МИНИСТЕРСТВО СЕЛЬСКОГО ХОЗЯЙСТВА
И ПРОДОВОЛЬСТВИЯ РЕСПУБЛИКИ БЕЛАРУСЬ

ГЛАВНОЕ УПРАВЛЕНИЕ ОБРАЗОВАНИЯ,
НАУКИ И КАДРОВОЙ ПОЛИТИКИ

Учреждение образования
«БЕЛОРУССКАЯ ГОСУДАРСТВЕННАЯ
ОРДЕНОВ ОКТЯБРЬСКОЙ РЕВОЛЮЦИИ
И ТРУДОВОГО КРАСНОГО ЗНАМЕНИ
СЕЛЬСКОХОЗЯЙСТВЕННАЯ АКАДЕМИЯ»

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АНГЛИЙСКИЙ ЯЗЫК

AGRONOMY

Рекомендовано учебно-методическим объединением
в сфере высшего образования Республики Беларусь
по образованию в области сельского хозяйства
в качестве учебно-методического пособия для студентов
учреждений образования, обеспечивающих получение
общего высшего образования по специальностям
6-05-0811-01 Производство продукции растительного происхождения,
6-05-0811-05 Защита растений и карантин

Горки
Белорусская государственная
сельскохозяйственная академия
2025

УДК 811.111(075.8)
ББК 81.Англ я73
П80

Рекомендовано методической комиссией
по социально-гуманитарным и лингвистическим дисциплинам
22.10.2025 (протокол № 2)
и Научно-методическим советом
Белорусской государственной сельскохозяйственной академии
29.10.2025 (протокол № 2)

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П80 Английский язык. Agronomy : учебно-методическое пособие / С. Л. Прокопенко, И. В. Осипова. – Горки : Белорус. гос. с.-х. акад., 2025. – 84 с.

ISBN 978-985-882-766-3.

В данном пособии приведены тексты для чтения по специальностям с последующими упражнениями, направленными на расширение лексического запаса, контроль понимания прочитанного, а также на повторение грамматики в рамках учебной программы.

Для студентов учреждений образования, обеспечивающих получение общего высшего образования по специальностям 6-05-0811-01 Производство продукции растительного происхождения, 6-05-0811-05 Защита растений и карантин.

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ВВЕДЕНИЕ

Данное учебно-методическое пособие предназначено для студентов первого курса учреждений образования, обеспечивающих получение общего высшего образования по специальностям 6-05-0811-01 Производство продукции растительного происхождения, 6-05-0811-05 Защита растений и карантин.

Цель пособия – заложить основы навыков чтения и перевода текстов по специальности, а также повторить грамматический материал, изученный ранее. С первых уроков в текстах вводится сельскохозяйственная лексика, которая закрепляется в дальнейшем в устных и письменных упражнениях.

Пособие состоит из двадцати одного урока. Каждый урок содержит текст с лексическим минимумом, который включает наиболее употребительные в сельскохозяйственных текстах слова и термины и подлежит заучиванию.

Кроме того, урок включает систему упражнений, которые имеют целью проверку понимания содержания прочитанного, закрепление новой терминологии и повторение грамматики в рамках учебной программы.

Для развития навыков беспереводного чтения с общим охватом содержания текстов в каждый урок включен один небольшой по объему текст. Этот текст тематически и грамматически увязан с основным текстом.

В пособии также представлены тексты для чтения с учетом уже пройденного лексического и грамматического материала, которые могут быть использованы как для аудиторной, так и для внеаудиторной работы. Приводится также словарь-минимум.

LESSON 1

Упр. 1. Прочитайте и выучите следующие слова:

agriculture – сельское хозяйство
animal – животное
to apply – применять
to breed (bred) – разводить
crop – культура
cultivation – обработка
to develop – развивать
development – развитие
farm – хозяйство, ферма
food – пища
to grow (grew, grown) – выращивать, расти
growth – рост
to increase – увеличивать
plant – растение
to supply – снабжать
to use – использовать
yield – урожай

Упр. 2. Прочитайте и переведите текст.

What is agriculture?

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 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.

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

Пояснения к тексту:

depends on – зависит от

in order to – чтобы; для того, чтобы

crop production – растениеводство, возделывание сельскохозяйственных культур

animal husbandry – животноводство

highly developed – высокоразвитый

most of – большинство.

Упр. 3. Ответьте на следующие вопросы.

1. What does economic growth of any country depend on?
2. What does agriculture supply people with?
3. When did people begin to grow crops?
4. What is the role of plants in everyday life of people?
5. Where are plants used?
6. What is applied in order to increase crop yields?
7. What are the two branches of agriculture?

Упр. 4. Переведите следующие слова и словосочетания на английский язык.

Растения, важная роль, пища, непосредственно, сельскохозяйственная культура, отрасль экономики, широко использовать, сельскохозяйственные животные, интенсивные технологии, увеличивать, потреблять, выращивать, урожаи культур, обработка полей.

Упр. 5. Заполните пропуски предложенными ниже словами.

1. Crop production is an important … of agriculture.
2. Agriculture ... people with food.
3. People began ... crops many thousand years ago.
4. Plants are used for many different … .
5. To increase crop … farmers apply intensive technologies.
6. Plants play a very important … in everyday life of people.

(role, to grow, supplies, branch, purposes, yields)

Личные местоимения

Именительный падеж	Объектный падеж	Притяжательный падеж
I – я	Me – мне, меня	My – мой
You – ты	You – тебе, тебя	Your – твой
He – он	Him – ему, его	His – его
She – она	Her – ей, ее	Her – её
It – он, она, оно	It – ей, ему	Its – ее, его
We – мы	Us – нам,нас	Our – наш
You – вы	You – вам, вас	Your – ваш
They – они	Them – им, их	Their – их

Упр. 6. Вставьте соответствующие личные местоимения в именительном падеже.

1. Are ... a student of the Agrotechnological faculty? – Yes, ... am. 2. My friend is an agronomist. ... is on the farm now. 3. This farm is known in this region. ... is rich and profitable. 4. Most of the farms in England are small. ... are family farms. 5. ... , people, must protect nature. 6. Do ... have any books on agronomy? – Yes, ... do.

Упр. 7. Вставьте соответствующие личные местоимения в объектном падеже.

1. People made parks in cities because they liked ... . 2. Plants take water from the soil and transport ... to the leaves. 3. The Japanese grow much rice. They grow ... in standing water in fields. 4. Some plants are used by man directly for food, some are grown by ... for industry. 5. We have used special cultural practices. They helped ... achieve good results. 6. I use fertilizers and other chemicals on my plot. Their use helps ... increase crop yields. 7. Man lives on the Earth because plants give ... oxygen.

