## МИНИСТЕРСТВО СЕЛЬСКОГО ХОЗЯЙСТВА И ПРОДОВОЛЬСТВИЯ РЕСПУБЛИКИ БЕЛАРУСЬ

## ГЛАВНОЕ УПРАВЛЕНИЕ ОБРАЗОВАНИЯ, НАУКИ И КАДРОВ

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# АНГЛИЙСКИЙ ЯЗЫК

## AGRICULTURE

Сборник текстов и упражнений для студентов всех специальностей УО БГСХА

> Горки БГСХА 2021

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Приведены тексты и упражнения для расширения лексического запаса студентов в рамках изучения темы «Сельское хозяйство». Данный сборник может использоваться как в аудитории, так и для самостоятельной работы дома.

Для студентов всех специальностей УО БГСХА.

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#### введение

Сборник текстов и упражнений предназначен для студентов дневного и заочного отделений всех факультетов в рамках изучения темы «Сельское хозяйство».

Цель сборника – расширение лексического запаса студентов, а также обучение работе с текстом (понимание прочитанного, перевод и выполнение заданий к тексту).

Сборник состоит из 6 разделов. Каждый раздел включает в себя тематический словарь, где слова и выражения снабжены русскими эквивалентами, текст, а также серию послетекстовых упражнений, имеющих коммуникативно-речевую направленность. Лексика текстов отрабатывается и усваивается в ходе выполнения упражнений. В некоторых упражнениях уделяется внимание повторению правил грамматики. Сборник также содержит дополнительные тексты для чтения и приложение в виде англо-русского словаря.

Сборник текстов и упражнений рекомендован как для аудиторной работы студентов в сотрудничестве с преподавателем, так и для самостоятельной работы.

## UNIT 1

## Exercise 1. Learn the words.

Alfalfa [æl'fælfə] – люцерна clover ['kləuvə] - клевер game [geim] – дичь hog [hɔg] – свинья poultry ['pəultri] – домашняя птица cattle [kætl] - крупно-рогатый скот cereal grains ['siəriəl 'greinz] – зерновые культуры millet ['mɪlɪt] – просо sorghum ['sɔ:gəm] – сорго root crops ['ru:t 'krops] - корнеплоды beets [bi:ts] - свекла pulses ['pʌlsiz] – бобовые культуры beans [bi:nz] – бобы peas [pi:z] – горох oil-bearing crops ['ɔil'beərin 'krɔps] – масличные культуры soybeans ['sɔɪbi:nz] - соя sugarcane ['[ugəkein] – сахарный тростник coconuts ['kəukənʌts] - кокосовые орехи cocoa beans ['kəukəubi:nz] - какао-бобы turkey ['t3:k1] - индейка bee [bi:] - пчела trout [traut] – форель shellfish ['ſelfɪʃ] – моллюск mussel [mʌsl] – мидия oyster ['ɔistə] – устрица flax [flæks] – лен silkworms ['sılkwə:mz] – шелковичные черви natural rubber ['nætſrəl 'rʌbə] – каучук hide [haɪd] – шкура yarn [ja:n] – пряжа castor oil ['ka:stə\_ɔil] - касторовое масло linseed oil ['linsid ɔil] – льняное масло shrub [[rлb] – кустарник mink [mıŋk] – норка fur [f3:] – мех

#### **Exercise 2. Read the text.**

#### AGRICULTURE IN GENERAL

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 products. But farms also provide many other products, from natural fibers 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. Like 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 sugarcane and sugar beets; (5) nuts; and (6) cocoa beans, coffee, and tea.

Cattle, chickens, goats, hogs, sheep, turkey, 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 freshwater food fish, such as carp and trout, and saltwater shellfish, such as mussels and oysters.

Natural fibers come from a variety of plants and animals raised on farms. Factories use the fibers to make fabrics, yarn, and other textile

products. Cotton and flax together with some tropical plants are the chief plant fibers. Wool, the principal animal fiber, comes mainly from sheep but also from such animals as goats and members of the camel family. Silk fibers are obtained from the cocoons of silkworms. However the development of synthetic fibers has reduced the demand for natural fibers in some countries.

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

## Exercise 3. Answer the question to the text.

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

## Exercise 4. Say the same in English.

Сельское хозяйство; наиболее важные сельскохозяйственные продукты; пшеница; заняты в сельском хозяйстве; ячмень; краски и лекарства; домашний скот; рожь; натуральные и синтетические волокна; декоративные цветы, деревья и кустарники; на корм скоту; кормовые культуры; льняное масло; основные потребности человека; коммерческое животноводство; пищевые культуры; могут быть подразделены на группы; шкуры животных; основные зерновые культуры; выращиваются во всем мире; множество различных растений и животных; использовать волокна для изготовления тканей и пряжи; тропические растения; сырье; питание в рационе человека; шерсть; уменьшить спрос на; сахарная свекла.

#### **Exercise 5.** Say if the following statements are true or false.

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. All major food crops can be divided into six groups.

5. Millet and sorghum don't belong to pulses.

6. Chickens, turkeys and hogs make up the group of livestock called poultry.

7. Mussels and oysters are not fish, but they are raised on fish farms.

8. Wool comes mainly from sheep, goats and members of the camel family.

9. The production of natural fibers is growing in the world.

10. Vegetable oils are used in various products.

11. Foxes and mink are raised for their hides.

Exercise 6. Find the synonyms to the following words and expressions.

A pig, a breed, to raise (2), to have a job, to get, principal (3), to form, almost, artificial, a ration.

## Exercise 7. Make up word combinations and translate them.

1. linseed	a. fibers
2. ornamental	b. grains
3. synthetic	c. diet
4. saltwater	d. crops
5. root	e. products
6. human	f. oil
7. cereal	g. shellfish
8. textile	h. flowers

## Exercise 8. Make the plural.

A fish, a fox, a hog, a country, a sheep, an animal, a goat, an egg, a trout, a mink, a bee, a turkey, a factory.

Exercise 9. Complete the sentences according to the text. Use the following words: *beans and peas, crops, honey, natural fibers, yarn, saltwater shellfish, grain, fur, hides, silk fibers.* 

1. Various food products come from \_\_\_\_\_ and animals.

2. Animals \_\_\_\_\_ are used to make leather.

3. \_\_\_\_\_ supplies much of the nourishment in the human diet.

The group of pulses consists mainly of \_\_\_\_\_

5. \_\_\_\_\_ are obtained from the cocoons of silkworms.

6. Foxes and mink are raised for their \_\_\_\_\_.

7. The development of synthetic fibers has reduced the demand for \_\_\_\_\_ in some countries.

8. The wool of this sheep breed is processed into the high quality \_\_\_\_\_.

9. Farmers raise \_\_\_\_\_, such as mussels and oysters on fish farms.

10. Many farmers keep bees for \_\_\_\_\_

Exercise 10. Put the words in the right order to make up sentences.

1. Is / the / most / agriculture / important / world's / industry.

2. Farm / is / food / most / the / products / important.

3. Forage / make / crops / livestock / commercial / possible / production.

4. Grain / much / human / the / of / in / supplies / the / diet / nourishment.

5. Country / are / livestock / raised / every / in.

6. Farms / farmers / fish / raise / on / food / freshwater / fish.

Exercise 11. Match the words with their definitions.

1	cattle	а	a plant that is grown because its roots are eaten	
2	agriculture	b	an area of land that is devoted primarily to agricultural processes	
3	root crop	с	domestic fowl, such as chickens, turkeys, ducks, and geese	
4	grains	d	the practice of science of farming, especially of growing crops	
5	farm	e	edible dry seeds from plants called cereals	
6	poultry	f	a group of animals that includes cows, buffalo, and bison, that are often kept for their milk and meat	

#### Exercise 12. Translate the following sentences into English.

1. Сельское хозяйство обеспечивает материалы, используемые для производства многих промышленных товаров.

2. Около половины мировых рабочих заняты в сельском хозяйстве.

3. Кормовые культуры важны, потому что они делают возможным промышленное животноводство.

4. Основные продовольственные культуры можно разделить на восемь групп.

5. Фабрики используют волокна для производства тканей, пряжи и других текстильных изделий.

6. Шелковые волокна получают из коконов тутовых шелкопрядов.

7. Касторовое масло и льняное масло используются в различных продуктах.

