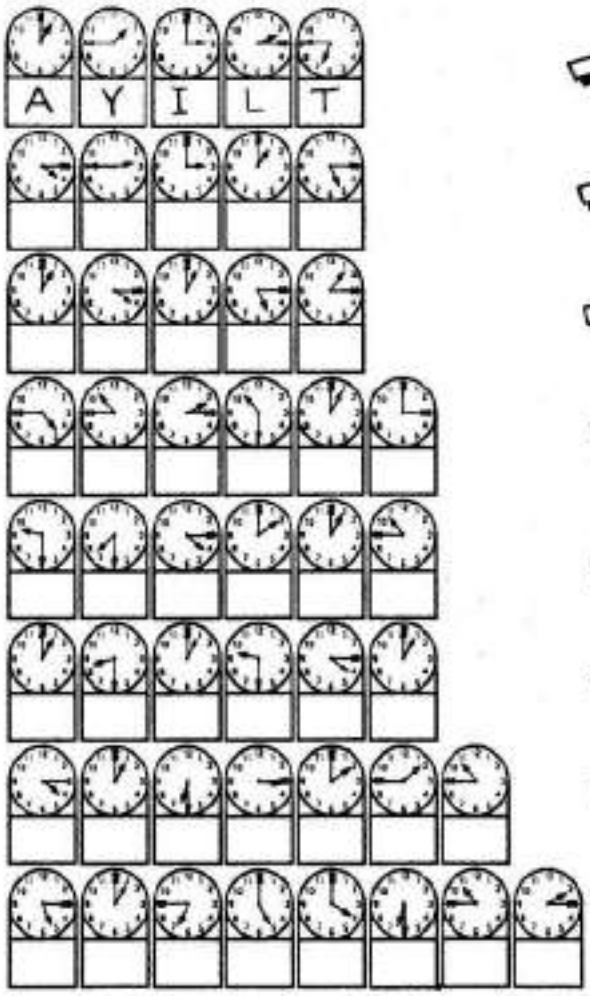
I'll take a *half dozen*

QUIZ TIME

Countries IN CODE

Use the code to find the names of seven more countries.

one o'clock A	two o'clock E	three o'clock I	four o'clock O	five o'clock U
ten thirty B	nine thirty C	eight thirty D	seven thirty F	six thirty G
one fifteen J	two fifteen L	three fifteen M	four fifteen N	five fifteen P
ten forty-five R	two forty-five S	six forty-five T	one forty-five Y	four forty-five Z



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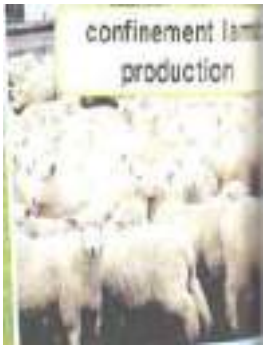
LESSON 15 SHEEP INDUSTRY



Vocabulary tasks:

Ex. 1 Read and translate the active vocabulary into Uzbek.

flocks, feeder lambs, market slaughter lambs, accelerating lambing, ewes, lambing period, distribute, seasonal market, confinement lamb production, range, ram production, predation, advantage, processing facility;

Ex. 2 Match the words (1-6) with the definitions (A-F).

1 ___ flock	**A** a large group of domesticated sheep
2 ___ ewe	**B** a method for raising sheep indoors
3 ___ distribute	**C** a lamb that is sold to be slaughtered
4 ___ feeder lamb	**D** a lamb that is sold for finishing
5 ___ market slaughter lamb	**E** to supply goods to shops to be sold
6 ___ confinement lamb production	**F** a female sheep

Ex. 3 Read the sentence pair. Choose where the words best fit the blanks.

1 seasonal market / accelerated lambing

A The farm produced more lambs for the _____.

B Weak ewes cannot participate in _____.

2 lambing period / finishing

A Lambs are put up for sale after _____.

B Ewes need extra care during the _____.

Reading tasks:

Ex. 4 Read the given passage and translate it into Uzbek.

Cloudhaven Sheep Farm

Galton Industries is proud to introduce our newest venture, the Cloudhaven Sheep Farm. Building on our success with the Cloudhaven Cattle Yard, we have

created a lambing facility that offers the same quality production. Cloudhaven oversees three flocks, combing for a otal of approximately 3,000 head of sheep. We supply both feeder lambs and market slaughter lambs. Thanks to our accelerated lambing process, we can meet the demands of any customer, large or small. Our ewes produce one to two lambs per year. During each lambing period, we keep half of the lambs for finishing. The others are distributed to meet seasonal market demands.

This is all made possible by our system of confinement lamb production. Our experienced managers ensure the safety and quality of lambs inside our facility. Not only does this process increase quality, but it also helps keep our costs down. Unlike range production operations, confinement production means we have zero losses to predation. And we pass those savings on to our customers. So come see us at Cloudhaven Sheep Farm for quality sheep at low prices.

Ex. 5 Read the passage again and choose the correct answers.

1 What is the passage mostly about?

A) a takeover of a failing sheep opration.
B) the advantages of range production
C) the success of a cattle operation
D) the operations of a new facility

2 What was the company's previous business venture?

A) a cattle yard B) a slaughterhous
C) a free range poultry operation D) a meat processing facility

3 What is the advantage of confinement lamb production?

A) production of more lambs B) no predation losses
C) accelerated lambing process D) better market prices

Speaking tasks:

Ex. 6 Read the following a conversation between a breeder and a farmer. Then discuss it in groups.

Employee: Cloudhaven Sheep Farm. This is Michael speaking. How can I help you?

Customer: Hi, Michael. My farm is expanding operations, and we're looking to get some feeder lambs.

Employee: Well, we can certainly provide that. About how many animals are you thinking of?

Customer: I'd like at least 300 head. Can you complete an order that large?

Employee: Oh, definitely. We try to keep a steady population of about 3,000. Of

course, only half of those are feeder lambs. The rest are market slaughter.
Customer: I see. Well, that's great news. In that case, let's talk about prices.
Employee: Right now, you're looking at eighty-five dollars per one hundred pounds.
Customer: Eighty-five dollars per one hundred pounds? That's a really good deal. Let's place the order.

Ex. 7 Read a conversation between a customer and a sheep farm employee. mark the following statements as true (T) or false (F).

1 ___ The woman wants market slaughter lambs.
2 ___ The sheep farm cannot complete orders over 300 lambs.
3 ___ Lamb prices are determined by weight.

Ex. 8 Read the conversation again and complete the gaps.

Employee: Cloudhaven Sheep Farm. This is Michael speaking. How can I help you?
Customer: Hi, Michael. My farm is expanding operations, and we're looking to get some (1) _____ _____.
Employee: Well, we can certainly provide that. About how many animals are you (2) _____ _____?
Customer: I'd like (3) ____ ____ 300 head. Can you complete an order that large?
Employee: (4) _____ _____. We try to keep a steady population of about 3,000. Of course, only half of those are feeder lambs. The rest are (5) ____ _____.
Customer: I see. Well, that's great news. In that case, let's talk about prices.

Ex. 9 Read and talk about these questions.

1 How is raising sheep different from raising cattle?
2 Are sheep raised mostly for meat or woll in your country?

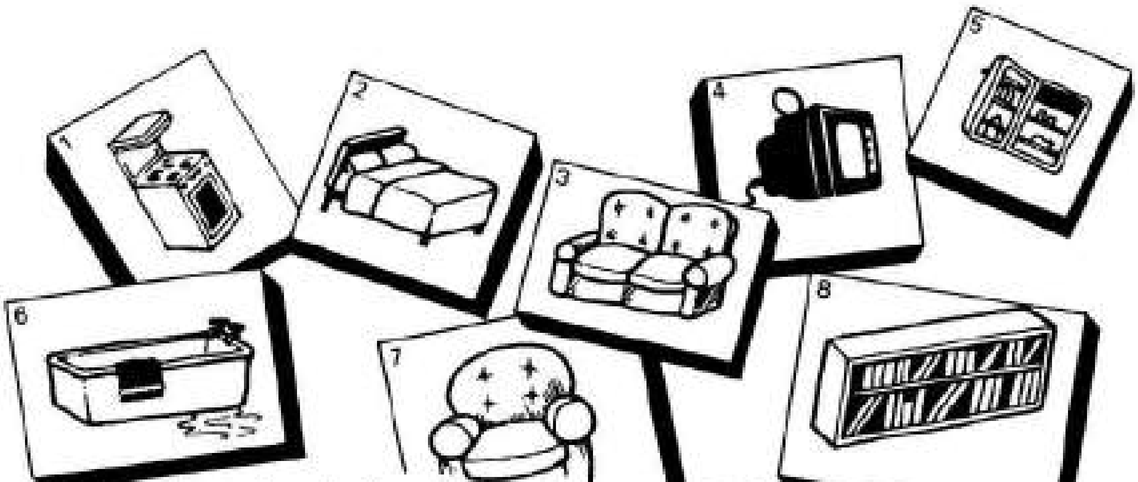
USE LANGUAGE SUCH AS:

My farm is expanding. We're looking to get ...
Can you complete an order that large?
Let's talk about prices.

QUIZ TIME

AT HOME

Write the words for the things horizontally in the grid. Then find the three English proverbs by taking the correct letters from the grid.



	a	b	c	d	e	f	g	h	i	j	k	l
1	C	O	O	K	E	R						
2												
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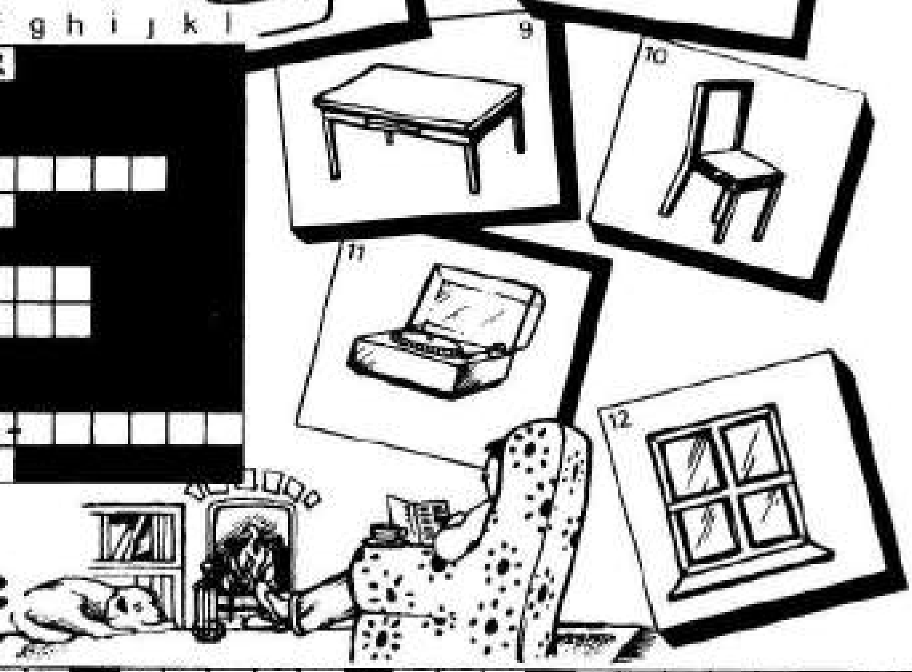


Proverbs:

10b 1c 7c 9e / 4f 8g / 12a 6d 1e 11a 5f / 4a 6d 8h / 7e 11k 9b 1f 4a / 5c 8g

9a 6d 2b 1f 8h 3a / 12c 4i / 11g 4c 9b 1a 4d / 9d 5c 1d 8h / 6d 12e 7c 2b

5f 9b 3a 9a / 12f 1e 4g 9a / 7e 11d 7c 2h / 10d 3a / 9c 8h 4g 9a

LESSON 16 EQUINE INDUSTRY


Vocabulary tasks:

Ex. 1 Read and translate the active vocabulary of the lesson into Uzbek.
equine, stalls, stallions, mares, broodmares, foals, preventative disease control, vaccination schedule, halter breaking, sacking out, bridling, saddling, to accept, illness, training a horse, baby horse;

Ex. 2 Match the words (1-7) with the definitions (A-G).

1 ___ bridling	A) training a horse to be led by a halter
2 ___ foal	B) a baby horse
3 ___ stallion	C) a female horse
4 ___ saddling	D) training a horse to accept a saddle
5 ___ mare	E) training a horse to accept a bit
6 ___ halter breaking	F) a male horse
7 ___ preventative disease control	G) activities that prevent illnesses

Ex. 3 Write a word that is similar in meaning to the underlined part.
1 The female horse used for breeding is pregnant again. br __ __ a __
2 Training a horse to not fear objects that humans place on it can be dangerous.
_ a _ k _ _ _ _ u _
3 The veterinarian created a planned administration of vaccinations.
_ _ c c _ _ _ t _ _ _ _c h _ _ _ _ _
4 Clean the small partitions inside a barn. _ t _ _ _ _

Reading tasks:

Ex. 4 Read the given passage and translate it into Uzbek.

Shady Stables

Shady Stables is East City's premier equestrian facility. Our ten acre property features two barns with eight stalls in each. Every stall is connected to a private run. We board stallions and mares for a small monthly fee that includes feed and access to all our riding areas as well as local riding trails.

We also have private boarding areas for broodmares and foals. In addition to our boarding services, we have an on-site veterinarian to meet all of your horse's needs including preventative disease control. Routine care includes foot and dental exams and comprehensive vaccination schedule.

Shady Stables also offers professional training services. Our trainers can assist you with everything from halter breaking and sacking out - to bridling and saddling. Each trainer has a minimum of five years experience training horses. They also offer private riding lessons for inexperienced riders.

Call Shady Stables today to learn more about our facilities and staff.

Ex. 5 Read the brochure from a horse stable. Then, mark the following statements as true (T) or false (F).

1 ___ The monthly boarding fee includes food.

2 ___ The facility is near a veterinary clinic.

3 ___ Trainers have years of experience teaching new riders.