Упр. 8. Вставьте соответствующие притяжательные местоимения.

1. Plants are very important in ... everyday life. 2. It is necessary to have many trees in a city to make ... air good. 3. Different plant species want ... special soils. 4. Do you know planting dates of wheat in ... country? 5. Timiryazev began ... scientific activities in the field of agriculture in Simbirsk. 6. Who is ... lecturer on plant physiology? − ... lecturer is a well-known scientist. 7. The farm has to irrigate ... fields. 8. The farmers improved ... work with the help of new machines. 9. Plants absorb most of ... nutrients from soil. 10. Now we grow wheat on ... farm.

Упр. 9. Прочитайте текст и кратко перескажите по-русски.

Agriculture in Denmark

Agriculture is the most important branch of economy in this country. It is highly developed. Big farms are predominant in Denmark.

The country has very favourable climate, soils and topography for farming. These factors stimulate crop growing and animal breeding.

Most farm operations are highly mechanized, from preparation of the soil to harvesting crops and feeding animals. The use of fertilizers and other chemicals increases crop yields and animal products.

England is the main importer of Denmark farm products. Animal products make up about 80 % of the total agricultural export of the country.

LESSON 2

Упр. 1. Прочитайте и выучите следующие слова:

application – применение
livestock – скот
to clean – чистить
to obtain – получать
control – борьба, уничтожение
disease – болезнь
quality – качество
to feed (fed) – кормить
soil – почва
fertilizer – удобрение
variety – сорт
to harvest – убирать
weed – сорняк
insect – насекомое
to plant – сажать

Упр. 2. Прочитайте и переведите текст.

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, the control of weeds, insects and diseases.

All intensification factors must be used in such a way as not to damage the land which is the basis of agriculture.

Пояснения к тексту:

per hectare – с гектара, на гектар

high-yielding – высокоурожайный

cultural practices – агротехнические приемы; агротехника

in such a way – таким образом

as not to damage – чтобы не повредить.

Запомните:

most – самый, наиболее (перед прилагательным)

most; most of – большинство (перед существительным).

Упр. 3. Ответьте на следующие вопросы.

1. What are the two ways of increasing the yield of farm crops?
2. What are the main sources of progress in agriculture?
3. What agricultural processes are mechanized now?
4. How are crop yields and quality increased?
5. What is the basis of agriculture?

Упр. 4. Переведите следующие слова и словосочетания на английский язык.

Увеличение, получать, сельскохозяйственное производство, источник, растениеводство, животноводство, посадка, уборка, использование**,** урожайность, сорт, агротехнические приемы, сорняк, болезнь.

Упр. 5. Замените данные в скобках слова их английскими эквивалентами. Переведите предложения на русский язык.

1. There are two ways of (увеличение) the yield of farm crops.
2. Most of agricultural processes in (растениеводство и животноводство) are mechanized.
3. At present more agricultural products are obtained by intensification of (сельскохозяйственное производство).
4. Mineral fertilizers (увеличивают) crop yields and quality.
5. Some other intensive technologies are the development of better (высокоурожайных сортов) of crops, the application of most effective (агротехнических приемов), the control of (сорняки, насекомые).

Местоимения some, any, no

Утвердительные предложения	Some – некоторый, какой-то, несколько, какой-нибудь Any – всякий, любой
Вопросительные предложения	Any – какой-нибудь
Отрицательные предложения	No = not any − никакой

Упр. 6. Употребите подходящие по смыслу неопределенные местоимения: *some, any, no.*

1. ... crops are used in feeding farm animals. 2. Our farm plants ... of the crops in autumn. 3. There is ... crop more important than wheat. 4. There aren't ... farms in this region growing wheat. 5. ... crop receives more cultivation than potato. 6. Are there ... artificial seas in Belarus? – No, there aren't ... . 7. ... lands are unfit for cultivation. 8. This method has ... advantages.

Неопределенные местоимения *much, many, (a) little, (a) few*

much	много	Употребляется с неисчисляемыми существительными
many	много	Употребляется с исчисляемыми существительными
few	мало	Употребляется с исчисляемыми существительными
a few	несколько	Употребляется с исчисляемыми существительными
little	мало	Употребляется с неисчисляемыми существительными
a little	немного	Употребляется с неисчисляемыми существительными

Упр. 7. Употребите подходящие по смыслу слова: *much, many, few, little, a few, a little.*

1. ... crops grown by this farm are high-yielding. 2. ... agricultural processes are mechanized. 3. Most trees in tropical forests lose only ... leaves. ... sunlight reaches the earth there. 4. Cotton grows well in the steppe but there is ... water there. 5. ... work was done in spring. 6. The farm has got ... farm machinery. 7. There are ... sunny days in winter. 8. Men get ... food from plants. 9. There are ... plant species in the world. 10. The production of meat, milk and eggs increased ... last year.

Упр. 8. Прочитайте текст и кратко перескажите по-русски.

Main sources of food

There are three main sources of food for man. They are crops, livestock and fish. Of these, crops make up about 75 % of the world's food production, 23 % is contributed by livestock and only 2 % of food comes from fish.

Many foods are obtained from farm animals. They are 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, sheep and poultry. Meat from mature sheep is known as mutton.

LESSON 3

Упр. 1. Прочитайте и выучите новые слова:

beef cattle – мясной скот
meat – мясо
dairy cattle – молочный скот
egg – яйцо
nutrient – питательное вещество
favourable – благоприятный
grain – зерно
nutritious – питательный
grass − трава
poultry – домашняя птица
hog – свинья
to produce – производить
to improve – улучшать
sheep – овца, овцы
to keep (kept) – содержать
soil fertility – почвенное плодородие
manure – навоз

Упр. 2. Прочитайте и переведите текст.

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.

Пояснения к тексту:
under ... conditions – при (в) ... условиях
with each other – друг с другом.
Запомните:
some – несколько, некоторый
the same – тот же самый, один и тот же.
Упр. 3. Ответьте на следующие вопросы.
1. What are the two main branches of agriculture?
2. What is crop production?
3. Name the most important crops grown by man.
4. What is animal husbandry?
5. Name farm animals bred throughout the world.
6. How do farmers improve the physical condition of the soil?
Упр. 4. Дайте английские эквиваленты следующих слов.
Благоприятный, почвенные условия, отрасль, разведение, питательный, кормление, скот, поддержание, плодородие почвы, питательные вещества.
Упр. 5. Составьте словосочетания из предложенных слов:

1) main	a) production
2) agricultural	b) crops
3) favourable	c) husbandry
4) crop	d) branch
5) grain	e) production
6) Soil	f) cattle
7) animal	g) conditions
8) beef	h) source
9) nutritious	i) fertility
10) important	j) products

Степени сравнения прилагательных

Положительная степень	Сравнительная степень	Превосходная степень
1. Old, slow	Older, slower	Oldest, slowest
Thin, big	Thinner, bigger	Thinnest, biggest
Heavy, easy	Heavier, easier	Heaviest, easiest
2. Beautiful	More beautiful	Most beautiful
3. Good, well	Better	Best
Bad, badly	Worse	Worst
Little	Less	Least
Many, much	More	Most
Far	Farther, further	Farthest, furthest
Old	Older, elder	Oldest, eldest

Упр. 6. Поставьте прилагательные и наречия в соответствующую степень сравнения.