#### **Exercise 13. Fill in the chart using the text.**

Farm animals	
Cereal grains	
Root crops	
Poultry	
Natural plant and animal	
fibers	
Freshwater food fish	
Food crops	
Industrial raw materials	
(besides fibers)	
Forage crops	

#### UNIT 2

## Exercise 1. Learn the words.

Seed [si:d]– семя, зерно domestication [də, mestı'keıʃ(ə)n] – одомашнивание, приручение irrigation [,ırı'geɪʃ(ə)n] – орошение plow (plough) [plau] – плуг (n), пахать (v) crop rotation ['krɔp,rəu'teɪʃ(ə)n] – севооборот selective breeding [sı'lektıv 'bri:dɪŋ] – селекционное разведение squash [skwɔʃ] – тыква seed drill ['si:d 'dri:l] – сеялка cotton gin ['kɔtn 'dʒɪn] – хлопкоочистительная машина harvester ['ha:vɪstə] – уборочная машина thresher ['θreʃə] – молотилка **Exercise 2. Read the text.** 

## HISTORY OF AGRICULTURE (Part 1)

For hundreds of thousands of years, prehistoric people lived by hunting, fishing, and gathering wild plants. Then about 8000 B.C., people took the first steps toward agriculture. Some tribes discovered that plants could be grown from seeds. They also learned that certain animals could be tamed and then raised in captivity. These two discoveries marked the beginning of the domestication of plants and animals. Scholars believe that domestication

began in the Middle East and then spread to surrounding areas. People who farmed no longer had to travel in search of food. They could thus build permanent settlements. Some of these settlements developed into the first cities. Some of the cities, in turn, produced the world's first civilizations.

The first great civilizations arose in two regions of the Middle East. One regions was the Nile River Valley of Egypt. The other was Mesopotamia. Both regions had fertile soil, but neither received enough rain for crops to grow. Farmers discovered, however, that they could raise crops during most of the year if they used river water for irrigation. By about 3000 B.C. Egyptian and Mesopotamian farmers had developed the world's first large-scale irrigation systems and had invented a plow that oxen could pull.

The Roman Empire began as a country of small farms on the Italian peninsula before 500 B.C. By the A.D. 200s, the Romans had developed new farming methods, e.g. systems of crop rotation. The selective breeding of plants and livestock began in Europe during Roman times, too.

European farmers invented a three-field system of crop rotation during the Middle Ages. In many areas, it replaced the Roman two-field system. On most European farms horses gradually replaced oxen as the chief source of power. Many special-purposes livestock breeds were developed.

The European voyages of discovery that began in the 1400s greatly affected agriculture throughout the world. In various parts of the Americas, Indian farmers grew cocoa beans, corn, peanuts, peppers, rubber trees, squash, sweet potatoes, tobacco, and tomatoes. Europeans first learned of these crops, and how best to grow them, from the Indians. The Europeans, in turn, brought their seeds, livestock, and farming tools and methods to the regions they explored and settled.

During the early 1700s, a great change in farming called the Agricultural Revolution began in the United Kingdom. By the mid-1800s, it had spread throughout much of Europe and North America. The Agricultural Revolution was brought about mainly by three developments. They were (1) improved crop-growing methods, e.g. a four-field rotation system; (2) advances in livestock breeding by means of developing new, better breeds; and (3) the invention of new farm equipment, such as seed drill, the cotton gin, the harvester, the thresher and the steel plow.

#### **Exercise 3.** Answer the question to the text.

1. How did prehistoric people live for hundreds of thousands of years?

2. When did people take the first steps toward agriculture?

3. Which two discoveries marked the beginning of the domestication of plants and animals?

4. Where did domestication begin?

5. Where did the first great civilizations arise?

6. What system did European farmers invent during the Middle Ages?

7. What crops did Indian farmers grow in various parts of the Americas?

8. What did the Europeans bring with them to the regions they explored and settled?

9. What is the name of the historical period that began in the United Kingdom during the early 1700s?

10. What developments did the Agricultural Revolution bring?

Exercise 4. Say the same in English.

Арахис; сделали первые шаги; кукуруза; ученые; плодородная почва: в поисках пиши: племена; четырехпольная система севооборота; главный источник силы; использовали речную воду для орошения; стальной плуг; охота; изобретение нового фермерского оборудования; селекционное разведение растений и домашнего скота; крупномасштабные ирригационные системы; доисторические люди; строили постоянные поселения; сельскохозяйственная революция; какао-бобы; европейцы; табак; растения; могли быть приручены и выращены в неволе; перец; сельскохозяйственные инструменты и методы; хлопкоочистительная машина.

Exercise 5. Name the main advances in agriculture development during each of the historical periods:

- the prehistoric times
- the first great civilizations
- the Roman Empire
- the Middle Ages
- the age of European voyages of discovery

• the Agricultural Revolution

#### Exercise 6. Say if the following statements are true or false.

1. People took the first steps toward agriculture about 5000 B.C.

2. The first great civilizations arose in two regions of the Middle East.

3. The Romans had developed systems of crop rotation by the A. D. 200s.

4. The selective breeding of plants and livestock began in Europe during Roman times.

5. Egyptian farmers invented a three-field system of crop rotation.

6. On most European farms horses gradually replaced oxen as the chief source of power during the Middle Ages.

7. The Indians first learned of cocoa beans, corn, peanuts, peppers, rubber trees and other crops and how best to grow them from Europeans.

8. The Europeans brought their seeds, livestock, and farming tools and methods to the regions they explored and settled.

9. The Agricultural Revolution began in the United States during the early 1700s.

Exercise 7. Make up word combinations and translate them.

1. fertile	a. drill
2. selective	b. gin
3. farming	c. plow
4. river	d. plants
5. prehistoric	e. soil
6. steel	f. methods
7. wild	g. water
8. crop-growing	h. tools
9. cotton	i. breeding
10. seed	j. people

Exercise 8. Fill in the table with the missing verb forms.

	V1	V2	V3	Meaning
1		took		
2			grown	
3	learn			
4		had		
5	discover			
6		began		
7			brought	
8	build			строить
9		arose		
10		was /were		
11	invent			

Exercise 9. Complete the sentences according to the text. Use the following words: *seeds*, *agriculture*, *rain*, *fertile soil*, *a plow*, *build*, *irrigation*, *large-scale*, *fishing*, *breeds*.

- 1. Prehistoric people lived by hunting, \_\_\_\_\_, and gathering wild plants.
- 2. Some tribes discovered that plants could be grown from \_\_\_\_\_.
- 3. People who farmed could \_\_\_\_\_ permanent settlements.

4. Both the Nile River Valley of Egypt and Mesopotamia had \_\_\_\_\_.

5. Neither the Nile River Valley of Egypt nor Mesopotamia received enough \_\_\_\_\_ for crops to grow.

6. Farmers used river water for \_\_\_\_\_.

7. Egyptian and Mesopotamian farmers developed the world's first \_\_\_\_\_ irrigation systems and invented \_\_\_\_\_\_ that oxen could pull.

8. During the Middle Ages many special-purposes livestock \_\_\_\_\_ were developed.

9. The European voyages of discovery greatly affected \_\_\_\_\_ throughout the world.

## Exercise 10. Fill in the chart using the text.

Crops	Farm equipment	Farm animals	Farming methods

## Exercise 11. Translate the following sentences into English.

1. Сотни тысяч лет доисторические люди жили охотой, рыбной ловлей и сбором дикорастущих растений.

2. Много лет назад люди узнали, что некоторых животных можно приручить, а затем выращивать в неволе.

3. Ученые считают, что одомашнивание началось на Ближнем Востоке, а затем распространилось на прилегающие территории.

4. Людям, которые занимались сельским хозяйством, больше не приходилось путешествовать в поисках еды.

5. Первые великие цивилизации возникли в двух регионах Ближнего Востока.

6. Селекционное разведение растений и домашнего скота началось в Европе во времена Римской империи.

7. В средние века европейские фермеры изобрели трехпольную систему севооборота.

8. Аграрная революция началась в Соединенном Королевстве в начале 1700-х годов, а затем распространилась по большей части Европы и Северной Америки.

## UNIT 3

## Exercise 1. Learn the words.

Milking machine ['milkiŋ mə'ʃi:n] – доильный аппарат irrigation pump [,iri'geiʃ(ə)n 'pʌmp] – ирригационный насос feeding trough ['fi:diŋ 'trɔf] – кормушка insect pest ['insekt 'pest] – насекомое-вредитель wood ash ['wud 'æʃ] – древесная зола manure [mə'njuə] – навоз **Exercise 2. Read the text.** 

## HISTORY OF AGRICULTURE (Part 2)

Since the 1800s, science and technology have helped make agriculture more and more productive in three main ways. They have (1) provided farmers with labour-saving technologies; (2) produced improved plant varieties and breeds of livestock; and (3) developed new agricultural chemicals.

Labour-saving technologies. Steam-powered tractors were developed in the mid-1800s, but they were expensive and difficult to operate. The first all-purpose gasoline-powered tractors appeared in the 1920s. They gradually replaced work animals and steam-powered machines on almost all farms. In Japan and several European countries, most farms had electric power service by the mid-1930s. Today, farmers use electric motors to run milking machines, irrigation pumps, and many other farm machines. Farmers also use electric power to operate electronic and automated equipment. This equipment includes devices that fill feeding troughs or collect and grade eggs automatically.