Speaking tasks:

Ex. 6 Talk about these questions and discuss them in pairs.

1 What role have horses played in agriculture in the past?

2 How are horses used in your country today?

Ex. 7 Read a conversation between two horse trainers and discuss it in pairs.

Trainer 1: Did you work with Snowflake today?

Trainer 2: I did. And I have to say, I think she's one of the best mares we've got.

Trainer 1: Really? Why do you say that?

Trainer 2: Well, just yesterday I started sacking her out. She didn't seem scared at all when I put the blanket on her.

Trainer 1: That's rare. What about today?

Trainer 2: The same thing happened today. You know, I think she might be ready for saddling.

Trainer 1: Have you bridled her yet?

Trainer 2: No. I guess I should probably work on that before I try to saddle her.

Trainer 1: Definitely. And that reminds me, she needs to see the vet.

Trainer 2: Is it time for more shots already?

Trainer 1: I think so. Doctor Roberts, the veterinarian, keeps track of the vaccination schedule.

Trainer 2: OK. I'll talk to him first thing tomorrow.

Ex. 8 Read the conversation again and choose the correct answers.

1 What did the woman do with the mare?

A bridled her **B** saddled her

C sacked her out **D** rode her

2 What will the woman do tomorrow?

A give the mare a shot

B talk to the veterinarian

C check the vaccination schedule

D put a saddle on Snowflake

Ex. 9 Read again and complete the conversation.

Trainer 1: Did you work with Snowflake today?

Trainer 2: I did. And [1]__ __ __ __, I think she's one of the best mares we've got.

Trainer 1: Really? Why do you say that?

Trainer 2: Well, just yesterday I started [2]___ ___ ___. She didn't seem scared at all when I put the blanket on her.

Trainer 1: That's rare. [3] ____ ____ today?

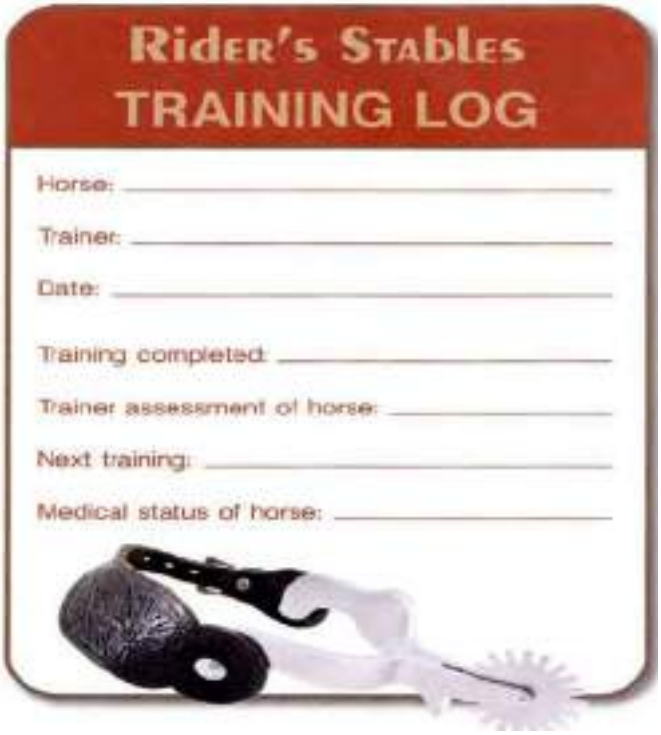
Trainer 2: The same thing happened today. You know, I think she might be ready For [4] _____.

Trainer 1: Have you [5] ____ ____ yet?

Trainer 2: No. I guess I should probably work on that before I try to [6] ___ ___.

Trainer 1: Definitely. And that reminds me, she needs to see the vet.

Writing: Ex. 10 Use the conversation from Ex. 7 to fill out the training log.



LESSON 17 APICULTURE

Vocabulary tasks:

Ex. 1 Read and translate the active vocabulary of the lesson into Uzbek.

apiculture, honey, honeycomb press, smoker, veil, top-bar hive, skeps, beehive frames, colony, apiary, liquid smoke, cold smoke aerosols, beesuits, beekeepers;

Ex. 2 Read the sentence pair. Choose where the words best fit the blanks.

1 apiary / beesuit

A) This _____ produces a lot of hone.

B) A good protects beekeeper skin.

2 liquid smoke / colony

A) Wendy's lives in a top-bar hive.

B) is a good option for people who dislike the smell of smoke.

3 veils / skeps

A) There are many types of protective

B) Traditional beekeepers use _____

Ex. 3 Match the words (1-6) with the definitions (A-F).

1 __ smoker	A) a structure that houses a bee colony
2 __ honey	B) a structure with a bar that bees build their colony on
3 __ honeycomb	C) a pressurized container that releases smoke
4 __ top-bar hive	D) a structure with six-sided cells
5 __ beehive frame	E) a sweet substance that bees make
6 __ cold smoke aerosol	F) a device that burns materials to produce smoke

Reading tasks:

Ex. 4 Read the given passage and translate it into Uzbek.

Sweet Rewards Beekeeper Supply

Whether you're considering beekeeping as a hobby or a career, Sweet Rewards Beekeeper Supplies has everything you need. We carry a wide selection of beehive

frames to house your colony. From top-bar hives to traditional skeps, we have hives for any type of apiary.

In addition to hive frames, we also carry a complete line of beekeeper tools. We have several sizes of smokers, as well as liquid smoke and cold smoke aerosols. When it's time to harvest honey, take advantage of our new line of honey jars. We even serve beekeepers who prefer traditional methods. For these customers, we carry honeycomb presses.

Finally, no beekeeping operation is complete without protective gear. We have beesuits in a variety of sizes and designs including square veils, round veils, and shoulder veils. Stop in today and see what makes Sweet Rewards the first choice for professional beekeepers.

Ex. 5 Read the passage. Then, choose the correct answers.

1 Which product do bees live in?

A) apiary B) beesuit C) beehive frame D) honeycomb press

2 What is true of the honeycomb press?

A) It protects beekeepers.

B) It supports large colonies.

C) It is preferred by professionals.

D) It is used by traditional beekeepers.

3 What does the store NOT sell?

A) bee colonies B) smoking tools

C) harvest equipment D) protective clothing

Speaking tasks:

Ex. 6 Read a conversation between an employee and customer and discuss it in pairs.

Employee: Can I help you find anything today?

Customer: Yes, I'm looking for liquid smoke.

Employee: OK. That's right over here by the smokers. Can I ask what type of apiary you have?

Customer: I just got a wooden beehive frame. Why do you ask?

Employee: Well, liquid smoke can be a problem with wooden hives.

Customer: Really? Why is that?

Employee: It leaves stains on wood. Also, you have to be really careful when you use it. The liquid can ruin your honey.

Customer: Oh, that's too bad. Is there something else that you'd recommend?

Employee: I'd go with cold smoke aerosols.

Customer: Will those stain the wood in my hive?

Employee: No. But you still need to be careful and avoid spraying them into the honeycomb.

Customer: OK. I'll take four of those, please.

Ex. 7 Read the conversation and mark the following statements as true (T) or false (F).

1 ___ The man wants to purchase a wooden beehive frame.

2 ___ The woman recommends liquid smoke.

3 ___ Cold smoke aerosols do not damage wooden frames.

Ex. 8 Read the conversation again and complete the gaps.

Employee: Can I help you find anything today?

Customer: Yes, I'm looking for liquid smoke.

Employee: OK. That's right over here by the smokers. Can I ask what type of apiary you have?

Customer: I just got a wooden beehive frame. Why do you ask?

Employee: Well, [1] _____ _____ can be a problem with wooden hives.

Customer: Really? [2] _____ _____ ____?

Employee: It leaves stains on wood. Also, you have to be really careful when you use it. The liquid can ruin your honey.

Customer: Oh, that's [3] ____ ____. Is there something else that you'd [4]_____?

Employee: [5] _____ _____ _____cold smoke aerosols.

Customer: Will those stain the wood in my hive?

Employee: No. But you still need to be careful and avoid spraying them into the [6] _____.

Ex. 9 Talk about these questions and discuss them in pairs.

1 What challenges do beekeepers face?

2 Why is beekeeping important today?

USE LANGUAGE SUCH AS:

I'm looking for ...

Can I ask what type of apiary you have?

The liquid can ruin your honey.

QUIZ TIME

VERB CROSSWORD

Put these verbs with the correct pictures.

Now put the verbs into the crossword – in their *third person singular* form, like the example.
(The first group go Across; the second group go Down.)

LESSON 18 SOIL CONSERVATION

Vocabulary tasks:

Ex. 1 Read and translate the active vocabulary of the lesson into Uzbek.

nutrient depletion, erosion, soil conservation, crop rotation, Cover crops, green manure, land degradation, windbreaks, Perimeter runoff control, grassways, unhealthy, plant paradise, increase, water resources, prevent from, perpendicular;

Ex. 2 Match the words (1-8) with the definitions (A-H).

1 __ nutrient depletion	A) a name for cover crops that add nitrogen
2 __ contour farming	B) process where nutrients are taken from soil
3 __ cover crops	C) grassy areas that slew water flew
4 __ green manure	D) the practice of maintaining soil
5 __ soil conservation	E) plants that add nutrients to soil and prevent it from washing away
6 __ grassways	F) a method of plowing to prevent erosion
7 __ keyline design	G) the use of plants near a field's borders to prevent erosion
8 __ perimeter runoff central	H) design that maximizes water resources

Ex. 3 Write a word that is similar in meaning to the underlined part.

1 The rows are at right angles to the fence. p _ _ p e_ d _ _ _ _ a _

2 The farmer needs a way to stop wind or water removing the soil in his fields.
_ _ o _ _ _ n

3 Tree barriers shelter fields from the wind. _ _ n _ _ _ _ a _ _

4 Growing different crops at different times helps keep soil healthy.
c _ _ _ r _ _ _ t _ _ _

5 The forest experienced negative effects on the land after the flood.
_ _ n _ _e _ _ _ d _ _ _ _ n

Reading tasks:

Ex. 4 Read the given passage and translate it into Uzbek.

A Guide to Soil Conservation

Without healthy soil, farmers can't produce healthy crops. But soil faces many threats, including nutrient depletion and erosion. Fortunately, several methods of soil conservation can turn unhealthy soil into a plant paradise.

One method, crop rotation, solves nutrient depletion. Cover crops, or green manure, are rotated with other crops. This process increases the amount of nitrogen in the soil and reverses land degradation.

In addition to addressing nutrient-depletion, farmers also combat erosion. Several practices can prevent erosion. Planting windbreaks stops topsoil loss from wind. Perimeter runoff control prevents erosion from water. For example, grassways slow water and direct it away from fields.

Contour-farming techniques, such as keyline design, also prevent water from eroding soil. In one method, farmers plow rows perpendicular to hills. The water slows as it reaches the rows, which results in less soil loss.

Ex. 5 Read the passage again. Then, choose the correct answers.

1 What is the main purpose of the article?

A) to show the benefits of soil additives
B) to describe soil conservation methods
C) to recommend soil conservation products
D) to explain the financial costs of soil damage

2 Which is NOT a suggestion made in the article?

A) planting cover crops
B)using keyline design
C) applying manure fertilizer
D) having perimeter runoff central

3 Which would be the best solution for nutrient depletion?

A) crop rotation B) soil conservation
C) windbreaks D) contour farming

Speaking tasks:

Ex. 6 Read a conversation between two farmers and discuss it pairs.

Farmer 1: I'm really worried about the soil in the fields. It's looking pretty soggy.
Farmer 2: Yeah, there's been so much rainfall the past few weeks.
Farmer 1: The soil is eroding. We have to do something.
Farmer 2: I agree. But what can we do?

Farmer 1: I think contour farming is a good option.
Farmer 2: I'm not sure about that. We'd have to re-design our fields.
Farmer 1: True, but look at our land! We have so many hills.
Farmer 2: Well, you have a point there. Contour-farming could be good for us in the next few years. But we have to do something sooner than that.
Farmer 1: How about starting with a grassway?
Farmer 2: I like that. We can buy some sod and install it next weekend.
Farmer 1: Great. I'll look for some grass suppliers.
Farmer 2: Good idea. I'll find the best place for the grassway.

Ex. 7 Read a conversation again and mark the following statements as true (T) or false (F)

1___The farmers are concerned about nutrient depletion.
2___ The land the farm sits on is flat.
3___ The farmers will plant a grassway.

Ex. 8 Read a conversation again and complete the gaps with suitable words.

Farmer 1: I'm really worried about the soil in the fields. It's [1]____ ____soggy.
Farmer 2: Yeah, there's been so much rainfall the [2] ____ _____ _____.
Farmer 1: The soil is [3] _____. We have to do something.
Farmer 2: I agree. But what can we do?
Farmer 1: I think contour farming is a good option.
Farmer 2: I'm [4] ____ ___ ___sure about that. We'd have to re-design our fields.
Farmer 1: True, but look at our land! We have [5] ____ _____ _____.
Farmer 2: Well, you [6] _____ _____ _____there. Contour-farming could be good for us in the next few years. But we have to do something sooner than that.
Farmer 1: How about starting with a grassway?
Farmer 2: I like that. We can buy some sod and install it next weekend.

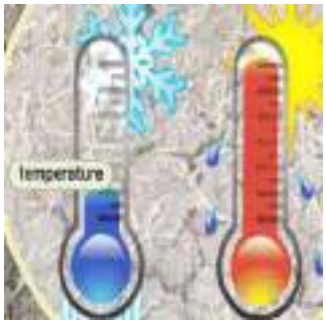
Ex. 9 Talk about questions and discuss in pairs.

1 In what ways can soil be damaged?
2 What parts of your country have the best soil?

USE LANGUAGE SUCH AS:

I'm worried about the soil in the fields.
We have to do something.
We'd have to re-design our fields.