1. The (favourable) seasons are those of moderate rainfall. 2. The (suitable) soil for potatoes is a light loam. 3. Our farm has (high) crop yields than last year. 4. Animal husbandry is (important) on this farm than crop production. 5. This cultural practice is (effective) than that one. 6. Wheat grows at a (low) temperature than cotton. 7. Soil air contains (little) oxygen but (much) carbon dioxide than atmospheric air. 8. Rye is (hardy) than wheat. 9. The oceans remain (large) source of water in the world. 10. Barley has a (short) period of growth than other cereals.

Глагол *to be* (быть) в Present Indefinite Tense

Утверждение	Вопрос	Отрицание
I **am**	**Am** I?	I **am** not
He **is**	**Is** he?	He **is** not (isn't)
She **is**	**Is** she?	She **is** not (isn't)
It **is**	**Is** it?	It **is** not (isn't)
We **are**	**Are** we?	We **are** not (aren't)
You **are**	**Are** you?	You **are** not (aren't)
They **are**	**Are** they?	They **are** not (aren't)

Упр. 7. Употребите соответствующую форму глагола *to be* в *Present Indefinite.*

1. The principal parts of plants ... roots, stems, leaves, flowers, seeds. 2. Sunlight ... necessary for plants. 3. It ... not warm in this region. 4. There ... many varieties of crops in the world. 5. Cereals ... leading farm crops. 6. The climate of this area... not good for growing fruits. 7. Summer ... rather moist in Britain. 8. Small farms ... usually mixed farms. 9. There ... millions of hectares of farm land in the world. 10. Cooperation in agriculture ... important.

Глагол *to have* (иметь) в Present Indefinite

I **have**	We **have**
He **has**	You **have**
She **has**	They **have**
It **has**	

Упр. 8. Употребите соответствующую форму глагола *to have* в *Present Indefinite.*

I. The country ... good soils for farming. 2. Agronomists ... a lot of work in the fields. 3. Deserts ... almost no plant life. 4. Britain ... a mild climate. 5. Plants also ... diseases. 6. Different soils ... the same utility. 7. The greater part of the country ... a continental climate. 8. Organic matter ... many functions in the soil. 9. Water ... no feeding value. 10. These plants ... a long growing season.

Упр. 9. Прочитайте текст и перескажите кратко по-русски.

Plant growing in Japan

Most Japan's land cannot be used for growing crops because it is mountainous. The land that can be used for crop cultivation is used intensively in order to provide people with food.

Rice is the most important food for the Japanese people. They grow much rice. It is grown in standing water in fields. When rice is mature the water is drained and the plants are harvested with special machines.

Another very important crop in this country is sweet potato. It is widely grown on the higher lands.

There are also fields of other crops such as wheat, barley and corn.

LESSON 4

Упр. 1. Прочитайте и выучите следующие слова:

to adapt – приспосабливать
moisture – влага
to affect – влиять
proper – надлежащий
air – воздух
to provide – обеспечивать
barley – ячмень
rainfall – осадки
cold – холодный
to require – требовать
corn – кукуруза
sunlight – солнечный свет
cotton – хлопок
warm – теплый
environment – окружающая среда

germination – прорастание
wheat – пшеница
loss – потеря
granary – зернохранилище

Упр. 2. Прочитайте и переведите текст.

Factors affecting the development of plants

All plants require certain conditions of the environment for their best growth and development. The most important of them are water, soil, sunlight and temperature.

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

Proper temperature is also essential for crop production. The optimum temperature for germination and growth varies with different kinds of crops. Grain crops such as wheat and barley, for instance, grow at a lower temperature than cotton or corn. Many crops are more adapted to the temperate conditions than to colder or warmer environment.

Without sunlight many important processes in plants do not take place. One of them is photosynthesis by which plants produce food from inorganic materials.

Besides water the soil in which crops are grown is to be provided with air and all the necessary nutrients. The most important plant nutrients are nitrogen, phosphorus and potassium. There are at least 14 elements that are essential for proper plant growth. Farmers have to apply the nutrients taken by growing crop from the soil.

In order to produce highest yields, crops should not only be provided with enough water, proper soil and necessary nutrients but they should be well adapted to both soil and climatic conditions.

Пояснения к тексту:

varies with – зависит от
for instance – например
to take place – иметь место, происходить
at least – по крайней мере
both ... and – как ..., так и … .

Упр. 3. Ответьте на следующие вопросы.

1. What conditions of the environment are the most important for plants?
2. How can man prevent the loss of moisture from the soil?
3. What crops require temperate conditions for growth?

4. Why is sunlight important for plants?
5. What are the most important plant nutrients?
6. What should man do to produce highest yields?

Упр. 4. Дайте английские эквиваленты следующих слов.

Окружающая среда, осадки, количество, потеря, солнечный свет, прорастание, надлежащий, применять, требовать, существенный, необходимый.

Упр. 5. Составьте словосочетания из следующих слов:

1) certain	a) processes
2) important	b) cultivation
3) crop	c) temperature
4) proper	d) nutrients
5) optimum	e) rainfall
6) inorganic	f) conditions
7) plant	g) production
8) necessary	h) materials
9) temperate	i) practices
10) cultural	j) growth

Present Indefinite Active

Утвердительное предложение	Вопросительное предложение	Отрицательное предложение
I **work**	**Do** I **work**?	I **do** not (don't) **work**
We **work**	**Do** we **work**?	We **do** not **work**
You **work**	**Do** you **work**?	You **don't work**
He **works**	**Does** he **work**?	He **doesn't work**
She **works**	**Does** she **work**?	She **doesn't work**
It **works**	**Does** it **work?**	It **doesn't work**
They **work**	**Do** they **work**?	They **don't work**

Упр. 6. Поставьте глаголы в скобках в *Present Indefinite Tense.*

1. Every year students (to help) farmers gather harvest.
2. Many lorries (to take) the grain to the granary every autumn.
3. In summer my sister (to work) at the granary. She (to weigh) the grain and (to make) notes in her register.
4. Usually two men (to drive) a combine-harvester.
5. Many collective farms (to cultivate) tomatoes?
6. Using fertilizers (to help) the plants grow and develop.
7. Different chemicals (to act) on plants in different ways.
8. Wheat (to belong) to the grass family.
9. British farmers (to cultivate) rye as a forage crop.