Many farmers use computers to aid in farm operations and to keep track of finances. Using the Internet, farmers may make use of data provided by agricultural colleges or other information centers.

**Plant and livestock breeding.** During the mid-1800s, an Austrian botanist and monk named Gregor Mendel discovered the principles of heredity. Mendel thus laid the groundwork for genetics – the science that explains how characteristics are inherited. The development of genetics has made it possible to breed plants and animals scientifically.

Since the early 1900s, plant breeders have developed a great number of hybrid crops that produced unusually high yields. The new varieties were

intended mainly to help various poor nations, such as India and Mexico, increase their food supply. This effort proved so successful that it has been called the Green Revolution.

Livestock breeders have introduced many improved lines since the early 1900s. Nutrition specialists have developed better livestock feeds, and veterinarians have improved methods of health care. All these advances continue to make livestock more and more productive.

Agricultural chemicals. Almost since the beginning of agriculture, farmers have used various substances to enrich the soil and to kill insect pests. For example, they have used wood ash and manure as fertilizers since prehistoric times. Since the beginning of modern chemistry in the late 1700s, scientists have produced many kinds of synthetic chemicals for use in agriculture. These chemicals include (1) fertilizers; (2) insecticides; (3) herbicides, or weedkillers; and (4) chemicals to control plant and animal diseases. All these chemicals have helped increase farm production greatly. However, improper or excessive use of these chemicals can be dangerous and cause damage to the environment. In many countries state laws limit such practices and prohibit the use of chemicals that have been proved harmful.

## **Exercise 3.** Answer the questions to the text.

- 1. When did the first all-purpose gasoline-powered tractors appear?
- 2. Why do farmers use electric motors today?
- 3. What devices does electronic and automated equipment include?
- 4. Why do many farmers use computers?
- 5. Who discovered the principles of heredity?
- 6. What is genetics?
- 7. What kinds of synthetic chemicals are used in agriculture?
- 8. Can these chemicals be dangerous? Why?

## Exercise 4. Say the same in English.

Химикаты; обогащать почву; удобрения; более продуктивный; наследственности: растениеводы; принципы животноводы; отслеживать поток финансов; автоматизированное оборудование; по питанию; нанести ущерб окружающей среде; специалисты для генетики; собирать и сортировать заложить OCHOBY яйца автоматически: vниверсальный бензиновый трактор: трудосберегающие технологии; породы домашнего скота; заполнять кормушки; использовать данные; лучшие корма для скота; запретить химикатов; ирригационный насос: использовали использование древесную золу и навоз в качестве удобрений.

#### Exercise 5. Define which verb goes with which noun.

1. collect	a. characteristics
2. develop	b. breeder
3. inherit	c. feeding trough
4. enrich	d. insect pests
5. provide	e. machine
6. control	f. eggs
7. fill	g. production
8. milking	h. damage
9. increase	i. pump
10. cause	j. diseases
11. kill	k. soil
12. livestock	1. data
13. irrigation	m. methods

#### Exercise 6. Say if the following statements are true or false.

1. Gasoline-powered tractors replaced steam-powered tractors in the 20th century.

2. Most farms in Europe had electric power service by the early 1920s.

3. Today electric motors are widely used on the farms.

4. Gregor Mendel invented the first automatic milking machine.

5. Geneticists work on breeding new crops and animals.

6. The Green Revolution was the exploration of new farming areas in India and Mexico.

7. Veterinarians are the specialists who develop livestock feeds.

8. Today there are various types of chemicals used on the farms.

9. There is no limit in using all kinds of agricultural chemicals, as they are friendly to the environment.

Exercise 7. Complete the sentences according to the text. Use the following words: devices, tractors, productive, automatically, principles, to run, equipment, genetics, fertilizers, wood ash, agriculture, farms, specialists, chemicals, all-purpose, groundwork.

1. Science and technology have helped make \_\_\_\_\_ more and more \_\_\_\_\_ since the 1800s.

2. Steam-powered \_\_\_\_\_ were developed in the mid-1800s.

3. The first \_\_\_\_\_ gasoline-powered tractors replaced work animals and steam-powered machines on almost all \_\_\_\_\_.

4. Farmers use electric motors \_\_\_\_\_ many farm machines.

5. Farmers also use electric power to operate electronic and automated

6. Electronic and automated equipment includes \_\_\_\_\_ that fill feeding troughs or collect and grade eggs \_\_\_\_\_.

7. During the mid-1800s, Gregor Mendel discovered the \_\_\_\_\_ of heredity and laid the \_\_\_\_\_ for genetics.

8. \_\_\_\_\_ explains how characteristics are inherited.

9. Since the early 1900s, \_\_\_\_\_ nutrition have developed better livestock feeds.

10. Since prehistoric times farmers have used \_\_\_\_\_ and manure as

11. Synthetic \_\_\_\_\_ such as fertilizers, insecticides, herbicides and chemicals to control plant and animal diseases are used in agriculture.

Exercise 8. Complete the following table with the appropriate verb or noun form.

	Verb	Noun	Meaning
1		variety	
2	to operate		
3	to develop		
4		equipment	
5		information	
6	to discover		
7		fertilizer	
8	to produce		

Exercise 9. Fill in the table with the degrees of comparison of the following adjectives.

	Positive	Comparative	Superlative
1		more productive	
2	dangerous		
3			the most expensive
4	new		
5		better	
6	difficult		
7		higher	
8			the earliest
9	modern		

Exercise 10. Translate the following sentences from Russian into English.

1. Развитие генетики сделало возможным научное разведение растений и животных.

2. Во многих странах государственные законы ограничивают практику и запрещают использование химикатов, которые оказались вредными.

3. Наука предоставила фермерам трудосберегающие технологии, позволила получить улучшенные сорта растений и породы домашнего скота, разработала новые сельскохозяйственные химикаты.

4. Многие фермеры используют компьютеры для помощи в работе ферм и отслеживания финансов.

5. Тракторы с паровым двигателем были дорогими и сложными в эксплуатации.

#### UNIT 4

## Exercise 1. Learn the words.

Еfficient [r'fiJ(3)nt] – эффективный to import [rm'pp:t] – импортировать, ввозить equipment [r'kwipmant] – оборудование pastoral ['pa:st(3)r(3)]] – пастбищный arable ['arabl] – пахотные source [sp:s] – источник gooseberry ['guzb(3)ri] – крыжовник strawberry ['strp:b(3)ri] – крыжовник strawberry ['strp:b(3)ri] – клубника, земляника raspberry ['ra:zb(3)ri] – малина quantity ['kwpntti] – количество to compete [kam'pi:t] – конкурировать hectare ['hekte3] – гектар **Exercise 2. Read the text.** 

## **BRITISH AGRICULTURE**

Agriculture, one of Britain's most important industries, supplies nearly two-thirds of the country's food. British agriculture is efficient, for it is based on modern technology and research.

Nearly 80 % of the land is used for agriculture. The total agricultural acreage of Great Britain is about 45 000 000 acres. Soils vary from the poor

ones of highland Britain to the rich fertile soils in the eastern and southeastern parts of England.

Britain is self-sufficient in milk, eggs, to a very great extent in meat, potatoes, wheat. However, it needs to import butter, cheese, sugar and some other agricultural products.

There are about 55 000 farms in Britain. They are not large. An average sized farm is about 30-40 acres. There are three main types of farming in Great Britain: pastoral, arable, mixed. Britain is an exporter of pedigree cattle, sheep, pigs and horses. About 60 % of farms are developed mainly for dairying or beef cattle and sheep raising. Sheep and cattle are reared in the hill and moorland areas of Scotland, Wales, Northern Ireland and southwestern England. Milk production is of the first importance in the structure of British agriculture. Dairy farming is distributed all over the country but is characteristic of the West of England.

Pig breeding is carried on in most areas but is particularly important in southern England, northeastern Scotland and Northern Ireland.

Arable farms are mainly in the eastern part of the country. The main cereal crops in Great Britain are wheat, barley and oats. Wheat growing is confined mainly to England. Barley and oats are grown in the same areas together with sugar beet. Rye is grown in small quantities for use as cattle fodder. More than half the crop is harvested mechanically.

Great Britain produces different kinds of fruit: apples, pears, cherries, gooseberries, strawberries, raspberries and others.

Potatoes are grown for sale, for fodder and for seed.

Modern machines: tractors, combines and other equipment are used on British farms. But today the main tendency in British agriculture is that small traditional farms are gradually disappearing because they cannot compete with big industrial farms.

Private woods make up 56 % of the total forests area in Great Britain.

Woodlands cover an estimated 2,2 million hectares.

Britain's second major source of food is the surrounding sea. The fishing industry provides about 70 % of British fish supplies.