LESSON 19 CLIMATE AND WEATHER



Vocabulary tasks:

Ex. 1 Read and translate the active vocabulary of the lesson into Uzbek.
climate, temperature, frost, weather, humidity, hardness zone, long-range forecast, determine, slightly damp, spising, warm areas, soil moisture;

Ex. 2 Fill in the blanks with the correct words and phrases from the box.

precipitation	last frost	temperature	hardiness zones

1 If the _____ falls too low, the plants will die.
2 Don't plant any seeds until after the _____.
3 If there is enough _____ you won't have to irrigate.
4 Different plants may have different _____.

Ex. 3 Match the words (1-5) with the definitions (A-E).

1 __ climate	A) weather conditions in a particular area
2 __ humidity	B) the amount of water in the soil
3 __ mulch	C) the amount of water in the air
4 __ long-range forecast	D) material that is spread on the ground to protect plants
5 __ soil moisture	E) a prediction of future weather conditions

Reading tasks:

Ex. 4 Read the passage and translate it into Uzbek.

Vegetables seeds unlimited

Poblano Pepper $3.19/pack

Plant in: full sun / soil temperature: 68-90 degrees Fahrenheit

Description: Poblanos are flavorful peppers that are perfect for spicing sauces. They grow in warmareas with moderate humidity. Check your hardiness zone to

make sure Poblanos grow in your region. Plant seeds about twelve weeks before last frost. A local long-range forecast will help you determine when to plant. Poblanos need some water, but just to keep the soil slightly damp. Do not over-water. Harvest after 14 to 16 weeks.

Famosa Cabbage $3.79/pack

Plant in: partial shade / soil temperature: 59-64.4 degrees Fahrenheit.

Description: The Famosa Cabbage is crispy vegetable that grows in cool climates. Famosas need lots of water, so areas with high precipitation are ideal for growing. Use plenty of mulch to maintain healthy soil moisture. These cabbages need only partial sun. Plant six weeks before last frost. Harvest in late autumn for best results.

Ex. 5 Read the passage again. Then, mark the following statematns as true (T) or false (F).

1 __ Poblano peppers grow best in areas with high precipitation.

2 __ Both types of seeds require full sun.

3 __ The cabbage should be harvested in the fall.

Speaking tasks:

Ex. 6 Read a conversation between a seed store employee and a customer. Discuss it in pairs.

Customer: Excuse me. Can you help me pick out some seeds?

Employee: Certainly, Ma'am. What type of crop do you want to grow?

Customer: I'm going to plant some lettuce. I found these Scottsdale lettuce seeds.

Employee: Oh, I wouldn't plant the Scottsdale. It needs a much warmer climate. I recommend the Waldmann's lettuce.

Customer: Oh, really? Why is that?

Employee: The Waldmann's is very hearty. It can handle the colder weather around here.

Customer: That sounds great. So would you plant them right away? Or would you wait?

Employee: I'd wait until the low temperatures are at about four degrees Celsius. I mean, the Waldmann's lettuce can tolerate cold weather. But we haven't had our last frost yet.

Customer: Okay. Thanks for all your advice. I'll take a dozen packs of the Waldmann's.

Ex. 7 Read a conversation again and mark the following statements as true (T) or false (F).

1 ___ The Scottsdale seeds grow best in warm climates.
2 ___ The man suggests a different seed type.
3 ___ The last frost of the season has passed.

Ex. 8 Read a conversation again and complete the conversation.

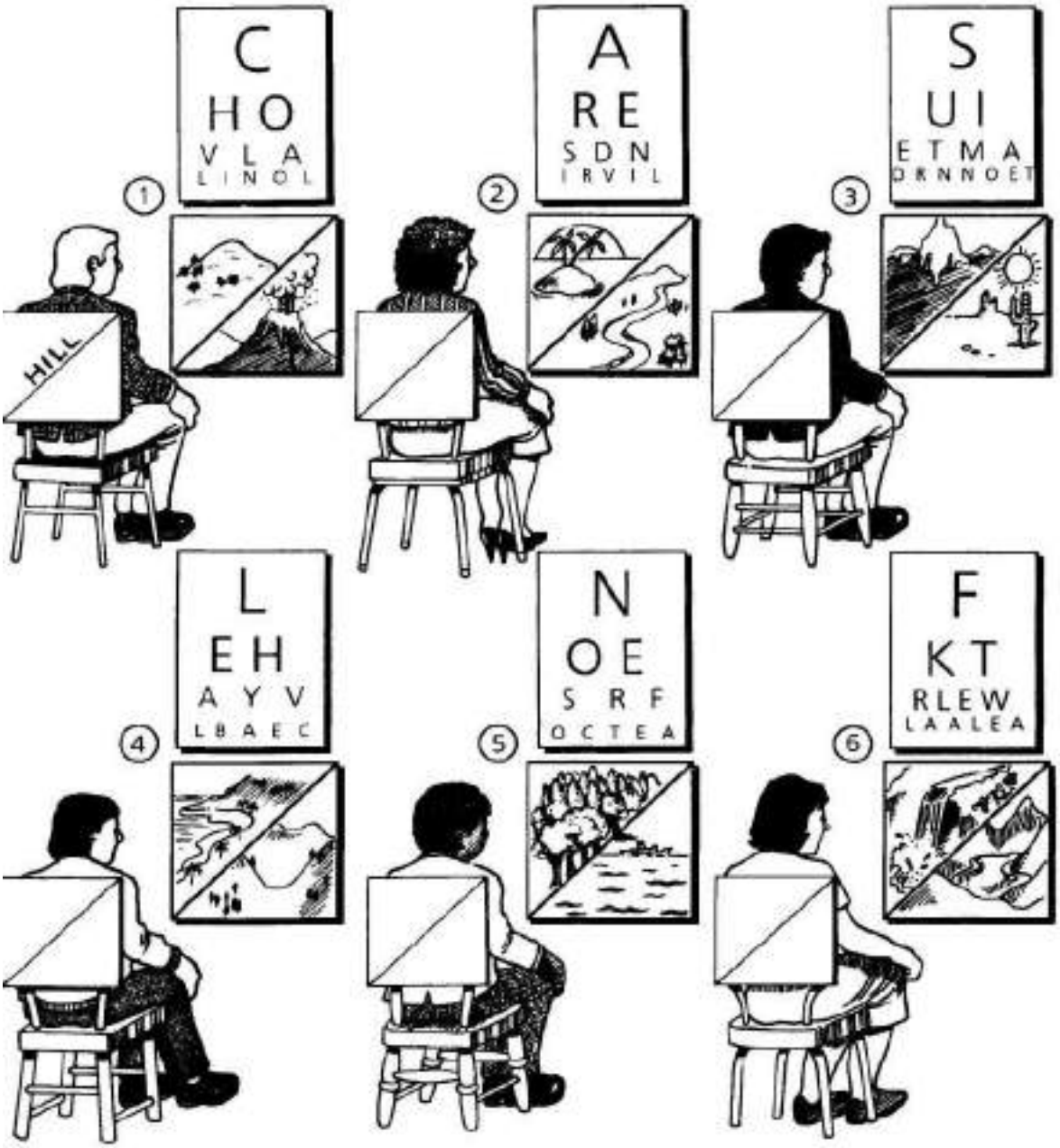
Customer: Excuse me. Can you help me (1) ____ ____ some seeds?
Employee: (2) _____ _____. What type of crop do you want to grow?
Customer: I'm going to plant some lettuce. I found these Scottsdale lettuce seeds.
Employee: Oh, I wouldn't plant the Scottsdale. It needs a (3) _____ _____ climate. I (4) _____ the Waldmann's lettuce.
Customer: (5) _____ _____? Why is that?
Employee: The Waldmann's is very hearty. It can (6) _____ _____ _____ weather around here.

Writing: Ex. 9 Use the conversation from Ex. 7 to fill out the customer feedback form.

QUIZ TIME

Eye test

On each eye test chart, there are the letters of two words. With the help of the pictures, find the words and write them on the backs of the chairs.



LESSON 20 ANIMAL HEALTH

Vocabulary tasks:

Ex. 1 Read and translate active vocabulary of the lesson into Uzbek.

veterinarian, diagnose, monitor, infectious, parasites, lice, ticks, insecticides, deworming, respiration, lethargy, antibiotics, vaccinations, effectively, disease, immediately, regularly;

Ex. 2 Match the words (1-5) with the definitions (A-E)

1 ___ lice	A) a parasitic arachnid
2 ___ tick	B) the act of killing or removing worms
3 ___ infectious	C) a state of extreme exhaustion
4 ___ deworming	D) a parasitic insect
5 ___ lethargy	E) easily spread

Ex. 3 Read the sentence pair. Choose where the words best fit the blanks.

1 veterinarian / parasite

A) A ____ infected several cows. B) The _____ gave the horse a shot.

2 respiration / antibiotics

A) Check for labored ____ B) Use _____ to kill the infection.

3 diagnose / monitor

A) Handlers should _____ their herds for health problems.

B) Only a medical professional can _____ diseases.

4 vaccination / insecticide

A) Use a (n) _____ to kill the lice.

B) A(n) _____ can boost animals' immunity.

Reading tasks:

Ex. 4 Read the given passage and translate it into Uzbek.

Disease Control (Modern farmer Mar. Ed.)

Proper health management involves much more than treating occasional infections. In fact, preventative care is probably the most important thing you can do to ensure the health of your livestock.

While only a licensed veterinarian can diagnose your animals, there are plenty of ways that you can monitor your livestock for infectious deseases and prevent their spread.

Some of the most common health problems among livestock are the results of parasites. Common parasitic organisms include worms, lice, and ticks. You can help prevent the spread of these parasites by regularly cleaning your facilities. You may also consider treating the coats of your livestock with insecticides. If you suspect a parasitic infection among your livestock, seek professional help immediately. Your veterinarian may be able to treat your animals with drugs, dietary remedies, and deworming techniques.

Another major concern is respiratory disease. Although there are numerous causes, the symptoms of respiratory infections are always the same. If you notice labored respiration, fever, and lethagry among your livestock, contact your veterinarian right away. Respiratory infections can be deadly if ignored, but they can usually be treated effictively with antibiotics. More importantly, many types of infections can be prevented with vaccinations.

Ex. 5 Read the passage again and choose the correct answers.

1 What is the article mainly about?

A) choosing the right veterinarian for livestock
B) identifying parasitic infections in livestock
C) preventing infectious diseases in livestock
D) diagnosing livestock illnesses at home

2 According to the passage, what can prevent parasitic infections?

A) having veterinarians check animals regularly
B) cleaning areas frequented by livestock
C) washing the coats of livestock
D) feeding livestock healthy diet

3 What is used to treat respiratory infections?

A) antibiotics B) dietary supplements
C) vaccinations D) isolation

Speaking tasks:

Ex. 6 Read a conversation between a farmer and a veterinarian and translate it into Uzbek.

Farmer: How does it look, doc?

Veterinarian: Not good. When did you first notice these symptoms?

Farmer: Well, last week a few of them seemed to be having some trouble breathing.

Veterinarian: Was there anything else?

Farmer: Yes, they seemed, well, really tired. Basically, they just didn't seem to want to move.

Veterinarian: Those symptoms, lethargy and difficulty breathing, are classic signs of a respiratory infection.

Farmer: So, what can we do? Can you treat them?

Veterinarian: Well, fortunately, I think they'll recover if we treat them with some antibiotics. You need to keep this herd away from your other livestock. We don't want this spreading.

Farmer: I wouldn't eat it.

Reporter: You mean to say your corn is inedible to humans?

Farmer: No, it's just people wouldn't like to eat it. They tend to prefer sweet corn. And I don't grow that. I grow feed corn.

Reporter: Still, couldn't we feed more people by growing sweet corn instead of feed corn?

Farmer: People use the corn I grow, just in a different form.

Reporter: You mean, when it's manufactured into corn syrup? Or a biofuel?

Farmer: No, you have the wrong idea.

Reporter: Help me to understand then.

Farmer: Growing feed corn doesn't take food away from people. It gives them more, really.

Reporter: How so?

Farmer: Because my feed corn supplies plenty of pork for the market.

Ex. 7 Read the conversation again and Check (√) the items the veterinarian suggests doing to the sick cattle.

1 □ isolating the infected animals

2 □ taking them to the vet's office

3 □ giving the animals antibiotics

4 □ cleaning the facilities

Ex. 8 Read conversation again and complete the gaps.

Farmer: (1) ____ ____ ____ _____, doc?

Veterinarian: (2) ____ ____. When did you first notice these symptoms?

Farmer: Well, last week a few of them (3) ____ ____ ____ ____ some trouble breathing.

Veterinarian: Was there anything else?

Farmer: Yes, they seemed, well, really tired. Basically, they (4) ____ ____ ___

_____ to want to move.

Veterinarian: Those symptoms, lethargy and difficulty breathing, are (5) _____ _____ _____ a respiratory infection.

Farmer: So, what can we do? Can you treat them?

Veterinarian: Well, fortunately, I think they'll recover if we treat them with (6) ___ ___ antibiotics. You need to keep this herd away from your other livestock. We don't want this spreading.

Writing: Ex. 9 Use the conversation from Ex. 6 to write a treatment plan. Include: animal symptoms, the diagnosis, and how they will be treated.

Ex. 10 Talk about these questions and discuss them in pairs.

1 What are some common health problems livestock get?

2 How can farmers prevent the spread of disease in livestock?

Ex. 11 Complete these sentences with the correct "general" word. Look at the example first.

Example: Apples, oranges and bananas are all types of fruit.

1. The most famous _____ are tomatoes, cabbages, carrots, cucumbers, onions, sweet pepper, potatoes, beets, radishes, rutabagas.
2. _____ is the general word for wheat, maize, barley, etc.
3. We use the word ___ as a general word for plants which are grown to be eaten.
4. Well-known _____ include vegetables, fruits, nuts, seeds, herbs, flowers and other ornamental crops.
5. _____ include cotton, flax, nettle, hemp and ramie.
6. The leading _____ are grain crops, legume seed crops, oil seed crops, fiber crops, forage crops.
7. The main _____ grown for their seeds are field beans, chick pea, lentil.