Упр. 7. Поставьте следующие предложения в *Present Indefinite* в вопросительную и отрицательную формы.

1. These factors stimulate crop growing.
2. Farmers usually obtain high yields of crops.
3. The farm grows many crops.
4. The use of fertilizers increases crop yields.
5. Plants take nutrients from the soil.
6. We control weeds with special cultural practices.
7. They plough land in summer.

Упр. 8. Прочитайте текст и перескажите кратко по-русски.

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. Mineral fertilizers and chemicals used by farmers accumulate in the soil and in plants and may become harmful for people.

LESSON 5

Упр. 1. Выучите следующие слова и словосочетания:

to absorb – поглощать, всасывать
root – корень
alfalfa – люцерна
root crop – корнеплод
fibrous – мочковатый (о корне)
seed – семя
flower – цветок
source – источник
ground – земля, грунт

stem – стебель
leaf (pl. leaves) – лист
sugar beet – сахарная свекла
legume – бобовое растение
tap – стержневой (о корне)
to obtain – получать
anchor – держать

Упр. 2. Прочитайте и переведите текст.

Plant, its parts and their functions

Plants are highly important sources of food for man and farm animals. They also supply people with clothing, shelter and many other things as well.

To obtain high yields of farm crops it is necessary to study the principal parts of the plant and their functions.

The principal parts of a plant are the root system and the above ground portion consisting of stems, leaves, flowers and seeds.

The root performs two main functions. It absorbs plant nutrients as well as water from the soil and anchors the plant. There are two types of roots: fibrous roots and tap roots. All grain crops have fibrous roots, while tap roots are typical of legumes and root crops. Alfalfa and sugar beets are examples of crops having tap roots.

As to stems and leaves they are usually above the ground. To support leaves and to conduct water and nutrients from the roots to the leaves are the main functions of the stem. The food used by green plants is produced in the leaves through the process known as photosynthesis.

A flower is the part of the plant where seeds are produced. Thus, to produce seeds the plant must have flowers.

All parts of a plant must be developed well in order to function properly. If conditions for plant growth are not favorable the plant will be weak to develop its parts well.

Пояснение к тексту:

above ground portion – надземная часть.

Запомните:

as – так как; как; когда; по мере того, как
as well – тоже, также
as well as – так же как; а также
as to – что касается.

Упр. 3. Ответьте на следующие вопросы.

1. What do plants supply people with?
2. What is necessary to study in order to obtain high yields of farm crops?
3. What types of roots are there?
4. What are the principle parts of a plant?
5. Where is the food used by green plants produced?
6. Why must the plant have flowers?
7. When is the plant weak?

Упр. 4. Переведите следующие слова и словосочетания на английский язык.

Корневая система, зерновые культуры, благоприятные условия, корнеплоды, питательные вещества, состоять, источник питания, посредством, использовать, сахарная свекла, изучать, получать высокие урожаи, основные функции.

Упр. 5. Дополните предложения, используя слова к тексту.

1. Roots ... nutrients and water from the soil.
2. All grain crops have ... roots.
3. ... roots are typical of legumes and root crops.
4. To support leaves and to conduct water and nutrients are the main functions of... .
5. Seeds are ... in a flower.
6. If conditions for plant growth are not good the plant will be... .

Упр. 6. Раскройте скобки и переведите предложения на русский язык.

1. Plants are (очень важный) source of food.
2. It is (необходимо) to study the principle parts of the plants.
3. The principle parts of a plant are the root system and (надземная часть).
4. The root (выполняют) two main functions.
5. As to stems and leaves they are (обычно) above the ground.
6. A flower is the part of the plant where seeds (производятся).

Глагол *to be* в *Past Indefinite*

Единственное число	Множественное число
I, he, she, it – was	We, you, they – were

Упр. 7. Поставьте соответствующую форму глагола *to be* в *Past Indefinite.*

1. Belarus ... an agrarian country at the beginning of the 21th century.

2. The life of the peasants ... extremely hard.

3. Agricultural technique ... at a very low level.

4. Even the plow ... a luxury for a peasant.

5. The 'soha', the harrow, the spade, the scythe and the sickle ... about all the tools of the peasants.

6. Land ... private property.

7. Prominent scientists ... working for better varieties of plants, higher yields, improved breeds of cattle.

8. Big landowners ... the first who introduced new ideas into practice.

9. After the Revolution in 1917 land ... proclaimed national property.

10. All the lands ... confiscated and handed over to those who cultivated them.

Упр. 8. Образуйте вопросительные и отрицательные предложения из предложенных ниже утвердительных предложений.

1. My friend was a first-year student last year.

2. It was easy to seed the vegetable garden.

3. Barley was one of the most ancient of cultivated plants.

4. Climate conditions were favourable for cereal crops last year.

5. Plant diseases were difficult to control in the past.

Упр. 9. Поставьте глагол *to have* в *Past Indefinite* и образуйте вопросительную и отрицательную формы.

1. Students ... their practice at the experimental farm last year.

2. Farmers ... their own homesteads.

3. Farmers ... a number of chemicals to control weeds, pests, fungi.

4. Plant breeders ... varieties with almost all desired properties.

5. This method of tillage ... broad application in the past.

6. New fertilizers ... many important advantages.

7. Cotton ... the commercial value many years ago.

8. Watering always ... great influence on plant growing.

9. New varieties ... greater resistance to low temperature.

10. This cultural practices ... great effect on crop production.

Упр. 10. Прочитайте текст и кратко перескажите по-русски.

Agriculture and the quality of our environment

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. And 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.

LESSON 6

Упр. 1. Выучите следующие слова и словосочетания:

annual – однолетний, однолетнее растение
growing season – вегетационный период
biennial – двухлетний, двухлетнее растение
hay – сено
oats – овес
cereal crop – хлебная (зерновая) культура
pasture – пастбище
to cultivate – возделывать
feed – корм
potatoes – картофель
forage crop – фуражная (кормовая) культура
silage – силос
perennial – многолетнее растение
rye – рожь
legumes – бобовые
radish – редис
tuber crops – клубнеплоды

Упр. 2. Прочитайте и переведите текст.

Classification of field crops

Crops are variously grouped and classified. They may be classified as cultivated crops such as potatoes and corn or as non-cultivated crops such as wheat or barley.