## Exercise 3. Answer the questions to the text.

1. What is the total agricultural acreage of Great Britain?

- 2. Is British agriculture efficient?
- 3. What are large areas in hill countries used for?
- 4. How do soils vary?
- 5. What is Britain self-sufficient in?

6. What does Britain need to import?

7. How many farms are there in Britain today?

8. What kind of farms are they?

9. How many types of farming are there in Britain? What are they?

10. Where are sheep and cattle reared?

11. What is of the first importance in the structure of British agriculture?

12. What are the main grain crops in Great Britain?

13. Where are arable farms situated?

14. What kinds of fruit does Great Britain produce?

15. What is the main tendency in agricultural development of the country today?

16. What is Britain's second major source of food?

## Exercise 4. Say the same in English.

Ферма среднего размера; производство молока; самодостаточный; в среднем; вересковые пустоши; разные виды фруктов; молочное животноводство; племенной (породистый) скот; пахотные фермы; овцеводство; выращивание пшеницы; свиноводство; в небольших количествах; мясной скот; основной источник еды; основные зерновые культуры; яблоки и груши; современные технологии и исследования; основная тенденция; общая площадь сельскохозяйственных угодий.

## Exercise 5. Choose the correct answer. Consult the text if necessary.

1. British Agriculture supplies nearly \_\_\_\_\_ of the country's food.

a) one-third

b) two-third

c) a half

2. Nearly \_\_\_\_\_ of the land is used for agriculture.

a) 30 %

b) 50 %

c) 80 %

3. Arable farms are mainly in the \_\_\_\_\_ part of the country.

a) southern

b) western

c) eastern

4. The main cereal crops in Great Britain are \_\_\_\_\_.

a) wheat, barley and oats

b) rye, millet and sorghum

c) buckwheat, millet and rye

5. Woodlands cover an estimated \_\_\_\_\_ million hectares.

a) 1,2 b) 2,2 c) 3,2

**Exercise 6. Agree or disagree. Use the following expressions:** 

- You are right. Right you are. That's true. It's really so.
- You are not right. That's false. You're mistaken.
- 1. British agriculture is not efficient.
- 2. British agriculture is based on modern technology and research.
- 3. Nearly 60 % of the land is used for agriculture.
- 4. Great Britain does not import agricultural products.
- 5. British farms are large.
- 6. There are two main types of farming in Great Britain.
- 7. Meat production is more profitable than milk production.
- 8. Arable farms are mainly in the northern part of the country.
- 9. Potatoes are grown only for fodder.
- 10. There are no private woods in Great Britain.
- 11. The fishing industry is not developed in the country.

# Exercise 7. Complete the sentences according to the text. Use the following words: *supplies, compete, barley, self-sufficient, cereal crops, food, source.*

1. Small traditional farms are gradually disappearing because they cannot \_\_\_\_\_ with big industrial farms.

2. Britain's second major \_\_\_\_\_ of food is the surrounding sea.

- 3. Britain is \_\_\_\_\_ in milk and eggs.
- 4. The fishing industry provides about 70 % of British fish \_\_\_\_\_.
- 5. Agriculture supplies nearly two-thirds of the country's \_\_\_\_\_.
- 6. The main \_\_\_\_\_ in Great Britain are wheat, barley and oats.
- 7. Wheat, \_\_\_\_\_ and oats are the main cereal crops in Great Britain.

## Exercise 8. Complete these word-building tables.

	Verbs	Adjectives	Nouns	Meaning
1	to mix			
2		rich		
3			distribution	
4		modern		
5	to breed			
6			structure	
7	to compete			

## Exercise 9. Put the words in the right order to make up sentences.

1. One / agriculture / Britain's / of / most / is / industries / important.

2. Agriculture / is / British / on / modern / based / technology / research / and.

3. Large / farms / British / not / are.

4. Fruit / produces / Great Britain / kinds / different / of.

5. Tractors / modern / and / are / combines / British / used / farms / on.

6. Are / small / nowadays / farms / disappearing.

## Exercise 10. Translate the following sentences into English.

1. Британское сельское хозяйство эффективно, поскольку основано на современных технологиях и исследованиях.

2. В Британии средняя площадь фермы составляет около 30– 40 акров.

3. В Великобритании существует три основных типа земледелия: пастбищное, пахотное и смешанное.

4. Производство молока имеет первостепенное значение в структуре британского сельского хозяйства.

5. Свиноводство ведется в большинстве районов страны.

6. Пшеница выращивается в основном в Англии.

7. Частные леса составляют 56 процентов от общей площади лесов Великобритании.

8. Рыбная промышленность обеспечивает около 70 процентов британских рыбных запасов.

#### **Exercise 11. Discuss in groups.**

> The main aspects of British agriculture.

The part of Great Britain which is called the "Garden of England".

#### UNIT 5

#### **Exercise 1. Learn the words.**

Foodstuffs ['fu:dstʌfs]- продовольствие, продукты питания to employ [Im'plɔi] – предоставлять работу workforce ['wə:kfɔ:s] – рабочая сила arable ['ærəbl] – пахотные to account for [ə'kaunt] – составлять meadow ['medəu] – луг to belong to [brlɔŋ]- принадлежать к unstable [ʌn'steibl] – неустойчивый fertility [fə'tılıtı] – плодородие fertilizer ['fə:tılaızə] – удобрение explosion [ık'spləuʒən] – взрыв to contaminate [kən'tæmineit] – загрязнять, заражать, портить

to be overmoistened [,əuvə'mɔıstʃənd] – быть переувлажненным, заболоченным

marshy ['ma:ʃi] – болотистый to be drained [dreind] – осушаться fodder ['fɔdə] – корм to dominate ['dɔmineit] – преобладать enterprise ['entəpraiz] – предприятие transition [træn'zıʃ(ə)n] – переход broiler chicken ['brɔilə 'tʃıkın] – цыпленок-бройлер flax [flæks] – лен to meet [mi:t] – удовлетворять, соответствовать lack [læk] – недостаток, отсутствие **Exercise 2. Read the text.** 

## AGRICULTURE OF THE REPUBLIC OF BELARUS

Agriculture is one of the main branches of the Belarusian economy for it supplies the population with foodstuffs. Agriculture is also one of the most important activities in the republic for it employs more than 20 % of the workforce.

The area of Belarus is 207 600 km<sup>2</sup>. Nearly 60 % of the total land area is cultivated. Arable lands account for about 30 % of the cultivated land area, and meadows and pastures account for 15 %.

Belarus belongs to the area of so-called unstable farming. A short growing season, the lack of fertile soils and other factors make farming difficult. The main plowed lands have low natural fertility. Much of the land can be productive only with fertilizer application. The 1986 explosion at the Chernobyl nuclear power station contaminated much of the soil in southern Belarus. It reduced the country's total area of arable land by more than 10 %.

40 % of the total territory is overmoistened. Marshy lowlands cover the southern region of Polesye in the basin of the Pripyat River. Many of the lowlands have been drained. They are used for producing fodder crops.

The Belarusian agrarian business is represented by large agricultural enterprises and cooperatives. In 1993 private farms began to appear. But the transition to private farms is slow. Large agricultural enterprises were transformed into smaller individual farms or agricultural cooperatives. Most of the farms have mixed crop and livestock farming. The main species of livestock are cattle, pigs, sheep, goats and poultry. A powerful cattle breeding has been created in Belarus to manufacture milk and meat products. Broiler chickens are other major livestock. They are raised in special mass-production plants.

Many species of plants grow well especially grain crops (wheat, rye, barley and oats) and sugar beets. A large percentage of them is used to feed animals. Flax is also important. The republic is one of the main producers of flax in the world. The fact that potatoes are Belarusians 'second bread' is known far beyond the republic. No wonder: Belarus is the second producer of potatoes in Europe. Additional crops grown on Belarusian farms are cabbage, tomatoes, carrots, cucumbers, onions. Fruit crops include apples, cherries, pears, plums.

The increase in cattle breeding production and the demand for new products required a modernization of dairy and meat-processing companies. Belarus is considered to have low prices for foodstuffs among other countries in transition. Retail prices for foodstuffs in Belarus are much lower than those in Russia and other CIS countries.

Belarusian agriculture not only produces farm products to meet domestic needs. The republic is a traditional exporter of agricultural products. Among them are pork, beef, chicken, animal oil, cheese, eggs, flax, vegetables. Today Belarusian agricultural products are supplied to twenty-three countries. The Russian Federation is our main customer.

#### **Exercise 3.** Answer the questions to the text.

- 1. Is agriculture one of the main branches of the Belarusian economy?
- 2. How many people are employed in the agriculture of Belarus?
- 3. Does Belarus belong to the area of so-called unstable farming?
- 4. Are the natural conditions of the Republic favourable for agriculture?
- 5. When did the Chernobyl accident occur?
- 6. What are the consequences for the Republic?
- 7. What are the main species of livestock in Belarus?
- 8. What are the main grain crops in the Republic?
- 9. Why is Belarus often called a "potato country"?