USE LANGUAGE SUCH AS:

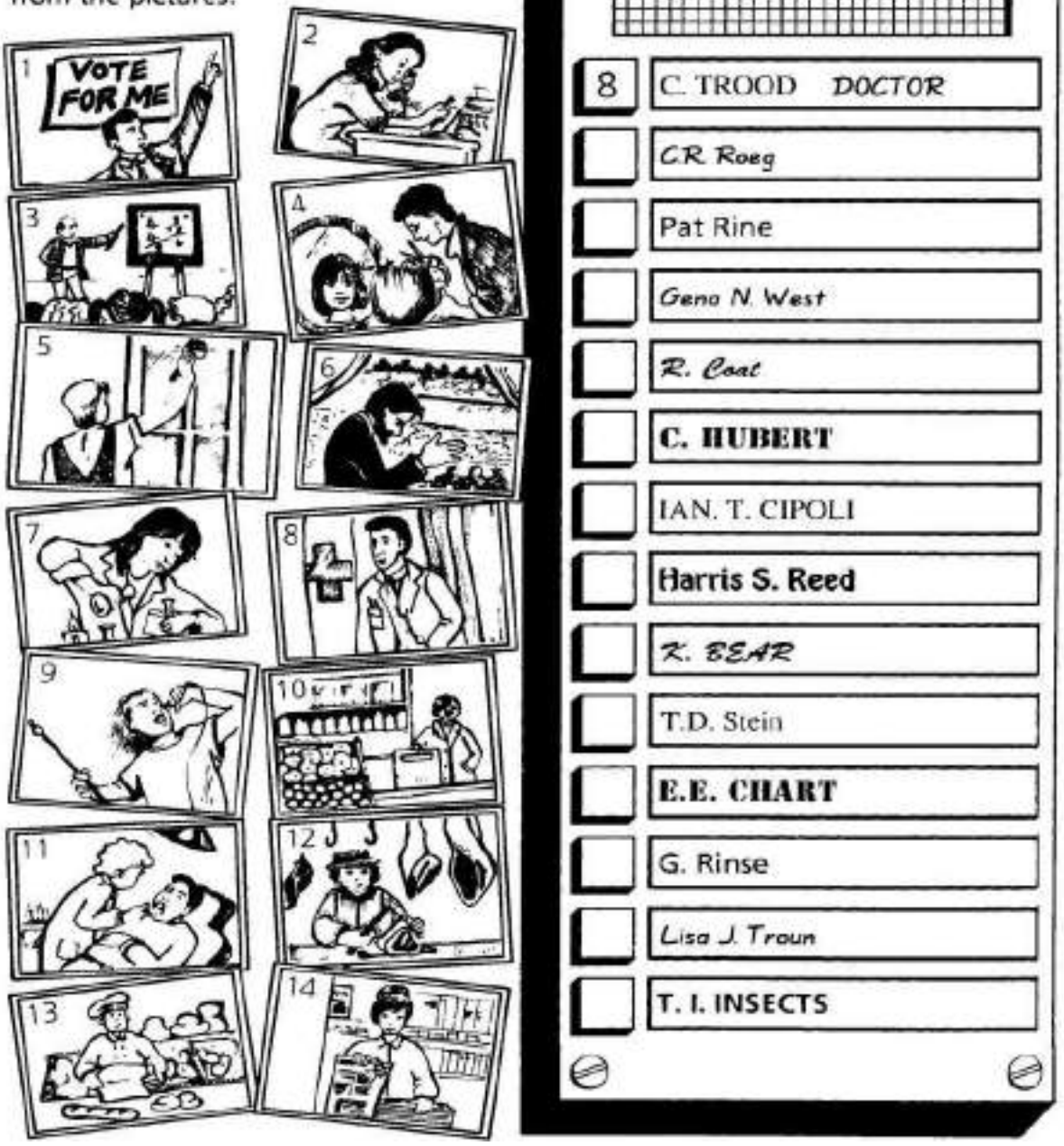
When did you notice these symptoms?

What can we do? *You need to ...*

QUIZ TIME

What are their jobs ?

Each of the names is an anagram of a job. For example:
C. TROOD = DOCTOR
Find the other jobs, and add the correct numbers from the pictures.



LESSON 21 BIOENGINEERING

Vocabulary tasks:

Ex. 1 Read and translate the active vocabulary of the lesson into Uzbek.

cloning, gene, transgenic, prohibition, expression, genetic engineering, trait, appearance, artificially, banning, research, application, societal concerns, regulation, gene enhancement;

Ex. 2 Match the words (1-6) with the definitions (A-F).

1 __ cloning	A) the appearance of a trait
2 __gene	B) making a copy of an organism
3 __ transgenic	C) a segment of DNA
4 __ prohibition	D) banning something
5 __ expression	E) altering genetic material
6 __ genetic engineering	F) having artificially introduced genetic material

Ex. 3 Read the sentence pair. Choose where the words best fit the blanks.

1 gene enhancement / regulation

A) can create stronger animals.

B) There is strict of genetic research.

2 biotechnology / societal concerns

A) There are many about cloning.

B) Robert wants to work in the field

Reading tasks:

Ex. 4 Read the conference schedule and translate it into Uzbek.

Animal Bioengineering

(National Association of Bioengineers-NAB Westphalia University)

Friday March 18

4:30 pm Registration – Parker Hall lobby

5:30 pm Keynote Address

Chapman Ballroom. Keynote speaker Dr. Mary Gilberson will describe her research in genetic engineering.

Saturday March 19

8:30 am-12:00 pm Presentations Parker hall Group A: Room 119
Transgenic organisms. Dr. Meyers White tals about current research and newly developed transgenic organisms and their benefits.
Group B: Room 106
Biotechnology applications in agriculture. Dr. Francis Gray discusses three promising new directions for biotechnology in agriculture.
2:00 pm – 4:00 pm Poster Session Rorschach Exhibition Area

Sunday March 18

8:30 am – 12:00 pm Presentations, Parker hall Group A: Room 119
Cloning bacteria and other microorganisms: engineering applications. Dr. Ursula Prsybysic and Dr. William Shawcross present on the latest engineering applications.
Group B: Room 106 Genes, gene expression, and gene enchancement: new techniques for producing favorable outcomes. Dr. Samel Perez discusses a set of techniques developed by Camber University.
2:00 pm – 3:00 pm Closing Remarks
Chapman Ballroom. Dr Whitaker will discuss societal concerns about bioengineering. How might we face greater regulation of our research and even prohibitation?

Ex. 5 Read the conference schedule. Then, mark the following statements as true (T) or false (F).

1 ___ The keynote speaker will address biotechnology in agriculture.
2 ___ On Sunday, group B attends a presentation cloning bacteria.
3 ___ The closing remarks will discuss concerns with bioengineering.

Speaking tasks:

Ex. 6 Read a conversation between an interviewer and a speaker and discuss it in groups.

Interviewer: So, what are the challenges of agricultural bioengineering?
Speaker: Well, consumers fear that genetically modified foods are not safe.
Interviewer: Shouldn't people be worried about eating genetically modified food?
Speaker: Not at all. The science says that genetically modified food is safe to eat. We just need to do a better job of communicating this with the public.
Interviewer: What do you think will happen if you don't educate the public about genetically modified foods?

Speaker: In some countries consumers have been very vocal. Governments there have responded by increasing their regulation of agriculture. In some cases, they have responded by prohibiting all genetically modified products. This is not what we want to happen.
Interviewer: Of course not!

Ex. 7 Read the conversation again and choose the correct answers.

1 What is the interview mostly about?
A) the benefits of bioengineering in agriculture
B) the government's support of biotechnology
C) the health risks of bioengineered foods
D) the impact of consumer's concerns

2 What does the speaker suggest as a solution?
A) opposing government regulations
B) communicating better with consumers
C) publishing the latest scientific discoveries
D) testing transgenic products more often

Ex. 8 Read the conversation again and complete the gaps.

I**nterviewer:** So, what are the challenges of agricultural bioengineering?
Speaker: Well consumers fear that genetically modified (1)_____
Interviewer: Shouldn't people be worried about eating genetically modified food?
Speaker: Not at all. (2) _____ _____ _____ _____ genetically modified food is safe to eat. We just need to do a better job of communicating this with the public.
Interviewer: What do you think will happen if you don't (3) ___ ___ ___ about genetically modified foods?
Speaker: (4**)** _____ _____ _____ consumers have been very vocal. Governments there have responded by (5) ____ _____ _____ of agriculture. In some cases, they have responded by prohibiting all genetically modified products. This is not what we want to happen.
Interviewer: (6) ____ ____ _____!

USE LANGUAGE SUCH AS:

What are the challenges of bioengineering ...

Consumers fear that ...

Some governments have ...

QUIZ TIME

COMPLETE THE TITLES

A lot of English words end with the letters 'er'. Here are twelve. Use them to complete the film titles on the posters.

HIGHER | ALEXANDER | CORNER | LETTER | PANTHER | SWIMMER | CHRISTOPHER | WALTER | DRIVER | BIGGER | SINGER | GREENER

Question:

Why are the posters in groups of three?

LESSON 22 AGRICULTURE AND FORESTRY

"My grandfather used to say that once in your life you need a doctor, a lawyer, a policeman and a preacher but every day, three times a day, you need a farmer."

Brenda Schoepp

Over 2 billion people

rely on forests for shelter, livelihoods, water, food and fuel security

Agriculture is the art and science of cultivating the soil, growing crops and raising livestock. It includes the preparation of plant and animal products for people to use and their distribution to markets. Agriculture provides most of the world's food and fabrics. Cotton, wool, and leather are all agricultural products. Agriculture also provides wood for construction and paper products.

INTRODUCTORY TEXT

Agriculture is an important branch of economy. Economic growth of any country depends on the development of agriculture which supplies people with food and clothing and industry with raw materials.

The word "agre" is a Latin word. It means the cultivation of fields in order to grow crops. Now agriculture also includes the use of land to breed farm animals. We do not know when people began to grow crops. It was many thousand years ago. Now crop production and animal husbandry are highly developed branches of agriculture.

Life is impossible without plants. They play an important role in everyday life of people. Plants grown by farmers are known as farm crops. They are used for many purposes. Most of them are used directly as food for people, some are consumed by farm animals, and others are used in industry and medicine.

Crop production is the practice of growing and harvesting crops. The most important crops grown by man are grain crops, vegetables, grasses. In order to obtain high yields crops are grown under favourable soil and climatic conditions.

Animal husbandry is a branch of agriculture including the breeding of farm animals and their use. Dairy and beef cattle, hogs, sheep and poultry are widely bred throughout the world. Farm animals are highly important sources of food for man. They are kept for the production of such nutritious products as meat, milk

and eggs. Milk is often called the nature's most important food. Meats from farm animals are highly important as food for people. The animals most often used for this purpose are beef cattle, hogs, sheep, and poultry. Meat from mature sheep is known as mutton. Meat from hogs is called pork. Meat from mature beef cattle is called beef.

Meat from young beef cattle is called veal. Many crops grown by man are used in feeding livestock. At the same time manure produced by farm animals is an important source for the maintenance of soil fertility. Most of the nutrients taken by plants from the soil thus returned. Applying manure, farmers improve the physical condition of the soil. Thus, crop production and animal husbandry are closely connected with each other.

Forestry is the science and craft of creating, managing, using, conserving, and repairing forests and associated resources to meet desired goals, needs and values for human and environmental benefits. The science of forestry has elements that belong to the biological, physical, social, political and managerial sciences. Trees and forests are very important because trees absorb carbon dioxide and turn it into wood, where the carbon stays bound up for hundreds or even thousands of years. Growing trees soak up CO2 from the atmosphere and store it in their trunks, roots, leaves and forest soils.

Forest ecosystems have come to be seen as the most important component of the biosphere, and forestry has emerged as a vital applied science, craft, and technology.

VOCABULARY EXERCISES

Ex. 1 Give Uzbek equivalents to:

agriculture, branch, forestry, crop production, animal husbandry, economic growth, industry, raw materials, the cultivation of fields, to grow crops, the use of land, highly-developed branches of agriculture, to play an important role, are used for many different purposes, farm crops, practice of growing and harvesting crops, to obtain high yields, the breeding of farm animals, are widely bred throughout the world, such nutritious products as meat, milk and eggs, are used in feeding livestock, an important source for the maintenance of soil fertility, science;

Ex. 2 Complete the following sentences using words and word-combinations from the text:

1. In the East most farmers grow different … … .
2. Farmers applying fertilizers obtain high … of farm crops.
3. The products supplied by farm animals are …, … and.....
4. Agriculture is the most important ….. of economy in this country

5. There are many farms where farmers grow some crops and … some farm animals.
6. Some farmers keep … in poultry houses in summer and in winter.
7. Meat from mature sheep is known as ….
8. Meat from hogs is called ….

Ex. 3 Find the main word.

1	**a)** meat	**b)** milk	**c)** bread	**d)** food
2	**a)** animal	**b)** hog	**c)** sheep	**d)** dog
3	**a)** meat	**b)** pork	**c)** beef	**d)** veal
4	**a)** carrot	**b)** vegetable	**c)** potato	**d)** tomato
5	**a)** apple	**b)** orange	**c)** fruit	**d)** lemon
6	**a)** crop	**b)** wheat	**c)** barley	**d)** corn
7	**a)** cow	**b)** livestock	**c)** sheep	**d)** bull
8	**a)** chicken	**b)** duck	**c)** poultry	**d)** hen.

Ex. 3 Answer the following questions.

1 Why is agriculture very important?
2 What are the two branches of agriculture?
3 What does the Latin word “agre“ mean?
4 Where are farm crops used?
5 How do people increase crop yields?
6 What is crop production?
7 What does animal husbandry include?
8 What products do farm animals produce?
9 What is manure used for?
10 How do farmers improve the physical condition of the soil?
11 What is forestry?
12 Why are forests and trees very important?