Crops may also be grouped according to the duration of their growth. Annual crops complete their life cycle in one growing season. Biennials require two seasons to produce seed. Perennials grow for more than two seasons, producing seed each year.

According to their use field crops may be classified into many groups. The most important of them are:

1. *Cereal or Grain Crops*. A cereal is a grass grown for its edible grain. Wheat, corn, rye, barley, oats and rice are the most important grain crops.

2. *Legumes for Seed*. The principal legumes grown for seed are field peas, field beans and soybeans. Sometimes the aim of growing them is to improve

soil fertility because they are able to fix atmospheric nitrogen through the bacteria living on their roots.

3. *Forage Crops*. These are the crops used as feed for farm animals in the form of pasture, hay or silage. Most of them are perennials.

4. *Root Crops*. Unlike cereals root crops are grown because of the food value of their roots. There are many root crops grown by man. They are sugar beet, carrots, radishes and others. They are biennials.

5. *Tuber Crops*. The most important tuber crop cultivated throughout the world is potatoes. Like root crops they are biennials but people grow them as annuals.

Пояснения к тексту:

cultivated crops – пропашные культуры

according to – согласно чему-либо.

Запомните:

like – подобно

unlike – в отличие от

because – потому что

because of – из-за, благодаря.

Упр. 3. Ответьте на вопросы к тексту.

1. How may crops be classified?
2. How long do perennials grow?
3. Are field crops classified into many groups according to their use? What are they?
4. What is a cereal?
5. Can you name the principle legumes?
6. Where are forage crops used?
7. What are root crops?
8. What is the most important tuber crop?

Упр. 4. Раскройте скобки и переведите предложения.

1. Crops may be classified as (пропашные культуры) and non-cultivated crops.
2. Crops may also be grouped according to (продолжительности их роста).
3. (Согласно) their use field crops are classified into many groups.
4. (Зерновая культура) is a grass grown for its edible grain.
5. (Основные бобовые культуры) are field peas, beans and soybeans.
6. (Фуражные культуры) are used as feed for farm animals.
7. (Корнеплоды) are sugar beet, carrots and others.
8. The most important tuber crop is (картофель).

Упр. 5. Задайте вопросы к следующим предложениям, используя слова в скобках.

1. Scientists classify crops as cultivated and non-cultivated crops. (Do...?)
2. Perennials grow for more than two years. (What ...?)
3. The most important grain crops are cereals, legumes, forage crops and others. (What ...?)
4. Farmers grow cereals for their edible grain. (What ... for?)
5. We grow root crops because of the value of their roots. (Why ...?)

Past Indefinite Active

Утвердительное предложение	Вопросительное предложение	Отрицательное предложение
I work**ed** (went)	**Did** I work (go)	I **didn't** (did not) work (go)
We work**ed** (went)\	**Did** we work (go)?	We **didn't** work (go)
You work**ed** (went)	**Did** you work (go)?	You **didn't** work (go)
He work**ed** (went)\	**Did** he work (go)?	He **didn't** work (go)
She work**ed** (went)	**Did** she work (go)?	She **didn't** work (go)
It work**ed**	**Did** it work (go)?	It **didn't** work (go)
They work**ed** (went)	**Did** they work (go)?	They **didn't** work (go)

Упр. 6. Поставьте глаголы в скобках в *Past Indefinite*.

1. This farm (to grow) many root crops last year.
2. Farmers (to use) forage crops as feed for farm animals.
3. Legumes (to improve) soil fertility.
4. People (to cultivate) potatoes throughout the world.
5. We (to get) high yields of field beans last year.
6. Last year this farm (to harvest) cereals in August.
7. Plants (develop) well last year due to warm weather.

Упр. 7. Составьте вопросительные и отрицательные предложения из предложенных в упражнении 6.

Упр. 8. Прочитайте и кратко перескажите текст по-русски.

From seeds to plants

Seed starts to germinate only under certain conditions. The optimum temperature at which seeds germinate best varies with different kinds of seed. The optimum temperature for the germination of wheat is about 27 °C. Cotton and corn germinate best at about 35 °C.

Seeds of all crops need enough air for germination as oxygen is necessary for certain chemical reactions which take place in the plant food in the seed.

These reactions take place only when water is present. So, moisture is also necessary for the germination of seeds.

Thus, a seed does not germinate: 1) if the temperature is not proper, 2) if there is not enough moisture and air in the soil.

LESSON 7

Упр. 1. Выучите следующие слова и словосочетания:

area – площадь
to raise – выращивать
common – обычный, распространенный
to seed – сеять
seedbed – пашня
to drill – сеять рядовой сеялкой
spring crop – яровая культура
fine soil – мелкокомковатая почва
to store – хранить
valuable – ценный
to mature – созревать
winter crop – озимая культура
mellow soil – рыхлая почва

Упр. 2. Прочитайте и переведите текст.

Cereal or grain crops

Cereals are those members of the grass family which produce edible seed. Wheat, barley, rye, oats, corn and rice are the most common and most valuable cereals. The cereals grown in the temperate zone are known as small grains. They are wheat, barley, oats and rye. They may be spring or winter annuals. Corn and rice are warm season crops. They are seeded in spring or early summer and mature in the fall.

Of the cereals raised wheat, rice and corn are the world's three most important grain crops. Although rice is the main food of more people, wheat is the first in importance as to the area sown and the total annual production.

There are some reasons why cereals are considered to be the man's leading food source. They produce food in a relatively short period of time for they are annuals. In addition, they are adapted well to different soil and climatic conditions. Cultural practices required in growing grain crops are quite similar. Grain is easily drilled, harvested, cleaned and stored. All these operations are highly mechanized.

For cereals to grow well they are to be grown on moderately fine and mellow seedbed supplied with enough moisture.

Though cereals do not supply much protein and vitamins, they remain a major source of food for people.

Пояснения к тексту:
small grains – хлебные зерновые культуры
in the fall – осенью
of – из
in addition – кроме того.
Запомните:
for – для, в течение; так как (обычно после запятой); чтобы.

Упр. 3. Ответьте на следующие вопросы.
1. What are cereals?
2. What are small grains?
3. When are corn and rice seeded?
4. Name the world's three most important grain crops.
5. Is rice the main food of many people?
6. How well are cereals adopted to different climatic conditions?
7. What cultural practices are required in growing grain crops?
8. Are all operations in growing grain crops mechanized?
9. Cereals are to be grown on fine and mellow seedbed, aren't they?
10. Do cereals supply much or little protein?