10. Is our republic a traditional exporter of agricultural products?

#### Exercise 4. Say the same in English.

Пахотные земли; огурцы; рабочая сила; одна из главных отраслей белорусской экономики; экспортер сельскохозяйственной продукции; зерновые культуры; капуста; овцы; свинина; крупные сельскохозяйственные предприятия; кормовые культуры; болотистые низины; короткий вегетационный период; лук; отсутствие плодородной почвы; внесение удобрений; говядина; сливы; крупный рогатый скот; площадь обрабатываемых земель; луга и пастбища.

## Exercise 5. Choose the correct answer.

The agricultural sector is dominated by \_\_\_\_\_.

a) state and private farms

b) private holdings

c) agricultural enterprises and cooperatives

2. What factors make farming difficult?

a) a short growing season

b) soils of low natural fertility

c) marshy lowlands and the contaminated area

d) all of the above

3. The 1986 explosion at the Chernobyl nuclear power station contaminated much of the soil in \_\_\_\_\_.

a) northern Belarus

b) southern Belarus

c) eastern Belarus

d) western Belarus

4. The transition to private farms is \_\_\_\_\_.

a) easy

b) efficient

c) slow

5. A great amount of goods produced by Belarusian agriculture is oriented towards \_\_\_\_\_.

a) the CIS countries' markets

b) Russia

c) neighboring countries

## Exercise 6. Say if the following statements are true or false.

1. Belarus has a large amount of farmland.

2. Fodder crops are grown on the drained lowlands.

3. Livestock farming and crop farming are the main trends in the republic's agrarian sector.

4. Belarus is self-sufficient only in milk and meat products.

5. One-fifth of the republic's population is employed in agriculture.

6. It is known that potatoes are Belarusians 'second bread'.

Exercise 7. Complete the sentences according to the text. Use the following words: *farming*, *flax*, *producer*, *cooperatives*, *economy*, *agrarian*, *unstable*, *fertility*, *branches*.

1. Agriculture is one of the main \_\_\_\_\_ of the Belarusian \_\_\_\_\_.

2. Belarus belongs to the area of so-called \_\_\_\_\_ farming.

3. The main plowed lands have low natural \_\_\_\_\_.

4. The Belarusian \_\_\_\_\_ business is represented by large agricultural enterprises and \_\_\_\_\_.

5. Most of the farms have mixed crop and livestock \_\_\_\_\_.

6. The republic is one of the main producers of \_\_\_\_\_ in the world.

7. Belarus is the second \_\_\_\_\_ of potatoes in Europe.

## Exercise 8. Put the words in the right order to make up sentences.

1. The / cereal / used / is / producing / land / for / grains.

2. Farms / were / some / cooperatives / transformed / into.

3. Supplies / agriculture / with / us / foodstuffs.

4. The / belongs / country / to / area / the / of / farming / unstable.

5. Total / the / land / of / arable / reduced / was / percent / by / 10 / area.

6. The / to / transition / slow / farms / is / private.

## Exercise 9. Match the words with their definitions.

1	farmland	а	cattle, horses, poultry and similar animals kept for		
			domestic use on a farm		
2	livestock	b	land used or suitable for farming		
3	meadow	с	the total number of workers employed by a		
			company on a specific job		
4	pasture	d	the top layer of the land surface that is composed of		
			rock particles, humus, water and air		
5	workforce	e	land covered with grass or herbage and suitable for		
			grazing		
6	soil	f	an area of grassland often used for hay or for		
			grazing animals		

#### Exercise 10. Complete these word-building tables.

	Verbs	Adjectives	Nouns	Meaning
1	to grow			
2			economy	
3		productive		
4	to explode			
5		applicable		
6			use	
7	to cultivate			
8		fertile		
9			industry	

#### Exercise 11. Translate the following sentences into English.

1. Сельское хозяйство является одной из главных отраслей белорусской экономики.

2. Наша республика – один из главных производителей льна в мире.

3. Сельское хозяйство обеспечивает нас продуктами питания.

4. Главные зерновые культуры в Беларуси – пшеница, рожь, ячмень и овес.

5. Сельское хозяйство Беларуси предоставляет работу более 20 % рабочей силы.

Exercise 12. Fill in the chart.

Country	Belarus	Great Britain
The Role of Agriculture		
<b>Branches of Agriculture</b>		
Size of the Farms		
Rate of the Development		
Main Crops		
Major Livestock		

#### **Exercise 13. Discuss in groups.**

> Agriculture is one of the main branches of the Belarusian economy.

- $\triangleright$  Belarusian agriculture in the 21<sup>st</sup> century: problems and prospects.
- Belarusian agriculture needs reforming.
- > The difference between Belarusian and British agriculture.

## UNIT 6

### Exercise 1. Learn the words.

To clear [kliə] – расчищать, очищать, убирать to settle [setl] – поселиться, обосноваться settler ['setlə] – поселенец to adopt [ə'dɔpt] – перенимать to graze [greɪz] – пасти(сь) to comprize [kəm'praɪz] – охватывать, включать, содержать to improve [ɪm'pru:v] – улучшать(ся), совершенствовать(ся) to cut [kʌt] – резать, снижать, уменьшать consumer [kən'sju:mə] – потребитель to own [əun] – владеть owner ['эилэ] – владелец to hire ['haiэ] – нанимать, давать напрокат to invest [m'vest] – вкладывать, инвестировать деньги to rent [rent] – сдавать, брать (в аренду), арендовать tenant ['tenənt] – арендатор to pick [pik] – собирать, снимать (плоды) picking ['pikiŋ] – сбор migrant workers ['maigrənt 'wə:kəz] – рабочие мигранты to contribute [kən'tribju:t] – способствовать, содействовать to receive [rr'si:v] – получать to require [rı'kwaiə] – нуждаться, требовать **Exercise 2. Read the text.** 

#### **USA AGRICULTURE**

Nearly 400 years ago European colonists came to America. The colonists began to settle. They cleared the land and transformed forests into croplands and pastures. The settlers lived in a group of houses around a central field. Here grazed the village cattle.

In 1862 the government gave land away free. A settler had to clear it, build a house and live there for at least five years. There appeared family farms. Over time, farming methods and farming areas increased. Today the average farm in the USA comprises 187 ha (462 acres). American farms became more efficient. Many farms adopted new technologies. Computers helped them to improve productivity and cut costs. In the 1990s, American farmers invested more than \$ 400 billion in land, livestock, building and equipment. American consumers pay less for their food than the people of many other industrial countries. By the mid-1970s, a single farmer could grow enough food to feed himself, 45 other Americans and 8 foreigners.

Most of the farms in the USA are family farms. Corporations that are owned by families lead only 3 percent of them. People who have small pieces of land cannot invest in the modern equipment. Often they sell their land to other farmers. There are tenant farmers who rent this land for cash or give the owner a part of the crops they grow. Owners of large farms hire seasonal workers. Many of these seasonal workers travel from farm to farm. They stay only for the period of picking crops. They are known as migrant workers.

The Northeast region does not have large areas of good land. However, you can find dairy and poultry farms in several areas. Maine is famous for potatoes.

The Great Lakes region is also an important area for farming. Corn, wheat and dairy products are the most important agricultural items. Farmers often rotate soybeans – that is planting corn in a field one year and soybeans the next. The region has enough rainfall, which is very important for hay, grown to feed dairy cattle. Wisconsin is the most important dairy state in the region.

The South is famous for tobacco. The moist warm climate contributes to the extensive growth of tobacco in Virginia, North Carolina and South Carolina. Cotton is another important crop for southern farmers, especially in Arkansas and Mississippi. Peanuts are grown in Georgia. Soybeans is an important crop in Arkansas. Citrus fruits and vegetables are grown in Florida.

The Great Plains region is considered the "American breadbasket". It yields great quantities of crops, especially wheat. Wheat is important in Kansas, Minnesota, Nebraska and the Dakotas. Iowa receives more rainfall than the states in the west, so corn is grown instead of wheat. It is the leading state in the USA in corn production. Texas leads the country in the number of cattle and sheep. Here vegetables and citrus fruit, wheat and cotton are grown too.

The Rocky Mountains region lacks water. So many farmers raise livestock. The cattle and sheep require a lot of land to graze. Many of the ranches are very large. Their sizes can be over 900 hectares.

California leads the Pacific region in farming. It is the leading grower of fruits and vegetables. The farms produce cattle, dairy products, cotton, grapes, tomatoes and citrus fruits. In Washington cherries and apples are major fruits. Farms in Hawaii grow sugarcane and pineapples.

Now USA agriculture is big business and is a part of the country's economy.