GRAMMAR EXERCISES

Ex. 4 Put the following nouns in plural form:

1 country -	_____	12 child -	_____
2 life -	_____	13 vegetable -	_____
3 plant -	_____	14 cow -	_____
4 animal -	_____	15 farmer -	_____
5 woman -	_____	16 mouse -	_____
6 man -	_____		
7 sheep -	_____		
8 hog -	_____		
9 ox -	_____		
10 goose -	_____		
11 horse -	_____		

Ex.5. Analyze the word-structure. Translate the words into Uzbek.

1 to develop – development
2 to produce – production
3 to absorb – absorption
4 to cultivate – cultivation
5 to continue – continuation
6 to improve – improvement
7 to connect – connection
8 to translate – translation
9 to manage – management
10 to organize – organization

Ex. 6 Give the three forms of the following verbs:

to be			
to use			
to breed			
to grow			
to mean			
to begin			
to know			
to make			
to do			
to produce			
to keep			
to connect			
to get			
to have			
to give			
to become			
to pay			
to take			
to read			
to write			
to harvest			
to sow			
to supply			

Ex. 7 Translate into Uzbek.

1. Animal husbandry is as important as plant production.
2. Intensification is the most popular way of increasing food products.
3. Man obtains more food by growing better crop varieties.
4. Application of fertilizers is one of the best methods of increasing crop yields.
5. Cattle breeding is the most important branch of animal husbandry.
6. This is the largest farm in our region.
7. Our farm has higher crop yields now than last year.
8. Intensification of agricultural production is the most urgent problem now.
9. Animal husbandry is more significant on this farm than crop production.

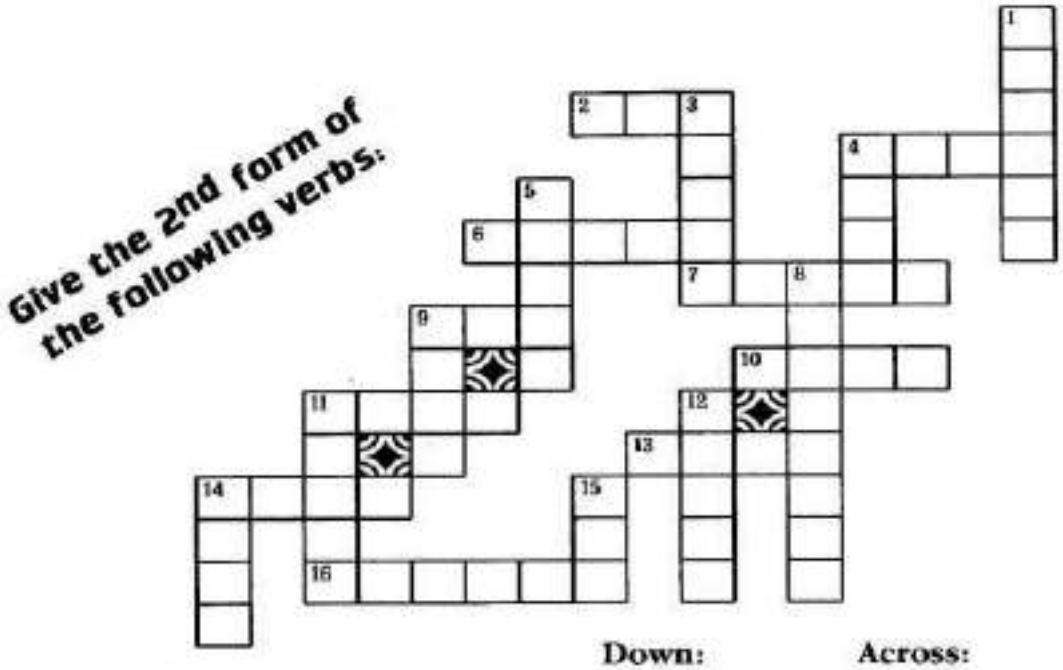
Ex. 8 Translate the sentences with Modal Verbs.

1. Man cannot regulate the amount of rainfall but he can prevent the loss of moisture from the soil by cultivation or irrigation.

2. Farmers have to apply the nutrients taken by growing crops from the soil.
3. Farmers must feed their animals properly.
4. Cattle, sheep, poultry and hogs should be kept under proper conditions.
5. Wheat can be grown throughout the world.
6. Every farmer has to work much.
7. Wheat is to be planted on this field next season.
8. Favourable conditions may be provided for poultry on our farm.
9. Weeds can be controlled with special cultural practices.
10. Different grasses are to be grown for feeding livestock.
11. The feed for young animals must be nutritious.

Quiz time

CROSSWORD PUZZLE
(Irregular verbs)



Down:
1. Forget;
3. Throw;
4. Send;
5. Drink;
8. Overtake;
9. Read;
11. Sleep;
12. Shine;
14. Feel;
15. Sit.

Across:
2. Meet;
4. Sing;
6. Break;
7. Write;
9. Run;
10. Fall;
11. Swim;
13. Shoot;
14. Fly;
16. Teach.

LESSON 23 INTENSIVE TECHNOLOGIES IN AGRICULTURE

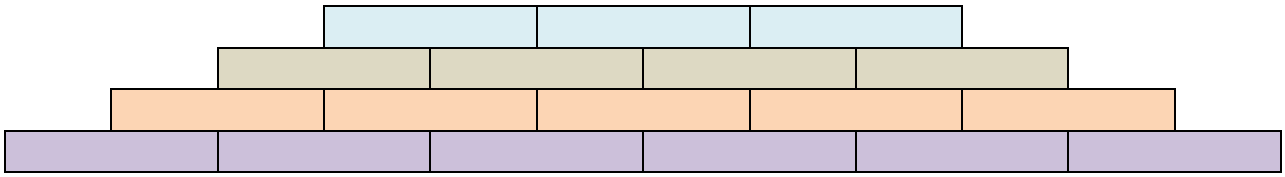
Vocabulary tasks:

Ex. 1 Read and translate the active vocabulary of the lesson into Uzbek.

survive, human, matter, certainly, vegetation, survival, directly, significance, huge, development, overall, scope, develop, importance, extremely, harmful, quality, generate, revenue, ordinary, varieties, advanced, consumption;

Ex. 2 "Pyramid" Find words from the bottom of pyramid.

- The place surrounded with water
- There are four …s in the world
- Sun rises in the … .
- High level, beginning part of something;



Reading tasks:

Ex. 3 Read the passage and translate it into Uzbek.

Every human being needs food to survive. No matter if you are vegetarian, or non-vegetarian, you certainly need crops or vegetation for your survival directly or indirectly. Even for the production of meat, milk, and egg, you need crops. That is why the agriculture sector has a significant role in the economy of any country.

Use of agricultural technology has great significance in the development overall country economy. There is huge scope in the agriculture sector to develop, and introduce the modern agricultural technology. The importance of the use of latest technology in the agriculture is extremely significant as we can increase the production per acre.

The use of agricultural technology starts right from the land and continue until the selling of the final product. With the help of latest technology, we can

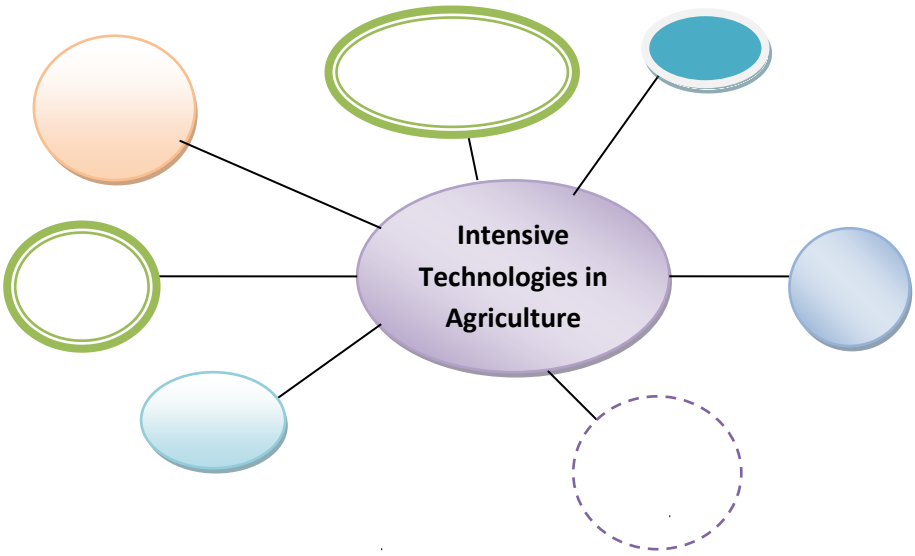
create the new seed varieties of the crop that can produce more crop but also resistant to many environmental as well as the biological factors, i.e. insects, virus, etc. This will not only help to reduce the use of pesticides and other harmful chemicals. In this way, we can produce crops that are more organic and will be fit for both the animals as well as the human consumption.

Moreover, we can eliminate the anti-nutritional factor from various crops. For example, sorghum has tannin in its grains that limits its use in the poultry feed. We can produce different varieties by the use of advanced agricultural technology and can produce tannin free sorghum product. Other than the production, we can use agricultural technology in the snowing, spraying, harvesting, storing, transportation, as well as the processing the agricultural products. In this way, a farmer not only can reduce its input cost, but also can get maximum output. Moreover, it will help to increase the quality of the product that will generate more revenue than the ordinary products.

Ex. 4 Answer the questions from the text.

1 Why we need food?
2 Why is the agriculture sector is so important?
3 Is the latest technology for agriculture important? Why?
Use facts to substitute your ideas.
4 What are biological factor to affect the agriculture?
5 What is anti-nutritional factor?
6 How farmers can increase the quality of the product?

Ex. 5 Complete the scheme "Cluster" by getting information from the text. Work in pairs or groups. Demonstrate your ideas and discuss with others.



Grammar revision:

Ex. 6 Write the verbs in Past Perfect Simple.

1 The pupils talked about the film they (watch)_____.
2 I was late for work because I (miss) _____the bus.
3 We lived in the house that my father (build_____ .
4 We admired the picture that Lucy (paint_____ .
5 They watered the trees that they (plant_____ .
6 The teacher corrected the tests that the pupils (write)_____.
7 I received a good mark in my test because I (practice)_____ on it.
8 The mail order house did not send me the shirt that I (order)_____ .
9 I had to clean the floor because my cats (knock)_____ over the flower pots.
10 My friend was in hospital because she (slip)_____ on a banana skin.

Ex. 7 Write the verbs in Past Perfect Simple. Use the negative form.

1 In the shopping centre, I met a friend who I (see / not) _____ for ages.
2 The thief could walk right into the house because you (lock / not) _____ the door.
3 We lost the match because we (practise / not) _____ the days before.
4 At school, Jim quickly copied the homework that he (do / not) _____.
5 We ate at a restaurant last night because I (buy / not) _____ anything for dinner.
6 When we came back, it was cold in the house because Alice (close / not) _____ the windows.
7 All day long, Phil was angry with me just because I (greet / not) _____ him first.
8 When I met Jane at eleven o'clock, she (have / not) _____ breakfast yet.
9 I couldn't go to the cinema with my friends last night because I (finish / not) _____ my homework yet.
10 Fred answered my question although I (ask / not) _____ him.

Ex. 8 Complete the questions in Past Perfect Simple.

1 (what / Bob / do) _____ that he was kept in after school?
2 (you / eat) _____ anything before you went to the theatre?
3 (he / live) _____ in London before he moved to Glasgow?
4 (she / find) _____ a new job by that time?
5 (they / book) _____ a room before they went to Dublin?
6 (how often / you / ring) _____ the bell before he answered the door?
7 (why / they / have) _____ dinner before they came to the party?

Speaking tasks:

Ex. 9 Get into two groups and discuss each picture. What are the advantages and disadvantages in two pictures?

Picture 1 (Before Technology)

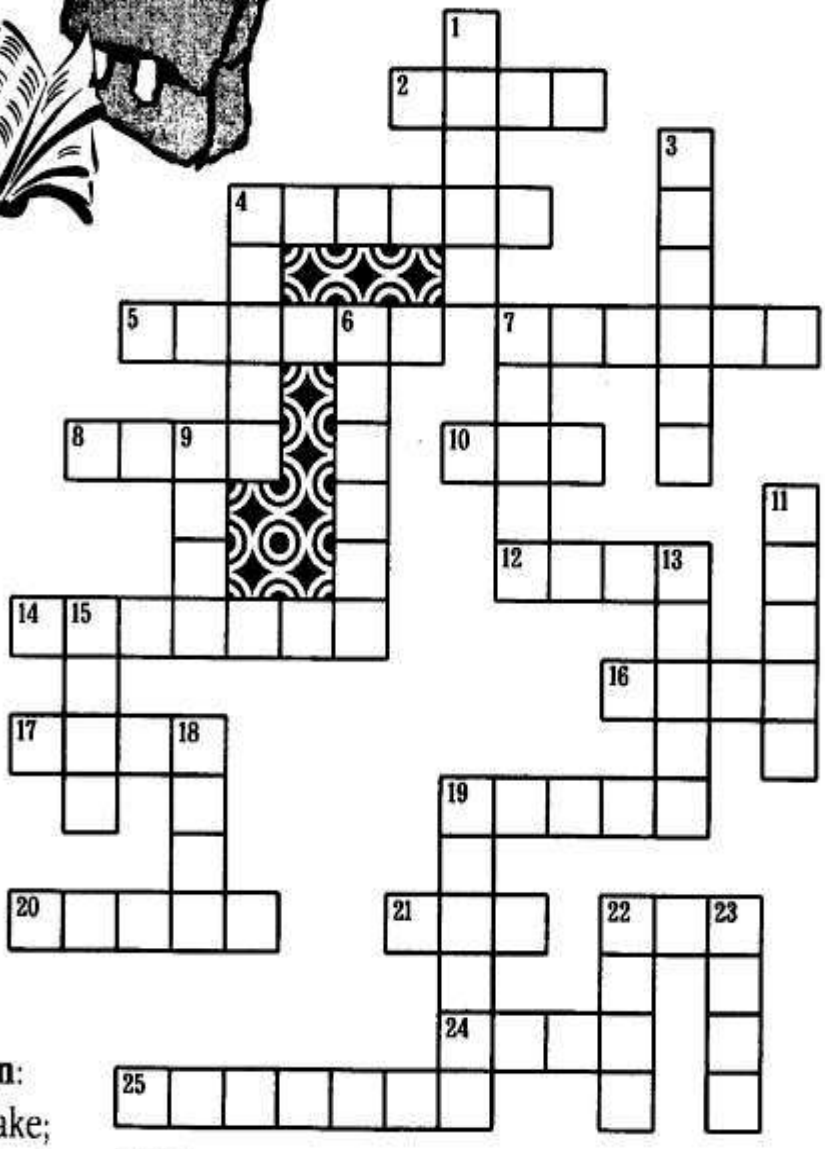
Picture 2 (After Technology)

Ex. 10 Complete the following "The flower of lily" diagrams. Work in pairs.