Упр. 4. Определите, верны или неверные следующие высказывания. Исправьте неверные.
1. Cereals produce seeds which people can eat.
2. Cereals grow in cool and wet weather.
3. Wheat is a cereal.
4. Cereals are only spring annuals.
5. Wheat, rice and corn are the most important grain crops.
6. Cereals are not the man's leading food source.
7. Cereals need little water.
8. Cereals do not supply much protein.

Упр. 5. Составьте словосочетания из следующих слов:

1) grass	a) crops
2) grain	b) production
3) food	c) zone
4) mellow	d) period
5) valuable	e) family
6) annual	f) source
7) short	g) cereals
8) temperate	h) seedbed

Упр. 6. Подтвердите словами из текста следующие высказывания.

1. People can eat grains of cereals.
2. People grow more wheat than any other cereals.
3. Cereals produce seed in a short period of time.
4. Cereals need proper conditions for their growth.
5. Cereals are an important source of food.

Future Indefinite Active

Утвердительное предложение	Вопросительное предложение	Отрицательное предложение
I **will** work	**Will** I work?	I **won't** (will not) work
He **will** work	**Will** he work?	He **will not** work
We **will** work	**Will** she work?	She **will not** work
She **will** work	**Will** it work?	It **will not** work
It **will** work	**Will** we work?	We **won't** (will not) work
They **will** work	**Will** you work?	You **will not** work
You **will** work	**Will** they work?	They **will not** work

Упр. 7. Поставьте глаголы в скобках в *Future Indefinite*.

1. These cereals (to produce) edible grains in autumn.
2. Corn and rice (to need) warm weather.
3. Wheat, rice and corn (to become) the three most important grain crops in future.
4. Small grain crops (to grow) in the temperate climatic zone.
5. Cereals (to supply) little protein.
6. Farmers (to seed) corn later than rye.
7. Cereals (to remain) a major source of food for people in future.
8. Growing grain crops (to require) some cultural practices.

Упр. 8. Составьте вопросительные и отрицательные предложения из предложенных в упражнении 7.

Упр. 9. Прочитайте текст и кратко перескажите по-русски.

Photosynthesis

The most important difference between plants and animals is that plants can produce food in the leaves. The process by which plants produce their food is known as photosynthesis.

The conditions necessary for photosynthesis are light, carbon dioxide, water, some essential nutrients and proper temperature. Water and nutrients required for photosynthesis come from the soil through the roots. So, leaves function well if the plant has a highly-developed root system.

The word *photosynthesis* consists of two parts: *photo* which is light and *synthesis* which is building. So, photosynthesis is building with light.

LESSON 8

Упр. 1. Выучите следующие слова и словосочетания:

coarse seed – крупное семя
to plow – пахать
depth – глубина
firm seedbed – уплотненная пашня
to reduce – уменьшать, сокращать
fine seed – мелкое семя
to roll – прикатывать (почву)
grower – фермер, земледелец
size – размер
level seedbed – ровная пашня
stand – всходы, травостой
to perform – выполнять
tillage – обработка земли
rate – норма

Упр. 2. Прочитайте и переведите текст.

Cultural practices

Before planting a grower must perform some tillage operations that insure proper environment for germination. The first tillage operation is plowing. It may be done either in the fall or in spring, depending on the crop and the region. Harrowing and rolling are the operations that insure a level and firm seedbed.

Nowadays the traditional tillage practices are increasingly replaced by minimum tillage. Under minimum tillage the number of operations is reduced. Farm machines can prepare the soil, apply fertilizers and plant the seed in one operation. Main advantages of this method are lower soil compaction and lower labour and energy costs.

Planting the seed is usually done when the soil and the air are warm enough. For cereals to germinate well two factors must be controlled during planting: depth and rate. Everybody knows that the depth of planting the seed depends largely on the type of the soil and the size of the seed. The coarse seeds of corn and peas are planted much deeper than fine seeds of clover or alfalfa. The establishment of high-quality stand is also favoured by a proper seeding rate. Too thick or too thin sowing lowers grain production.

Harvesting is the last cultural practice. Mechanical harvesting helps farmers obtain highest yields of good quality.

Пояснения к тексту:

either ... or – или ... или

depending on – в зависимости от

largely – в основном

thick sowing – загущенный посев

thin sowing – редкий посев.

Запомните:

too – тоже, также (в конце предложения); слишком (перед прилагательным или наречием)

much – много (перед существительным); намного, значительно (перед прилагательным ими наречием в сравнительной степени).

Упр. 3. Ответьте на следующие вопросы.

1. What is the first tillage operation?
2. What other tillage operations are necessary before planting?
3. What factors are important during planting?
4. What are the advantages of minimum tillage?
5. When is planting the seed done?
6. What must be controlled during planting?
7. What is the last cultural practice?

Упр. 4. Переведите следующие слова и словосочетания на английский язык.

Растениевод, глубина посева, зависеть от, хорошее качество, прорастание, мелкое зерно, достаточно тёплый, норма посева, тип почвы, сокращать, главное преимущество, вносить удобрения, боронование, пахать.

Упр. 5. Заполните пропуски подходящими по смыслу словами из текста и переведите предложения.

1. Coarse seeds are planted deeper than… .
2. When the soil and air are … we begin planting the seed.
3. The depth of sowing depends on the seed... .
4. Farm ... prepare the soil, apply fertilizers, and plant the seed in one operation.
5. Too thick or too thin ... lowers grain production.

Упр. 6. Найдите в тексте и переведите предложения, в которых говорится:

а) о времени проведения вспашки; б) о том, как получают уплотнённую пашню; в) о преимуществах минимальной обработки земли, г) от чего зависит глубина посева; д) какие культуры заделывают глубже; е) что влияет на получение высококачественного травостоя.

Упр. 7. Поставьте глаголы в скобках в одном из времен группы *Indefinite*.

1. Fertilizers (to improve) soil fertility.
2. Flowers (to produce) many seeds last year.
3. Our farm (to use) only improved varieties of crop plants next year.
4. Most of forage crops (to be) perennials.
5. Many collective farms of our region (to cultivate) this new corn variety last year.
6. Rice (to be) a warm season crop.
7. Our agronomist (to say) the farm (to produce) high quality potatoes next year.
8. Under minimum tillage the farmers (to reduce) the number of operations in future.
9. We (to apply) phosphorus in order to increase the effectiveness of manure.