Agribusiness includes farmer cooperative, rural banks, shippers of farm products, firms that manufacture farm equipment, food-processing industries and many other businesses. American agriculture exports its crops to Europe, Asia, Africa, and Latin America. The United States produces half of the world's soybeans and corn for grain, and from 10 to 25 percent of the world's cotton, wheat, tobacco and vegetable oils.

#### **Exercise 3.** Answer the questions to the text.

1. When did European colonists come to America?

- 2. Did the settlers live in a group of houses?
- 3. When and how did family farms appear?
- 4. How do American farmers improve productivity?

5. What kind of farms is the most typical in the USA?

6. What are the main agricultural regions of the USA?

7. What crops are grown in the South?

8. Do all states in the USA grow the same crops? What does it depend on?

9. What is the leading state in growing wheat in the USA?

10. What state leads the country in growing fruits and vegetables?

11. Where are dairy farms situated?

12. Is agriculture a part of the US economy?

## Exercise 4. Say if the following statements are true or false.

1. In the 13<sup>th</sup> century European colonists who came to America lived in a group of houses.

2. Most of the farms in the USA are family farms.

3. Seasonal workers are known as migrant workers.

4. The Great Lakes region is famous for tobacco.

5. Florida is considered the "American breadbasket".

6. Iowa is the leading state in the USA in corn production.

7. USA agriculture is a part of the country's economy.

8. American agriculture exports its crops only to Europe.

## Exercise 5. Say the same in English.

Ведущий производитель фруктов и овощей; сахарный тростник; пищевая промышленность; нанять сезонных рабочих; потребители; превращали леса в пахотные земли и пастбища; современное оборудование; производить кукурузу на зерно; требуют много земли для выпаса; цитрусовые фрукты; регион Скалистых гор; растительные масла; стали более эффективные; период сбора урожая; ведущий штат по производству кукурузы.

Exercise 6. Name the main agricultural regions of the USA. Complete the following sentences using the text. Fill in the gaps with the names of the regions. Translate into Russian.

- 1. \_\_\_\_\_ is famous for soybeans and tobacco.
- 2. Wheat is the most important crop in \_\_\_\_\_.

3. Cotton is another important crop in \_\_\_\_\_.

4. Wisconsin is the main dairy state in \_\_\_\_\_.

5. Iowa is the leading state in \_\_\_\_\_ in corn production.

6. Many farmers in \_\_\_\_\_ raise livestock.

7. California leads \_\_\_\_\_ in farming.

8. In several areas of \_\_\_\_\_ you can find dairy and poultry farms.

## Exercise 7. What states lead the country in growing crops? Make up short dialogues using the Models.

Model A: - What is the leading state in growing corn in the USA?

- The leading state in growing corn in the USA is Iowa.

Model B: – What state leads the country in growing corn?

- Iowa leads the country in growing corn.

Exercise 8. Use these letters to write the names of the crops grown in the USA.

a) sapelp –

b) otcocba –

c) csehierr –

d) sperga –

e) rcaangeus -

f) tncoot -

g) ssonyabe -

h) spielnepap -

Exercise 9. Complete the sentences using the following words: cleared, higher, produces, to graze, producer, receives, to make, to cut, uses, croplands.

1. New technologies will help us \_\_\_\_\_ costs.

2. The first American settlers \_\_\_\_\_ the land and transformed forests into \_\_\_\_\_ and pastures.

3. The leading \_\_\_\_\_ of tobacco is the South region.

4. \_\_\_\_\_ productivity of farm animals \_\_\_\_\_ the owner of the farm \_\_\_\_\_ new technologies.

5. The Great Plains region \_\_\_\_\_ many crops such as wheat, corn, cotton and many others.

6. Iowa \_\_\_\_\_ more rainfall than the states in the west.

7. The cattle and sheep require a lot of land \_\_\_\_\_.

## Exercise 10. Make questions for the answers.

1. \_\_\_\_? - Migrant workers are people who work on different farms only for the period of picking crops.

2. \_\_\_\_? – The Great Plains region is the "American breadbasket" because it is the leading grower of wheat in the USA.

3. \_\_\_\_? – Crop growing depends on climate.

4. \_\_\_\_\_? – Yes, most of the farms in the USA are family farms.

5. \_\_\_\_? – Tenant farmers rent a piece of land and give the owner a part of the crops they grow.

6. \_\_\_\_? – The USA exports its crops to Europe, Asia, Africa and Latin America.

## Exercise 11. Make up word combinations and translate them.

1. modern	a. farmers
2. seasonal	b. climate
3. tenant	c. industries
4. warm	d. equipment
5. extensive	e. fruits
6. citrus	f. cattle
7. food-processing	g. workers
8. dairy	h. farms
9. poultry	i. growth

## Exercise 12. Match the words with their definitions.

1	breadbasket	a	a worker who is employed for a particular	
			period of the year	
2	tenant farmer	b	people or companies who ship cargo as a	
			business	
3	seasonal worker	с	a major cereal-producing region	
4	settlers	d	cows raised mainly for their milk	
5	shippers	e	an area of land on which crops are grown	
6	cropland	f	people who go to live in a new country	
7	dairy cattle	g	a person who farms rented land	

## Exercise 13. Put the words in the right order to make up sentences.

1. Farm / what / average / is / an / the / of / size?

2. The / growing / region / crops / does / lands / not / good / have / for.

3. USA / most / family / the / of / farms / in / are / farms / the.

4. Tenant / crops / farmers / picking / workers / hire / period / seasonal / the / for / of.

5. Region / dairy / Mountains / farms / Rocky / are / the / situated / the / in.

6. The / cotton / and / South / is / tobacco / for / famous.

7. Hawaii / sugarcane / grow / and / farms / pineapples / in.

## Exercise 14. Translate the following sentences into English.

1. Колонисты превратили леса в пахотные земли и пастбища.

2. Сегодня средняя ферма в США составляет 187 га.

3. Фермеры-арендаторы берут в аренду участок земли и отдают владельцу часть выращиваемого ими урожая.

4. Владельцы крупных хозяйств нанимают сезонных рабочих только на время сбора урожая.

5. Регион Великих равнин считается «американской житницей», потому что он является ведущим производителем пшеницы в США.

6. Влажный теплый климат способствует экстенсивному росту табака в Южном регионе.

7. Техас лидирует в стране по количеству крупного рогатого скота и овец.

8. Калифорния – ведущий производитель фруктов и овощей.

9. Многие фермеры выращивают скот в районе Скалистых гор.

10. Сейчас сельское хозяйство США – это большой бизнес и часть экономики страны.

11. США экспортируют свою продукцию в Европу, Азию, Африку и Латинскую Америку.

## Exercise 15. Be ready to speak about on one of the topics:

➤ A short history of American agriculture.

 $\succ$  Agriculture is one of the biggest and most productive enterprises in the USA.

 $\succ$  The six agricultural regions.

#### SUPPLEMENTARY READING

## TEXT 1

## WHAT IS AGRICULTURE?

Agriculture is a human activity and 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 *agriculture* means the cultivation of fields and growing crops. But this is the old meaning of this word. Now it also means the use of land to breed animals. At present, there are two main branches of agriculture. They are crop growing and animal husbandry.

We do not know when people began to grow crops. It was many thousand years ago. Now crop growing and animal husbandry are highly developed branches of agriculture.

The soil is the basis of agriculture. Enough food for all the people can be grown if there is sufficient good soil for crops to produce high yields. Life is impossible without plants. They play a highly important role in everyday life of people. Plants that are grown by farmers are known as farm crops. They are used for many different purposes. Most of them are used directly as food for people, some are consumed by farm animals, others are used in industry and medicine.

There are two ways to grow enough food plants. They are the increase in area of arable land and the intensification of agricultural production in the areas already used for cropping. At present, the second way is more important because there is not enough experience to reclaim tropical and subtropical lands.

In order to increase crop yields and animal products our collective and state farms apply widely intensive technologies.

### TEXT 2

## INTENSIVE TECHNOLOGIES IN AGRICULTURE

There are two ways of increasing the yield of farm crops. They are the cultivation of new lands and the increase in yields per hectare. In the recent past the first way was more popular. At present more agricultural products are obtained by intensification of agricultural production.

Intensification is based on mechanization, electrification and chemization, which are the main sources of progress in agriculture. Most of agricultural processes in crop production and animal husbandry are mechanized now. They are the preparation of the soil, planting and harvesting crops, feeding farm animals and cleaning livestock buildings. Chemization of agriculture is increased by higher production and use of mineral fertilizers and other chemicals. They increase crop yields and quality.

Some other important intensive technologies are the development of better high-yielding varieties of crops, the application of most effective cultural practices, the breeding of better farm animals and the control of weeds, insects and diseases.

All intensification factors, such as full mechanization, high application of fertilizers and extensive use of herbicides must be used in such a way as not to disturb the biological equilibrium of the soil.