	Development of animal feeds	
	Breeding of animals	
	Irrigation of plants	
	Fertilizer	
	Demand	
	Supply	
	Modern transportation	
	Cooling facilities	
	Genetically produced plants	

Quiz time

CROSSWORD PUZZLE
(irregular verbs)



Across:

2. Pay;
4. Freeze;
5. Catch;
7. Break;
8. Sell;
10. Hit;
12. Tell;
14. Write;
16. Lie;
17. Say;
19. Blow; 20. Wake;
21. Put;
22. Meet;
24. Hold;
25. Bring.

Down:

1. Take;
3. Speak;
4. Find;
6. Hide;
7. Build;
9. Lose;
11. Bear;
13. Draw;
15. Read;
18. Do;
19. Buy;
22. Make;
23. Tear.

Give the 3rd form of the following verbs:

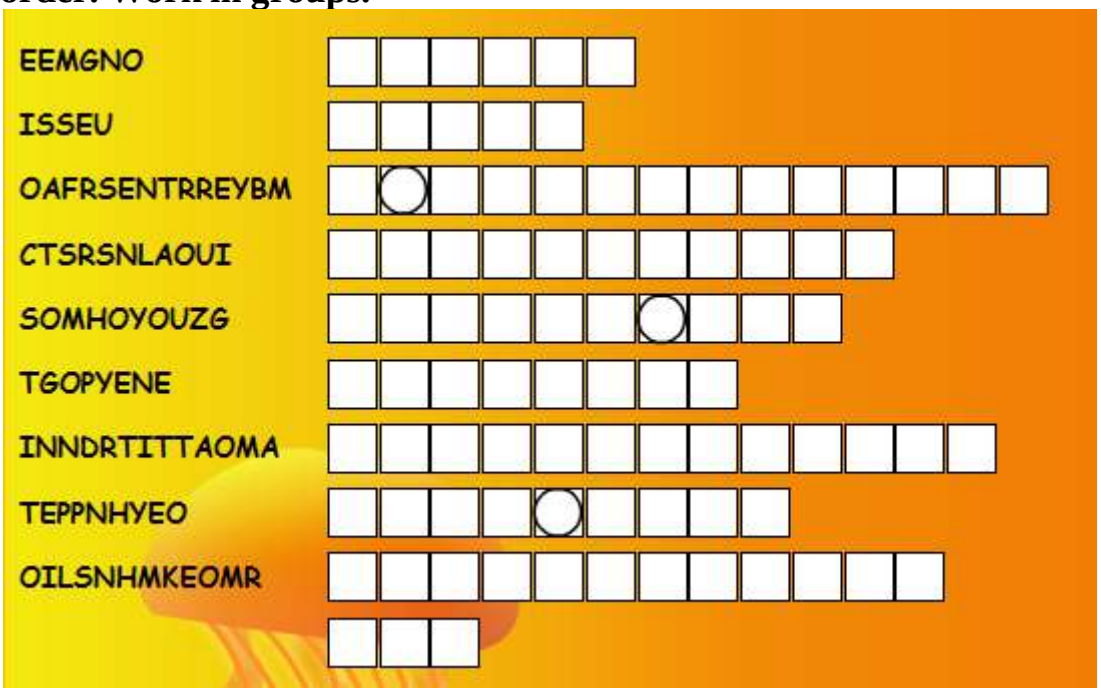
LESSON 24 AGRICULTURE AND ENVIRONMENT

Vocabulary tasks:

Ex. 1 Read and translate the active vocabulary of the lesson into Uzbek.

cost-effective, improve, pressing, challenges, quality, requirements, degradation, enhancing, sustainability, expanding, integrity, creating, maintaining, unique, land, countryside, influence, rural, attractive, preservation, forestry, compatible, change;

Ex. 2 Complete the following puzzle with rearranging the letter in a proper order. Work in groups.



Reading tasks:

Ex. 3 Read the passage and translate it into Uzbek.

Agriculture represents one of the most cost-effective ways to improve two of our most pressing environmental challenges: water quality and climate change. The important goal is to help farmers and ranchers play a major role in

improving our environment while also expanding their sources of revenue.

Integrating environmental concerns into the Common Agricultural Policy aims to head off the risks of environmental degradation and enhancing the sustainability of agro-ecosystems.

Around half the EU's land is farmed. Farming is important for the EU's natural environment. Farming and nature influence each other:

Farming has contributed over the centuries to creating and maintaining a unique countryside. Agricultural land management has been a positive force for the development of the rich variety of landscapes and habitats, including a mosaic of woodlands, wetlands, and extensive tracts of an open countryside.

The ecological integrity and the scenic value of landscapes make rural areas attractive for the establishment of enterprises, for places to live, and for the tourist and recreation businesses.

The links between the richness of the natural environment and farming practices are complex. Many valuable habitats in Europe are maintained by extensive farming, and a wide range of wild species rely on this for their survival. But inappropriate agricultural practices and land use can also have an adverse impact on natural resources, like

- pollution of soil, water and air,
- fragmentation of habitats and
- loss of wildlife.

The Common Agricultural Policy (CAP) has identified three priority areas for action to protect and enhance the EU's rural heritage:

Biodiversity and the preservation and development of 'natural' farming and forestry systems, and traditional agricultural landscapes;

- water management and use;
- dealing with climate change.

The CAP ensures that its rules are compatible with environmental requirements and that CAP measures promote the development of agricultural practices preserving the environment and safeguarding the countryside. Farmers are encouraged to continue playing a positive role in the maintenance of the countryside and the environment.

This is achieved by:

- targeting aid at rural development measures promoting environmentally sustainable farming practices, like agro-environment schemes;
- enhancing compliance with environmental laws by sanctioning the non-respect for these laws by farmers through a reduction in support payments from the CAP.

Ex. 4 Answer the questions from the text.

1 What are the most pressing environmental challenges?
2 What is the primary goal in the field of agriculture and environment?
3 Define “agro-ecosystems”.
4 What are the adverse impact on natural resources in case of inappropriate agricultural practices and land use?
5 What are the three priority areas that has been identified by CAP?
6 How farmers can help in protection of countryside and environment?
7 What comes to your mind first when you hear “biodiversity”?

Grammar Revision:

Ex. 5 Change the sentences from Active Voice into Passive Voice where it is necessary.

1 Lola washes dinner things every day. Her sister helps about the house.
2 The mother told an interesting story to the child.
3 She is very cute. All boys are always around her.
4 I translate the articles in English, Russian and Korean languages easily.
5 My parents always help me in my work. Because they are economists.
6 The manager signed the documents.
7 Mr. John is very intelligent. He respects others’ thoughts during the conversation.

Ex. 6 Put the correct form of the verb: Active or Passive.

1. Some English books... tomorrow. (are/were/will be bought)
2. English books ... from library every year. (are/were/will be taken)
3. The vocabulary exercises ... during English lesson. (are/were/will be done)
4. An interesting story... to children by their teacher. (is/was/will be told)
5. His homework ... after dinner tomorrow. (is/was/will be done)
6. This article... tomorrow. (is/was/will be translated)
7. A new film ... on TV yesterday. (is/was/will be watched)
8. Much cotton ... by students and farmers every year. (is/was/will be picked)

Let’s smile!

Parrot

A man bought himself a parrot and to induce him to talk kept repeating, 'Hello, hello,' to the bird.
Finally, the parrot opened one sleepy eye and commented, 'What's the matter? Line busy?

QUIZ TIME

OPPOSITES QUIZ

Find the opposite to these words.

HOT SAD WELL LIGHT BIG
NEW WEAK RICH TALL
BAD OLD RIGHT

1. Happy / Sad
2. .....
3. .....
4. .....
5. .....
6. .....
7. .....
8. .....
9. .....
10. .....
11. .....
12. .....

LESSON 25 INNOVATIONS IN AGRICULTURE


Vocabulary tasks:

Ex. 1 Read and translate the active vocabulary of the lesson into Uzbek.
root, triggered, change, society, development, dubbed, permanent, favor, reliable, settlement, civilization, demand, population, lifestyles, human, annual, pressure, independent, appearance, evidence, domestic, impact, spread, equipped, stomach;

Ex. 2 Use the word combinations you've made to complete the sentences below.

a)

1 cereal	a) plants
2 raw	b) environment
3 soil	c) supply
4 water	d) control
5 flood	e) conservation
6 farm	f) materials
7 horticultural	g) weeds
8 brushy	h) grains

b)

1 Plant breeding has placed improvement of _____ on a scientific basis.
2 Cereal farming is growing _____ for human food and livestock feed as well as for other uses, including starch and biofuel.
3 Agriculture is the main source of _____ for processing industries.
4 The first consideration in planning an irrigation project is developing a _____.
5 Soil management involves the application of available knowledge of crop production, _____, and economics.
6 Floodplain regulations and _____ structures protect watershed residents from the devastation caused by floods in the past.
7 A _____ plan will ensure that all farm businesses have essential soil and water protection management measures.
8 Like cattle, sheep graze for their food, eating both short, fine grasses and coarse, _____.

Reading Tasks:

Ex. 3 Read the text and translate it into Uzbek.

Innovations in agriculture

The Farming Revolution

Taking root around 12,000 years ago, agriculture triggered such a change in society and the way in which people lived that its development has been dubbed the "Neolithic Revolution". Traditional hunter-gatherer lifestyles, followed by humans since their evolution, were swept aside in favor of permanent settlements and a reliable food supply. Out of agriculture, cities and civilizations grew, and because crops and animals could now be farmed to meet demand, the global population rocketed—from some five million people 10,000 years ago, to more than seven billion today.

There was no single factor, or combination of factors, that led people to take up farming in different parts of the world. In the Near East, for example, it's thought that climatic changes at the end of the last ice age brought seasonal conditions that favored annual plants like wild cereals. Elsewhere, such as in East Asia, increased pressure on natural food resources may have forced people to find homegrown solutions. But whatever the reasons for its independent origins, farming sowed the seeds for the modern age.

Plant Domestication

The wild progenitors of crops including wheat, barley, and peas are traced to the Near East region. Cereals were grown in Syria as long as 9,000 years ago, while figs were cultivated even earlier; prehistoric seedless fruits discovered in the Jordan Valley suggest fig trees were being planted some 11,300 years ago. Though the transition from wild harvesting was gradual, the switch from a nomadic to a settled way of life is marked by the appearance of early Neolithic villages with homes equipped with grinding stones for processing grain.

The origins of rice and millet farming date to the same Neolithic period in China. The world's oldest known rice paddy fields, discovered in eastern China in 2007, reveal evidence of ancient cultivation techniques such as flood and fire control.

In Mexico, squash cultivation began around 10,000 years ago, but corn (maize) had to wait for natural genetic mutations to be selected for in its wild ancestor, teosinte. While maize-like plants derived from teosinte appear to have been cultivated at least 9,000 years ago, the first directly dated corn cob dates only to around 5,500 years ago.

Corn later reached North America, where cultivated sunflowers also started to bloom some 5,000 years ago. This is also when potato growing in the Andes region of South America began.

Farmed Animals

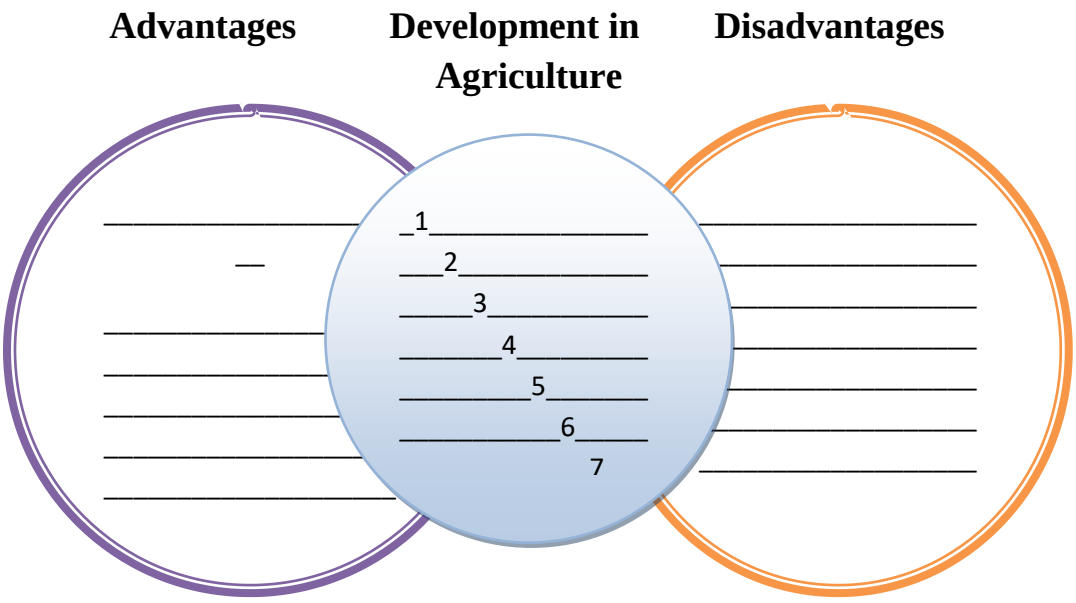
Cattle, goats, sheep, and pigs all have their origins as farmed animals in the so-called Fertile Crescent, a region covering eastern Turkey, Iraq, and southwestern Iran. This region kick-started the Neolithic Revolution. Dates for the domestication of these animals range from between 13,000 to 10,000 years ago.