Modal Verbs

Модальный глагол или его эквивалент	Выражает	*Present*	*Past*	*Future*
can **to be able to**	физическую или умственную способность совершения действия	*can* *am, is, are able to* могу, умею	*could,* *was, were able to* мог, умел	*shall, will be able to* – сможет, сумеет
may **to be allowed to**	разрешение, просьбу	*may,* *am, is, are able to* можете, можно	*might* *was, were allowed to* – разрешили	*shall, will be allowed to* разрешат
must	долженствование, необходимость совершения действия	*must* – должен	*had to* должен был	
have to	необходимость действия в зависимости от обстоятельств	*have to* приходится	*had to* должен был	*shall, will have to* придется
be to	необходимость совершения действия, заранее запланированного или по договоренности	*am, is are to* должен, обязан	*was, were to* должен был	
should	рекомендации к действию, совет	*should* должен, следует, рекомендуется		
would	просьбе, желания	*would* будьте добры		
ought to	моральный долг	*ought to* следовало бы		

Упр. 8. Употребите подходящие по смыслу модальные глаголы *can, may, must* в нужной форме.

1. Before planting a grower … perform some tillage operations.
2. Plowing … be done either in the fall or in spring.
3. Farm machines … prepare the soil and apply fertilizers.
4. For cereals to germinate well depth and rate … be controlled.
5. Under minimum tillage the farmers … reduce the number of operations in future.
6. The depth of sowing … depend on the seed size.
7. When the soil and air are warm enough we … begin planting the seed.
8. Flowers … produce many seeds last year.

Упр. 9. Прочитайте текст и кратко перескажите по-русски.

Life Cycle

Many important crop plants complete their life cycle in one growing season. Such plants are spring annuals planted in spring and harvested in autumn. There are also winter annuals planted in autumn and harvested next summer. Winter wheat is an example of winter annuals and corn is a typical spring annual.

Some plants start their growth in one season but produce seeds and die at the end of the second season. They are biennials. Sugar beet is a good example of a biennial plant.

Many plants grow for more than two seasons. Most of our hay and pasture crops are perennials.

LESSON 9

Упр. 1. Выучите следующие слова.

diversification – разнообразие, смена культур
benefit − прибыль, выгода
conventional tillage– обычная обработка почвы
fallow − земля под паром
residue − остаток

Упр. 2. Обсудите вопросы перед прочтением текста.

1. How can conventional tilling damage soil?
2. What are some types of cropping systems? What are their strengths and weaknesses?

Упр. 3. Прочитайте текст и выберите правильный ответ.

1. What is the passage mostly about?

A. the price of conventional tillage
B. the environmental effects of fertilizer
C. the diversification of crop systems
D. the market price for various crops

2. Which is NOT advice given in the passage?

A. research the market for crops
B. select a method of crop diversification
C. contact the agricultural extension office
D. use herbicides after diversification

3. What is the drawback to a fallow field?

A. It results in less available land for crops
B. It has herbicide residues that harm crops
C. It becomes less suitable for polyculture
D. It must be fertilized before planting again

Diversification

Farmers benefit from understanding diversification. This text outlines benefits of *diversifying* and some ways to do it.

Why diversity? – Diversifying a crop system offers farmers economic and environmental benefits.

Many farmers use *conventional tillage* because they think it is cheaper. That is not always true in the long term. *Conservation tillage* methods that rely on diversification can be more expensive at first. However, they protect the long-term health of the soil.

There are environmental benefits as well. Diversified fields are healthier. Farmers often find they use fewer fertilizer and *burn-down herbicides* after they diversify.

How to diversify. We suggest you start by contacting your local agricultural extension office. They can help you make informed decisions about which crops are most suitable.

Next, you need to research the market for these crops. Determinate which crops are economical.

Finally, consider if you want to use *crop rotation* of *polyculture.* With the former, farmers often leave a section of their fields *fallow.* If they also use *zero tillage* methods, they will leave *crop residues* in place. Unfortunately,

fallow fields mean less available cropland at a given time. On the other hand, many popular crops, such as *winter wheat* and *spring wheat,* are not suitable for polyculture. So making this decision requires careful though.

Упр. 4. Соедините слова (1–6) с их определениями (A–F).

1. – fallow
2. – zero tillage
3 – polyculture
4. – conventional tillage
5. – crop residue
6. – spring wheat

A. parts of plants left the field after harvest
B. growing different plants in the same field
C. having no crops
D. the standard cropping system
E. a crop that is harvested in summer or fall
F. a technique for growing crops without tilling

Упр. 5. Напишите синонимы к подчеркнутым словам.

1. A practice that prevents water and soil loss protects fields.
_o_ _ _ _ _ _t_ _n t_ _ _ _ _e
2. Wheat that is planted in the fall is harvested in the spring.
w_ _ _ _ _ w_ _ _ _
3. Use the weed killer before planting.
_ _ _ _n-d_ _ _ _ e_ _ _ _ _ _e
4. The process of growing different crops one after the other on a field improves soil quality.
c _ _ _ r_ _ _ _ _ _n
5. There are several methods of growing crops.
_ _ _ p____s_ _ _ s
6. Increase the variety of your crops to reduce fertilizer use.
d _ _ _ r_ _ _

LESSON 10

Упр. 1. Выучите следующие слова.

challenge – проблема, сложная задача
precipitous – крутой, стремительный

Упр. 2. Перед прочтением текста ответьте на вопросы.

1. How long are the growing seasons in your country?
2. How can farmers extend growing season?

Упр. 3. Прочитайте и переведите текст.

The Challenges of Growing Season

One of the most critical concerns for any agriculturalist is the changing of seasons. Specifically, the decline in temperature often sharp and precipitous, that occurs as each fall turns to winter. Plants have varying degrees of tolerance for cold, so different strategies for coping with the cold may be used with each type of crop. Next to the characteristics of the plants themselves, the most important issue to consider is site selection.

Each agricultural site has its own unique characteristics. Different sites have differing growing seasons based on elevation, growing degree days, and last frost dates. For example, one site may have very high growing degree days, while in another area, the mean temperature may barely rise over the base temperature. Agriculturists can protect their crops from the cold by selecting sites with long photoperiods and higher mean temperatures.

Of course, selecting a new site isn't always an option. After all, humans have cultivated crops in nearly every region on Earth. Less favorable sites may require special care. For example, there are several method of freeze protection that an agriculturist can use. Greenhouses and hoop houses can be used to absorb and trap whatever heat the region does receive. Additionally, heaters can be used to raise the temperature of the air around trees.

Упр. 4. Отметьте следующие утверждения как верные (T) или неверные (F).

1. The author believes site selection is the most important aspect of planting crops.
2. Areas with short photoperiods have colder temperatures.
3. Hoop houses increase temperature.

Упр. 5. Соотнесите слова (1–6) с их определениями(A–F).

1. base temperature; 2. last frost date; 3. greenhouse; 4. site selection; 5. mean temperature; 6. growing degree day.