## TEXT 3

#### **TWO BRANCHES OF AGRICULTURE**

There are two main branches of agricultural production – crop production and animal husbandry.

Crop production is the practice of growing and harvesting crops. The most important crops grown by man are grain crops, vegetables and 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.

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 are thus returned. Applying manure, farmers improve the physical condition of the soil.

Thus, crop production and animal husbandry are closely connected with each other.

## **TEXT 4**

## HOW SCIENCES CONTRIBUTE TO AGRICULTURE

One science may help, make, or contribute to another science. What sciences contribute to agriculture?

Botany contributes to agriculture, for botany is the science of plants, and plants are important in agriculture.

Bacteriology, the science dealing with bacteria, contributes to agriculture. Many diseases of plants and animals are caused by bacteria and fungi. It is probable that we would have no crops or animals without our knowledge of controlling plant diseases and animal diseases.

Zoology, the science of animals, contributes to agriculture, as does entomology, which treats of insects. Man cud not control insects unless he knew their nature and habits, their food, their life history, their enemies. This respects a vast amount of knowledge gained and proved. The modern farmer knows how to control most of the harmful insects. In our study of how plants make their food, we touch on chemistry, the science that treats of the composition of things and the changes that take place in them.

Physics had told us most of what we know that has helped us to develop machines and power for use in farming.

Geography, the science of the earth and its life, contributes to agriculture. So does economics, the science that treats of the production, distribution, and consumption of things.

Through the science of breeding, dairy cattle have been developed for high production of milk, and beef cattle for production of beef. Likewise, there is improvement in other kinds of livestock. Sciences has made it possible for us to know how to feed any kind of farm animal for any purpose.

Without knowledge of soils and fertilizers, which we have gained and proved, agriculture would be poor indeed. Without science, we would not know that we should grow legumes in order to take nitrogen from the air, nor would we know how to fertilize intelligently. We are making much progress in learning how to control soil erosion.

Forest fanning is today recognized as an important part of agriculture. Modern scientific principles of forestry are being widely applied. We know how trees live and grow, what their enemies are. Much knowledge is being gained and proved about the relation of forests to climate, stream flow and erosion, and about various problems of management. Also, new uses are being found for the products of the forest.

#### TEXT 5

## CATTLE-BREEDING IN GREAT BRITAIN

The climate of the British Isles is ideal for cattle. Therefore, they are found practically in all areas, particularly in the Midlands and south-west of England, the Lowlands of Yorkshire and the coastal areas of Scotland, Wales, the Lake District and Northern Ireland. In contrast, sheep are concentrated in uplands of Scotland, Wales, northern and south-western England and Northern Ireland.

Since British agriculture is highly specialized, cattle serve different purposes in different districts. There are two kinds of cattle: dairy cattle and beef cattle. The need for daily deliveries of fresh milk has given rise to particular concentration of dairy cattle on lowlands close to densely populated areas. Beef cattle are more widely distributed throughout the British Isles than dairy cattle, and rearing extends into upland regions far from urban areas.

Sheep no longer play such an important part in British agriculture as they did in the past, when there was a steady export of wool to the continent of Europe. Nowadays they are in general numerous only on land which is unsuitable for other types of farming. Although lamb production is the main source of income for sheep farmers, wool is also important.

Most farmers keep pigs and poultry. Pig production occurs in most areas but it is particularly important in northern and eastern England. There exists a high degree of specialization. Poultry farms are chiefly concerned with the supply of eggs to local markets and the production of poultry meat. Britain remains self-sufficient in both.

## TEXT 6

#### **Explanatory Notes:**

B. C. (before Christ) – до нашей эры
A. D. (Anno Domini) – нашей эры
bushel – бушель (36,3 л.)
Linum usitatissimum – Лен обыкновенный, или Лен посевной

## FLAX

Flax is one of the oldest cultivated crops. Flaxseeds that have been found in Syria and Turkey indicate that the plant might have been grown as early as 7000 B. C. The Egyptians began cultivating flax about 5000 B. C. By about 1000 B. C., the cultivation of flax had spread to Western Europe. In the A. D. 700, the areas that are now Belgium and France became leading producers of fine linen.

Flax is a plant raised for its fiber and seed. The fiber is made into linen fabric and a variety of other products, including rope, thread, and highquality paper. The seeds contain linseed oil, which is used primarily in the production of paints and varnishes.

There are about 230 species of flax. Only one species, *Linum usitatissimum*, is grown commercially. Different varieties of this species are grown for fiber and for seed.

Flaxseeds consist of about 40 percent oil and 60 percent water and solid matter. One bushel of seeds produces about 9.5 liters of linseed oil. The

meal that remains after processing is used as a high-protein feed for livestock. People also use ground flaxseed to make breads and other foods.

World production of fiber flax amounts to about 700 000 tons annually. China is, by far, the leading country in fiber flax production. Other leading growers include Belarus, France, the Netherlands, and Russia. The United States and Canada do not raise fiber flax. World flaxseed production totals about 100 million bushels yearly. Leading flaxseed-producing countries include Canada, China, India, the United Kingdom, and the United States.

## Answer the questions.

- 1. What is flax raised for?
- 2. Prove that flax is one of the oldest cultivated crops.
- 3. What do flaxseeds consist of?
- 4. What is the leading country in flax production?

## TEXT 7

#### **Explanatory Notes:**

Retting – вымачивание shives – костра́ scotching – трепание (стеблеволокнистых растений) hackling – ческа (льна) are baled – упаковываются в тюки

## **GROWING AND PROCESSING FIBER FLAX**

Fiber flax grows best in cool, moist climates with rainy summers. It is planted in spring after the danger of frost has passed. Fiber flax is generally grown in rotation with other crops. Rotation helps reduce the effects of diseases.

Fiber flax is harvested three to four months after planting. If the plants are harvested too early, the fibers will be fine and silky, but weak. If the plants become too ripe, the fibers will be stiff and rough and difficult to spin into yarn. Farmers harvest fiber flax with a machine that pulls the stalks from the ground. On some farms, workers harvest flax by hand.

After the plants have been harvested, the flax stems are soaked in water. This process, which is called retting, rots the stalk and exposes the fibers that lie under the woody part of the stem. There are two methods of retting – dew-retting and water-retting. In dew-retting, farmers spread the flax in the field and allow the dew to rot the plants for several weeks. During the dew-

retting process, the stems are turned several times and the seeds are removed. In water-retting, the seeds are removed first and the stems are then soaked in large tanks of warm water for four to eight days.

After retting, the flax stems are dried and sent through a machine that breaks them into small pieces called shives. Next, in a process called scutching, the machine separates the shives from the fibers by beating the stems with a whirling paddle or blade. In the next step, called hackling, the tow (short) and line (long) fibers are straightened and separated from each other by combing. After combing, the fibers are baled and sent to mills for processing. The seeds that were removed from the plants are processed for oil.

## Read the text and put the sentences in the right order.

## **Processing fiber flax**

1. The stems are dried.

2. A machine breaks the stems into shives.

3. The short and long fibers are straightened and separated from each other.

4. The flax stems are soaked in water.

5. The fibers are baled and processed.

6. The seeds are processed for oil.

7. A machine pulls the stalks from the ground.

8. The seeds are removed.

9. The machine separates the shives from the fibers.

#### **TEXT 8**

## AGRICULTURE AND ENVIRONMENT

Agriculture and environment are closely connected with each other. Crop yields and animal productivity depend on soil and climatic conditions of the region in which they are grown. When environmental conditions are favorable, crops grow and develop well and produce high yields.

At present agriculture is not so dependent on the environment as in the past. Man can improve the conditions under which crops are grown. The conditions can be improved by using irrigation and drainage, by applying fertilizers and different chemicals such as herbicides and insecticides and by some other practices. The environmental factors do not only affect agriculture, but they are also affected by the agricultural activity.

There are four main ways in which agriculture affects our environment. The first way is soil erosion. It is a natural process but it can be greatly increased when improper methods of farming are used. The second way is wastes of intensive keeping of livestock and poultry. These wastes pollute waterways. The third way is improper use of fertilizers. Mineral fertilizers and chemicals used by farmers accumulate in the soil and in plants and may become harmful for people. The last way of agricultural pollution of the environment is the use of different chemicals such as insecticides, herbicides and others. These chemicals affect both the soil and air.