Genetic studies show that goats and other livestock accompanied the westward spread of agriculture into Europe, helping to revolutionize Stone Age society. While the extent to which farmers themselves migrated west remains a subject of debate, the dramatic impact of dairy farming on Europeans is clearly stamped in their DNA. Prior to the arrival of domestic cattle in Europe, prehistoric populations weren't able to stomach raw cow milk. But at some point during the spread of farming into southeastern Europe, a mutation occurred for lactose tolerance that increased in frequency through natural selection thanks to the nourishing benefits of milk. Judging from the prevalence of the milk-drinking gene in Europeans today—as high as 90 percent in populations of northern countries such as Sweden—the vast majority are descended from cow herders.

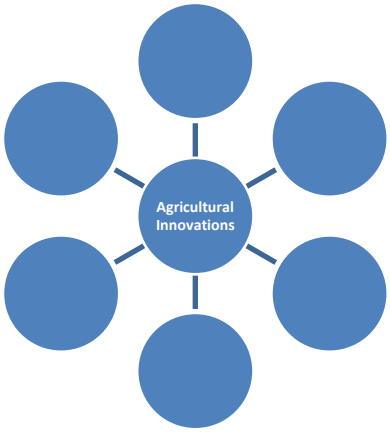
Ex. 4 Answer the following questions.

1 How is the agriculture connected with the civilization?
2 What did the people do before the agriculture developed?
3 Is there any connection between the population rise and the agriculture development? If yes, what?
4 What conditions did the end of the ice age bring in the Near East?
5 When did the growing of cereals begin?
6 What does the author says about the Jordan valley fig trees?
7 Where is the oldest rice paddy field's discovered?
8 According to the text, what happened in Mexico approximately 10000 years ago?
9 What can you say about the farmed animals?

Ex. 5 Complete the following diagram.



Ex. 6 Discuss the following diagram in pairs.



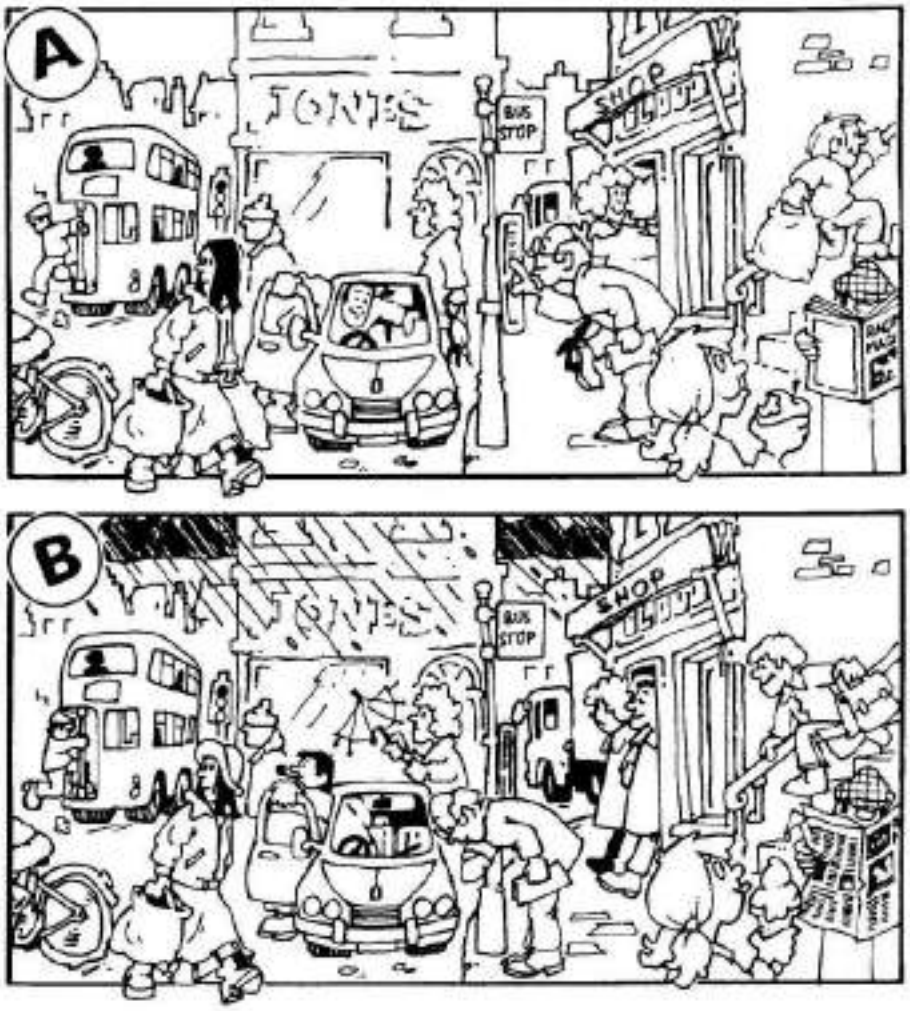
Ex. 7 Match the words with the definitions.

1 agriculture	a) a plant with blue flowers grown for its stems or seeds, or the thread made from this plant
2 crop	b) a large group of cultivated plant
3 cultivate	c) to put seeds in soil
4 farmland	d) to pick and collect crops
5 domesticate	e) growing plants and raising animals
6 plant	f) land that is used for or is suitable for farming
7 flax	g) the practice or work of farming
8 harvest	h) to tame an animal

QUIZ TIME

Spot the Difference 1

Compare the pictures. Write what is different in picture B.



Use these verbs:						
read	eat	run down	wear	get on	rain	get out
smoke	come out of	look at	open	carry		

The woman is opening her umbrella. It is raining.

LIST OF IRREGULAR VERBS

Infinitive	**Simple Past**	**Past Participle**
V	**V_2**	**V_3**
alight	alighted, alit	alighted, alit
arise	arose	arisen
awake	awoke, awaked	awoken, awaked
be	was, were	been
bear	bore	borne, born
beat	beat	beaten, beat
become	became	become
beget	begot	begotten
begin	began	begun
bend	bent	bent
bereave	bereaved, bereft	bereaved, bereft
beseech	besought, beseeched	besought, beseeched
bet	bet, betted	bet, betted
bid	bade, bid	bidden, bid, bade
bide	bade, bided	bided
bind	bound	bound
bite	bit	bitten
bleed	bled	bled
bless	blessed, blest	blessed, blest
blow	blew	blown
break	broke	broken
breed	bred	bred
bring	brought	brought
broadcast	broadcast, broadcasted	broadcast, broadcasted
build	built	built
burn	burnt, burned	burnt, burned
burst	burst	burst
bust	bust, busted	bust, busted
buy	bought	bought
can	could	(kein Participle)
cast	cast	cast
catch	caught	caught
choose	chose	chosen
cleave	cleft, cleaved, clove	cleft, cleaved, cloven
cling	clung	clung
clothe	clothed, clad	clothed, clad
come	came	come
cost	cost	cost
creep	crept	crept
crow	crowed	crew, crowed
cut	cut	cut
deal	dealt	dealt

dig	dug	dug
do	did	done
draw	drew	drawn
dream	dreamt, dreamed	dreamt, dreamed
drink	drank	drunk
drive	drove	driven
dwell	dwelt, dwelled	dwelt, dwelled
eat	ate	eaten
fall	fell	fallen
feed	fed	fed
feel	felt	felt
fight	fought	fought
find	found	found
flee	fled	fled
fling	flung	flung
fly	flew	flown
forbid	forbad, forbade	forbid, forbidden
forecast	forecast, forecasted	forecast, forecasted
forget	forgot	forgotten
forsake	forsook	forsaken
freeze	froze	frozen
geld	gelded, gelt	gelded, gelt
get	got	got, gotten
gild	gilded, gilt	gilded, gilt
give	gave	given
gnaw	gnawed	gnawed, gnawn
go	went	gone
grind	ground	ground
grip	gripped, gript	gripped, gript
grow	grew	grown
hang	hung	hung
have	had	had
hear	heard	heard
heave	heaved, hove	heaved, hove
hew	hewed	hewed, hewn
hide	hid	hidden, hid
hit	hit	hit
hold	held	held
hurt	hurt	hurt
keep	kept	kept
kneel	knelt, kneeled	knelt, kneeled
knit	knitted, knit	knitted, knit
know	knew	known
lay	laid	laid
lead	led	led
lean	leant, leaned	leant, leaned

leap	leapt, leaped	leapt, leaped
learn	learnt, learned	learnt, learned
leave	left	left
lend	lent	lent
let	let	let
lie	lay	lain
light	lit, lighted	lit, lighted
lose	lost	lost
make	made	made
may	might	(kein Participle)
mean	meant	meant
meet	met	met
melt	melted	molten, melted
mow	mowed	mown, mowed
pay	paid	paid
pen	pent, penned	pent, penned
plead	pled, pleaded	pled, pleaded
prove	proved	proven, proved
put	put	put
quit	quit, quitted	quit, quitted
read	read	read
rid	rid, ridded	rid, ridded
ride	rode	ridden
ring	rang	rung
rise	rose	risen
run	ran	run
saw	sawed	sawn, sawed
say	said	said
see	saw	seen
seek	sought	sought
sell	sold	sold
send	sent	sent
set	set	set
sew	sewed	sewn, sewed
shake	shook	shaken
shall	should	(kein Participle)
shear	sheared	shorn, sheared
shed	shed	shed
shine	shone	shone
shit	shit, shitted, shat	shit, shitted, shat
shoe	shod, shoed	shod, shoed
shoot	shot	shot
show	showed	shown, showed
shred	shred, shredded	shred, shredded
shrink	shrank, shrunk	shrunk
shut	shut	shut

sing	sang	sung
sink	sank	sunk
sit	sat	sat
slay	slew	slain
sleep	slept	slept
slide	slid	slid
sling	slung	slung
slink	slunk	slunk
slit	slit	slit
smell	smelt, smelled	smelt, smelled
smite	smote	smitten
sow	sowed	sown, sowed
speak	spoke	spoken
speed	sped, speeded	sped, speeded
spell	spelt, spelled	spelt, spelled
spend	spent	spent
spill	spilt, spilled	spilt, spilled
spin	spun	spun
spit	spat	spat
split	split	split
spoil	spoilt, spoiled	spoilt, spoiled
spread	spread	spread
spring	sprang, sprung	sprung
stand	stood	stood
steal	stole	stolen
stick	stuck	stuck
sting	stung	stung
stink	stank, stunk	stunk
stride	strode	stridden
strike	struck	struck
string	strung	strung
strive	strove	striven
swear	swore	sworn
sweat	sweat, sweated	sweat, sweated
sweep	swept	swept
swell	swelled	swollen, swelled
swim	swam	swum
swing	swung	swung
take	took	taken
teach	taught	taught
tear	tore	torn
telecast	telecast, telecasted	telecast, telecasted
tell	told	told
think	thought	thought
throw	threw	thrown
thrust	thrust	thrust

tread	trod	trodden
understand	understood	understood
wake	woke, waked	woken, waked
wear	wore	worn
weave	wove	woven
wed	wed, wedded	wed, wedded
weep	wept	wept
wet	wet, wetted	wet, wetted
win	Won	won
wind	Wound	wound
wring	Wrung	wrung
write	Wrote	written

Abbreviations / Сокращения

C.= Centigrade [sentI′greId] по Цельсию, термометр Цельсия
e.g. = exempli gratia = for example например
e.i. = id est то есть
etc. = et cetera [It′setrə] и так далее
F. = Fahrenheit [′fa:rənhaIt] по Фаренгейту
ft = foot [fut] фут (около 30,5 см)
in = inch [Intʃ] дюйм (анг. = 2,5 см)
l. = litre [′lItə] литр
lb = libra (лат.) фунт
pound [paund] фунт (анг. = 453,6 г)
ounce [auns] унция (анг. = 28,36 г)
sq cm. = square centimetre [′skwєə ′sentI′mi:tə] квадратный сантиметр (см2)
hp = horsepower лошадиная сила
syn. = synonym синоним
ant. = antony

Glossary

abiotic - If something is abiotic, it is a non-living thing.
agricultural advisor - An agricultural advisor is a professional who provides advice and support people working in agriculture.
air seeding - Air seeding is a method of planting seeds that uses a machine to spread seeds with a flow of air.
analysis - An analysis is a careful study or examination.
animal performance assessment - An animal performance assessment is a test that examines the effects of biotech products on animals.
animal welfare - Animal welfare is the health and well-being of animals.
antibiotic - An antibiotic is a drug that is used to kill bacteria.
audit trail document - An audit trail document is evidence that food or other products came from an organic source.
automated bin management - Automated bin management is a method for efficiently

organizing products and tracking quantities of stock.
bacterial - If something is bacterial it has to do with bacteria.
balance of trade - Balance of trade is the difference between the total value of a country's exports and the total value of its imports.
base temperature - A base temperature is the minimum temperature that will allow a plant to grow.
biodiversity - Biodiversity is the existence of a variety of plants on a particular area of land.
biological control - A biological control is an organism such as a predatory insect used for pest management.
biotech seed - A biotech seed is one that has been altered by genetic engineering.
biotechnology - Biotechnology is a branch of biology that uses living things in applied technology fields such as engineering or medicine.
biotic - If something is biotic, it is living.
blight - Blight is a disease that kills plants.
body length - Body length is the span from an animals head to its rear.
brown - To brown is to become brown due to lack of water, too much heat, or disease.
burn-down herbicide - A burn-down herbicide is a chemical used to kill weeds at the time a crop is planted.
carryover - Carryover is what remains of a previous year's stock and the current year's production after total inventories have been depleted by use.
certifier - A certifier is someone who confirms that clients are meeting standards they agree to meet to be considered organic.
change - Change is a difference occurring over time, as in a change in position, appearance, or value
chute score - A chute score is the subjective evaluation of how well an animal tolerates being forced through a chute.
cloning - Cloning is the process 0 copying a biological organism or part of that organism.
commingle - To commingle is to be ixed or sharing space.
commodity - A commodity is anything of monetary value to be bought sold or traded in an economic system.
compliance - Compliance is the act of following regulations.
compost - Compost is decaying plant material that is used as a soil amendment.
conditioning - Conditioning is the act of altering an animal's behavior and temperament.
conservation tillage - Conservation tillage is any practice that reduces water and soil loss associated with conventional tillage.
consumption - Consumption is the processes of taking food into the body through the mouth.
contamination - Contamination is when an undesirable substance mixes with a product to make it impure.
conventional seed - A conventional seed is one that has not been altered by genetic engineering.
conventional tillage - Conventional tillage is the standard way of mixing and turning the soil to prepare for planting.
crop residue - Crop residue is the remainder of plants left in the field after farmers harvest their crops.
crop rotation - Crop rotation is the process of growing different types of crops one after the other on the same space of land to improve soil quality.

cropping system - A cropping system is the method a farmer uses to grow crops, such as conventional or conservation tillage.
crowd pen - A crowd pen is a fenced area that is used to herd animals through a squeeze chute.
debt - Debt is the money that a person owes to a bank or other lender.
deworming - Deworming is the act of killing or removing worms.
diagnose - To diagnose an animal is to determine what is causing the animal's health problems.
diversify - To diversify is to increase the different types of crops produced.
drip irrigation system - A drip irrigation system is a system for watering plants that drips water slowly over the roots of the plants.
drought-tolerant - If a plant is drought-tolerant**,** it can withstand extremely dry conditions.
economic sustainability - Economic sustainability is the state of being able to continue production with consistent profits and resources.
elevation - Elevation is the height of an area of land relative to the level of the ocean.
ending stock - Ending stock is the same as carryover stock, or what remains of the previous year's stocks and the current year's production after total inventories have been depleted by use.
export - An export is a product that a nation provides to other nations in international trade.
export dependent - If a nation or industry is export dependent it relies more upon what it sells internationally than what it sells domestically.
expression - Expression is the process by which genes produce traits in an organism.
fallow - If a field is fallow**,** it does not have any crops growing on it.
farm cash receipts - Farm cash receipts include the cash income resulting from the direct sale of farm products plus government subsidies.
feed costs - Feed costs are the expenses associated with providing feed to livestock.
feed-to-food - If a process is feed-to-food, it involves growing grain to feed to animals in order to produce meat for human consumption.
field activity log - A field activity log is a document where producers record all of the operations performed on their fields.
field pattern - A field pattern is the regular and repeated way that a problem occurs in a field which is used to diagnose a problem.
fixed cash expense - A fixed cash expense is a cost due to cash spending that generally does not change such as insurance, interest, or rent.
flighty - If an animal is flighty, it is prone to run away.
food grains - Food grains are grains that are grown for humans to eat such as wheat, rice, or cor
freeze protection- Freeze protection is the act of preventing plants from freezing.
fungal - If something fungal is has to do with fungi.
fungicide - A fungicide is a chemical that kills fungi.
futures market - A futures market is a hub of financial exchange where contracts are bought and sold for the purchase of commodities at some specified price and time in the future.
gene - A gene is segment of DNA that determines which traits are inherited by offspring from their parents.
gene enhancement - Gene enhancement is the use of genetic engineering to produce desired traits in an organism beyond what is considered normal.
genetic engineering - Genetic engineering is the act of combining genetic material from two or more organisms to produce artificial changes in genes.
genetically modified organism - A genetically modified organism is an organism that was

produced through genetic engineering.
GPS - GPS (Global Positioning System) is a navigation system that can identify an exact location on the Earth.
greenhouse - A greenhouse is a structure that is designed to retain solar energy for plant growth.
gross farm revenue - Gross farm revenue is the total of all income a farm receives from its normal business activities.
growing degree day - A growing degree day is a measure of the amount of heat that a plant will receive each day in a particular area.
growing season - A growing season is the period of the year during which plants grow.
handling - Handling is the act of herding and caring for animals.
heater - A heater is a device that generates heat by consuming fuel.
herbicide - An herbicide is a chemical that kills weeds.
herbicide-tolerant - If a plant is herbicide-tolerant, it can withstand the application of herbicides.
high - A high is a price value up from what it was at some indicated point in time.
hoop house - A hoop house is a temporary structure featuring a curved plastic roof that is designed to hold in heat for plant growth.
inedible - If something is inedible it cannot be eaten.
inefficient - If something is inefficient it wastes energy.
infectious - If a disease is infectious, it is easily spread.
insecticide - An insecticide is a chemical that is toxic to insects.
insect-resistant - If a plant is insect-resistant**,** it can withstand the damages of insects.
inspector - An inspector is someone who examines farm facilities, crops, and animals to verify compliance with organic codes.
intercropping - Intercropping is the process of planting two or more crops close to each other.
interest payments - Interest payments are money paid to a lender above the amount that has been borrowed.
international trade - International trade is the exchange of products and services across international borders.
land use - Land use is the human transformation of the environment to make agricultural or living areas.
last frost date - The last frost date is the last day in spring during which a frost may occur.
lethargy - Lethargy is a condition of extreme weariness.
lice - Lice are a type of parasitic insect.
livestock - Livestock are animals that are raised for food, labor, or to make a product such as wool.
loan - A loan is money that a person borrows from a bank or other lender.
low - A low is a price value down from what it was at some indicated point in time.
manure - Manure is the solid waste produced by livestock that is often used for fertilizer.
material inputs - Material inputs are the supplies used in the production of crops or raising of livestock.
mean temperature - A mean temperature is the average temperature in an area.
mechanized - If something is mechanized**,** it is operated by machine instead of by a person.
monitor - To monitor something is to check it regularly, looking for problems.
monoculture - Monoculture is the farming of only one crop on a particular area of land.

mulching - Mulching is the process of cutting plants into small pieces usually to put on the ground as a cover to hold in moisture.
net farm income - Net farm income is the total gross farm income minus all expenses.
nitrogen efficiency - Nitrogen efficiency is the ability of a plant to use little nitrogen and grow to its full potential.
noncash expense - A noncash expense is a cost not due to cash spending, such as amortization, depletion of supply, or depreciation.
non-renewable resource -A non-renewable resource is something that exists in fixed quantities and cannot be reproduced.
off-farm impact - Off-farm impact is the effect of farming materials and actions on areas other than the farm.
open- To open a stocks trading market is to begin it for the day.
organic - If food is organic**,** it is produced without unnatural fertilizers or pesticides.
organic integrity - Organic integrity is a verification that a product is organic and not contaminated.
organic system plan - An organic system plan is a written statement which describes the organic methods a producer will use.
overplanting - Overplanting is the act of planting too many seeds in an area.
overwatering - Overwatering is the act of giving plants more water than they need.
parasite - A parasite is an organism that lives on or in another organism.
pathogen - A pathogen is any organism that causes illness or disease.
pest management - Pest management is the practice of preventing, suppressing, or destroying organisms that harm crops.
pesticide - A pesticide is a chemical that kills insects and other pests harmful to crops.
photoperiod - A photoperiod is the amount of time each day that a plant is exposed to light.
point of balance - A point of balance is the spot on an animal's body that determines which way it will move in relation to the position of a herder.
polyculture - Polyculture is a method of farming in which farmers grow several different crops together on the same piece of land.
prohibition - Prohibition is the act of forbidding something.
regulation - A regulation is something that limits or controls something else.
respiration - Respiration is the act of breathing.
restraint - A restraint is a device that is used to restrict movement.
roughage - Roughage is tough plant material that animals, but not humans, can eat.
sanitize - To sanitize is to clean something so that no bacteria remains.
self-propelled - If something is self-propelled**,** it moves by its own power.
site selection - Site selection is the act of choosing an area to plant crops in.
smart irrigation control - Smart irrigation control is a system for watering plants that adjusts watering based on environmental conditions.
societal concerns - Societal concerns are worries about the potentially negative effects of new technologies.
soil amendment - A soil amendment is a material added to soil to improve plant growth.
spring wheat - Spring wheat is a type of wheat that farmers plant in spring and harvest in late summer or early fall.

squeeze chute - A squeeze chute is a narrow fenced passage designed for passing animals through single file.
stippled - If a plant's leaves are stippled. they are covered with many little colored dots.
stocks-to-use ratio - A stocks-to-use ratio is the carryover stock divided by the total use
stunted - If a plant is stunted, it is not growing as large as it should.
suppression - Suppression is the act of reducing the amount of a pest so that it is no longer a threa
sustainable - If something is sustainable, it can be used or continued for a long time without running out of resources.
symptom - A symptom is change in a plant or animal that indicates the presence of disease**.**
symptom pattern - A symptom pattern is the regular and repeated way that symptoms occur in a plant.
symptomology key - A symptomology key is a tool that contains potential causes of symptoms that is used in diagnosing a problem.
systems perspective - A systems perspective is a broad view of how farming practices affect people and the environment throughout each step of the production process.
technology - Technology is the use of science to create machines or other items that increase speed and productivity.
temperament - Temperament is an animal's level of emotional stability.
tick - A tick is a type of parasitic arachnid.
total production expenses -Total production expenses are the combined expenses of money, time, and labor used in producing a product.
trade surplus - A trade surplus is a positive balance of trade that occurs when the total value of a country's exports exceeds the value of its imports.
trait - A trait is a genetic characteristic.
transgenic - If a plant or animal is transgenic it is has one or more genes artificially introduced from another plant or animal.
vaccination - A vaccination is an injection that gives an animal immunity to a disease.
value - Value is how much something is worth.
veterinarian - A veterinarian is a doctor who specializes in animal medicine.
weed - A weed is an unwanted wild plant that interferes with crops growing in a field.
weed map - A weed map is a diagram showing the location of weeds that is used for planning a weed management program.
wilt - (Of plants) To wilt is to grow weak and droop.
winter wheat - Winter wheat is a type of wheat that farmers plant in fall and harvest in spring or summer.
yield enhancement - Yield enhance m e1'l s a; r crease in the size of a harvest.
zero tillage - Zero tillage is technique for growing crops without tiling the soil to improve soil moisture and reduce erosion.

Used literature

1 Захарьева Л. В., Дубина Л. П., Рыло Т. В. АНГЛИЙСКИЙ ЯЗЫК. ПРОФЕССИОНАЛЬНАЯ ЛЕКСИКА ДЛЯ АГРОИНЖЕНЕРОВ Учебное пособие На английском языке Минск БГАТУ 2021 – 316 с.

2 Neil O'Sullivan, James D. Libbin Career Path: Agriculture; Student's Book Express Publishing 2011. – 121p.

3 Neil O'Sullivan, James D. Libbin Career Path: Agriculture; Teacher's Book Express Publishing 2011. – 41p.

4 Веренич Н. И., Беззубенок Т. И., Евстратова И. В. Английский язык : учеб. пособие / Минск : ТетраСистемс, 2012. – 304 с.

5 А. О. Васильевна, Г. И. Орешникова, Ю. Ч. Михальченя пособие по английскому языку «Keeping farm animals» Горки 2015.

6 А. А. Железнова / A course of English for students of Agriculture; Нижний Новгород 2017 — 144 стр.

7 Robin Matheson English for Agribusiness and Agriculture in Higher Education studies Course book; Garnet Publishing Ltd 2014 -138p.

8 Robin Matheson English for Agribusiness and Agriculture in Higher Education studies Teacher's book; Garnet Publishing Ltd 2014 -138p.

9 С. Ю .Дмитриева Английский язык для студентов сельскохозяйственных вузов; Пенза2012 – 137 стр.

10 Л. С. Зубрицкая, А. В. Сухецкая **ENGLISH: TEXTS FOR READING AND TRANSLATION;** практ. пособие для студентов специальности «Агрономия» учреждений высшего образования — Барановичи: РИО БарГУ, 2014. — 42 с.

11 Комарова, Е. Н. Английский язык для специальностей «Зоотехния» и «Ветеринария» = English for students of animals husbandry and veterinary medicine : М. : Академия, 2008. — 384 с.

12 Chandrasekaran, B. A Textbook of Agronomy / B. Chandrasekaran, K.

Annadurai, E. Somasundaram. — New Delhi : New Age International (P) Ltd., Publishers, 2010. — 834 c.

13 Myles Jane English Practice and progress language games elementary.

14 R. Murphy. Grammar in Use. Fifth edition Cambridge University Press 2019

15 English Puzzles 1,2,3,4 Macmillan Heinemann English Teaching, Oxford 1993

16 World games for English, English Puzzles. Macmillan Publishers Ltd 2002

17 Myles Jane. English_practice_and_progress_language_games_elementary/ Schoolastic. Mary Glosgow Magazines.

18 Play games with English Teacher's Resource Book 1/ Colin Granger / Macmillan Heineman English Language Teaching Oxford 1998.

19 Ruth Gairns and Stuart Redman. Basic Oxford Word Skills. Oxford University Press 2008

20 Stuart Redman English Vocabulary in Use. Pre-intermediate and intermediate. Third Edition. Cambridge University Press 2011.

21 English_puzzles_part_1_angliyskiy_yazyk_v_krossvordakh_chast.

22 Doug Case English Puzzles 50 puzzles and games for practising your English. Heinemann International 1990.

Internet resources:

1 wikipedia.org

2 encyclopedia.com

3 encyclopedia2.thefteedictionary.com

4 ga.water.usgs.gov

5 agriculture. org

FOR NOTES