## ENGLISH-RUSSIAN VOCABULARY

## A

account for [ə'kaunt] – составлять A.D. (Anno Domini) – нашей эры adopt [ə'dɔpt] – перенимать agriculture ['ægrɪ,kʌltʃə] – сельское хозяйство agricultural [,ægrɪ'kʌltʃərəl] – сельскохозяйственный alfalfa [æl'fælfə] – люцерна application [æplɪ'keɪʃ(ə)n] – внесение (удобрений и ядохимикатов) arable ['ærəbl] – пахотные

## B

barley ['ba:lı] – ячмень B.C. (before Christ) – до нашей эры beets [bi:ts] – свекла beans [bi:nz] – бобы bee [bi:] – пчела belong to [br'lɔŋ]– принадлежать к branch [bra:ntʃ] – отрасль breed [bri:d] – порода (n), разводить (v) broiler chicken ['brɔılə 'tʃıkın] – цыпленок-бройлер

## С

castor oil ['ka:stə,ɔil] – касторовое масло cattle [kætl] – крупно-рогатый скот cereal grains ['siəriəl 'greinz] – зерновые культуры clear [kliə] – расчищать, очищать, убирать clover ['kləuvə] – клевер cocoa beans ['kəukəubi:nz] – какао-бобы coconuts ['kəukənʌts] – кокосовые орехи compete [kəm'pi:t] – конкурировать comprize [kəm'praiz] – охватывать, включать, содержать consumer [kən'sju:mə] – потребитель contaminate [kən'tæminet] – загрязнять, заражать, портить contribute [kən'tribju:t] – способствовать, содействовать cotton gin ['kɔtn 'dʒin] – хлопкоочистительная машина cropland ['krɔp,lænd] – пахотная земля crop rotation [krɔp ,rəu'teiʃ(ə)n] – севооборот cut [kʌt] – резать, снижать, уменьшать

## D

dairy ['dæərı] – молочный diet [daiət] – рацион питания domestication [də,mestı'keı $\int(\mathfrak{d})n$ ] – одомашнивание, приручение dominate ['dɔmineit] – преобладать be drained [dreind] – осушаться

## Е

efficient [ɪ'fɪʃ(ə)nt] – эффективный egg [eg] – яйцо employ [ɪm'plɔɪ] – предоставлять работу enterprise ['entəpraɪz] – предприятие equipment [ɪ'kwɪpmənt] – оборудование explosion [ɪk'spləuʒən] – взрыв

## F

fabric ['fæbrik] – ткань farm [fa:m] – ферма (n), сельскохозяйственный (adj), заниматься сельским хозяйством (v) farmer ['fa:mə] – фермер farming ['fa:miŋ] – фермерство, занятие сельским хозяйством feed [fi:d] – корм (n), кормить (v) feeding trough ['fi:dŋ 'trɔf] – кормушка fertile ['fə:tail] – плодородный fertility [fə'tlitt] – плодородие fertilizer ['fə:tılaızə] – удобрение fibre ['faɪbə] – волокно flax [flæks] – лен fodder ['fɔdə] – корм foodstuffs ['fu:dstʌfs] – продовольствие, продукты питания forage ['fɔrɪdʒ] – корм, фураж fur [fɜ:] – мех

## G

game [geim] – дичь goat [gəut] – коза gooseberry ['guzb(ә)rī] – крыжовник grass [gra:s] – трава graze [greiz] – пасти(сь) grow [grəu] – расти, выращивать, произрастать

## H

hay [hei] – сено harvester ['ha:vistə] – уборочная машина hectare ['hekteə] – гектар herbicide ['hə:bisaid] – гербицид, средство от сорняков hide [haid] – шкура hire ['haiə] – нанимать, давать напрокат hog [hɔg] – свинья honey ['hʌni] – мед horticulture ['hɔ:tikʌltʃə] – садоводство, огородничество horse [hɔ:s] – лошадь

## I

import [Im'pɔ:t] – импортировать, ввозить improve [Im'pru:v] – улучшать(ся), совершенствовать(ся) industry ['Indəstri] – промышленность, производство inherite [m'herit] – передаваться по наследству insect pest ['Insekt 'pest] – насекомое-вредитель insecticide [In'sektisaid] – инсектицид invent [In'vent] – изобретать, придумывать invest [m'vest] – вкладывать, инвестировать деньги irrigation [,Irr'geIJ((ə)n] – орошение irrigation pump [,Irr'geIJ((ə)n 'pʌmp] – ирригационный насос

## K

kind [kaind] - сорт, разновидность, вид

## L

lack [læk] – недостаток, отсутствие large-scale ['la:dʒskeil] – крупномасштабный, массовый linseed oil ['linsid\_ɔil] – льняное масло livestock ['laɪvstɔk] – домашний скот livestock breeder ['laɪvstɔk 'bri:də] – животновод

## М

make up ['meik, лp] – составлять manure [mə'njuə] – навоз marshy ['ma:ʃi] – болотистый meadow ['medəu] – луг meet [mi:t] – удовлетворять, соответствовать migrant workers ['maigrənt 'wə:kəz] – рабочие мигранты milking machine ['milkiŋ mə'ʃi:n] – доильный аппарат millet ['milti] – просо mink [miŋk] – норка moorland ['mɔ:lənd] – вересковая пустошь; местность, поросшая вереском

mussel [mʌsl] – мидия

## N

natural rubber ['nætʃrəl 'rʌbə] – каучук nitrogen ['natrədʒ(ə)n] – азот, азотный nourishment ['nʌrɪʃmənt] – питание, питательные вещества

## 0

oats [əuts] – овес oil [ɔıl] – растительное масло oil-bearing crops ['ɔıl'beəriŋ 'krɔps] – масличные культуры ornamental [ɔ:nə'mentl] – декоративный be overmoistened [,əuvə'mɔistʃənd] – быть переувлажненным, заболоченным own [əun] – владеть owner ['əunə] – владелец oyster ['ɔistə] – устрица oxen ['ɔksn] – волы, рогатый скот

## P

pastoral ['pa:st(ə)r(ə)l] – пастбищный peas [pi:z] – горох pedigree cattle ['pedigri: kætl] – племенной (породистый) скот peninsula [pɪ'nɪnsjulə] – полуостров pepper ['pepə] – перец pick [pɪk] – собирать, снимать (плоды) picking ['pɪkɪŋ] – сбор plant [pla:nt] – растение (n), сажать (v) plow (plough) [plau] – плуг (n), пахать (v) potato [pə'tettəu] – картофель poultry ['pəultrɪ] – домашняя птица production [prə'dʌkʃ(ə)n] – производство, продукция pulses ['pʌlsɪz] – бобовые культуры

## Q

quantity ['kwontiti] - количество

## R

raise [reiz] – выращивать raspberry ['ra:zb(ə)ri] – малина raw material ['rɔ:, mə'tiəriəl] – сырье receive [rɪ'si:v] – получать rent [rent] – сдавать, брать (в аренду), арендовать require [rɪ'kwaiə] – нуждаться, требовать rice [rais] – рис root crops ['ru:t 'krɔps] – корнеплоды rye [rai] – рожь

## S

seed [si:d] – семя, зерно seed drill ['si:d 'dri:l] – сеялка selective breeding [si'lektıv 'bri:dɪŋ] – селекционное разведение settle [setl] – поселиться, обосноваться settlement ['set(ə)lm(ə)nt] – поселение, колония, деревня settler ['setlə] – поселенец silkworms ['silkwə:mz] – шелковичные черви sheep [ʃi:p] – овца (овцы) shellfish ['[elfɪʃ] – моллюск shrub [ʃrʌb] – кустарник soil [sɔil] – почва sorghum ['sɔ:gəm] – сорго source [sɔ:s] – источник soybeans ['sɔibi:nz] – соя squash [skwɔʃ] – тыква strawberry ['stɔ:b(ə)ri] – клубника, земляника sugarcane ['ʃugəkein] – сахарный тростник sugar-bearing crops ['ʃugə'beəriŋ 'krɔps] – сахаросодержащие культуры supply [sə'plai] – снабжать, поставлять, доставлять sweet potato ['swi:t\_pə'teitəu] – сладкий картофель, батат

## Т

tame [teim] – приручать tenant ['tenənt] – арендатор thresher [' $\theta$ геfə] – молотилка transition [træn'zıf(ə)n] – переход trout [traut] – форель turkey ['tɜ:kı] – индейка

## U

unstable [лп'steibl] - неустойчивый

## V

valley ['vælı] – долина variety [və'raiətı] – 1) разнообразие, множество; 2) вид, сорт vegetable ['vedʒtəbl] – овощ

## W

weedkiller ['wi:dkɪlə] – гербицид, средство от сорняков wheat [wi:t] – пшеница wood ash ['wud 'æʃ] – древесная зола wool [wul] – шерсть workforce ['wə:kfɔ:s] – рабочая сила

## Y

yarn [ja:n] – пряжа

## БИБЛИОГРАФИЧЕСКИЙ СПИСОК

1. Английский язык для студентов сельскохозяйственных вузов: пособие / Н. И. Веренич [и др.]. – Минск: ИВЦ Минфина, 2005. – 362 с.: ил.

2. Английский язык. Сельское хозяйство Республики Беларусь и Великобритании: учебно-методическое пособие / сост.: И. В. Падерова, В. Н. Смольская. – Минск: БГАТУ, 2011. – 56 с.

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