A. the act of choosing a place to plant crops
B. the last day during which plants may freeze
C. the minimum temperature at which plants may grow
D. a structure that retains solar energy
E. the average temperature in an area
F. a measure of how much heat a plant will receive in a day.

Упр. 6. Напишите синонимы к подчеркнутым словам.

1. Long amounts of time that plants are exposed to light produce strong plants.

p_ _ _ _p _ _ _ _ _s

2. The structure with a curved roof that traps heat allows farmers to grow in cold seasons.

_ o _ _ o _ _ _

3. Janet's farm is at a higher height of an area relative to the ocean level.

_ l _ _ _ _ _ _ n

4. Preventing crops from freezing saved the harvest last winter

_ r e _ _ _ p _ _ _ _ _ t _ _ _

5. Norman wants to start a farm in an area with a long period during which plants grow

g _ _ _ _ _ g _ e _ _ _ _

6. Get a device that burns fuel to create heat to keep the plants from freezing

_ _ a _ _ _

LESSON 11

Упр. 1. Выучите следующие слова и словосочетания.

cereals – злаковые культуры
grasses – злаковые травы
wheat – пшеница
maize – кукуруза
rye – рожь
barley – ячмень
oats – овес
sorghum – сорго
millet – просо
to till the soil – обрабатывать почву
to cultivate – возделывать
weeds – сорняки
poor soil – неплодородная почва
hardy – морозоустойчивый
yield – урожай
seed – семена, зерно

Упр. 2. Переведите следующие слова без словаря.

Cultivation, history, civilization, primitive, form, original, Abyssinia, Europe, Nile, Egypt, Persia, Afghanistan, problem, climate, Arctic, story.

Упр. 3. Переведите следующие слова:

plant, to plant; 2) to cultivate, cultivation; 3) to till, tillage; 4) to begin; beginning; 5) to belong, belonging.

Упр. 4. Переведите «цепочки существительных».

Crop plants, grass family, cereal grains, seed grains, wheat crops, oat plant, soil condition, barley cultivation.

Упр. 5. Поставьте следующие прилагательные в форму сравнительной и превосходной степени. Переведите словосочетания, данные ниже.

Important, late, great, hardy, poor, cold.

1) The most important source of food, 2) the greatest number of varieties, 3) rice is hardier plant than wheat, 4) poorer soils, 5) colder climates.

Упр. 6. Переведите предложения, обращая внимание на значение слова «like».

1. The oat plant, like rye, is hardier than wheat.
2. I like ready-to-eat breakfast cereals.

Упр. 7. Поставьте глаголы в скобках в форму страдательного залога. Переведите предложения на русский язык.

1. Wheat, barley and millet (to be cultivated) in many countries.
2. The seed grains of wild grasses (to be gathered) by primitive men.
3. The original home of wheat and barley (to be forgotten).
4. Eighteen kinds of common barley (to be found) in Abyssinia.
5. Later barley (to be carried) down the Nile to Egypt.
6. In the early time of cultivation wheat (to be spread) over Europe.
7. Wheat, rye and oats (to be grown) in the temperate climate.

Упр. 8. Прочитайте и переведите текст.

Cereal Grains

The cereals are crop plants belonging to the grass family. The cereal grains are wheat, rice, maize, rye, barley, oats, sorghum and millet. They are the most important source of food for man and domestic animals. Cultivation of all the cereal grains except oats and rye began before the dawn of history. Wheat, barley and millet were cultivated in many parts of the Old World.

Long before the beginning of civilization the seed grain of wild grasses were gathered by primitive man and formed an important part of his food.

Later, as man began to till the soil, cereal grasses were his first crops. The history of the cereals was the history of civilization.

Wheat and barley, oats and rye, all have been cultivated for so long in many lands that their original homes are forgotten. We know that the greatest number of varieties of a plant are found in its original home. Not less than eighteen kinds of the common barley are found in Abyssinia, about five in southern Europe and only one in Norway, at the northern limit of barley cultivation.

Abyssinia is the original home of barley. Later the barley was carried down the Nile to Egypt, in the early times of cultivation wheat was widely spread over Europe. Its original home lies in the great mountainous area of Persia and Afghanistan. How and when wheat arrived in Europe is an unsolved problem. One thing is certain, it did not come alone. Along with it came a number of weeds. Rye was one of them. It is a hardier plant than wheat and can grow on poorer soils and in colder climates.

The cultivation of rye in Europe extends to the Arctic circle. The story of oats has much in common with the story of rye. Many kinds of oats traveled as weeds in the wheat-crops. The oat plant, like rye, is hardier than wheat.

Soil and climatic conditions are very important for growth, yield and quality of cereals. Wheat, maize, rye, barley, oats, sorghum and some of the millets are generally grown in the temperate climates.

Упр. 9. Переведите на английский язык:

зерновые культуры, пшеница, рис, кукуруза, овес, ячмень, просо, домашние животные, обрабатывать почву, сорняки, морозоустойчивая культура, неплодородные почвы, рост, урожайность, умеренный климат.

Упр. 10. Заполните пропуски в предложениях словами, данными под чертой.

1. The cereals belong to the _____.
2. Cereal grains are ___for man and domestic animals.
3. ___were gathered by primitive men.
4. Rice can grow on _____.
5. Oats traveled as _____in wheat crops.
6. ___are very important for growth, _____and quality of cereals.

Seed grains of wild grasses, yield, grass family, poorer soils, weeds, soil and climatic conditions, the most important source of food.

Упр. 11. Соответствуют или не соответствуют тексту следующие утверждения?

1. The cereals include wheat, rice, rye, oats, pulse crop and millet. 2. Cultivation of oats and rice began long before. 3. Cereal grasses were the first food crops for primitive men. 4. Egypt is the original home of barley. 5. Wheat was widely spread over Europe. 6. Rye was one of the weeds in the early times of cultivation. 7. Soil conditions are very important for growth, yield and quality of cereals. 8. Cereal grains are generally grown in the colder climates.

Упр. 12. Ответьте на вопросы.

1. What family do cereal crops belong to? 2. Name cereal grains. 3. When did the cultivation of cereals begin? 4. Where is the original home of barley? 5. Where is the original home of wheat? 6. How and when did wheat arrive in Europe? 7. What is important for growth, yield and quality of cereals? 8. Where are cereals generally grown?

Упр. 13. Прочитайте текст без словаря и перескажите его.

Nutritional facts about cereals

Some grains are deficient in the essential amino acid lysine. That is why many vegetarian cultures, in order to get a balanced diet, combine their diet of grains with legumes. Many legumes, on the other hand, are deficient in the essential amino acid methionine, which grains contain. Thus, a combination of legumes with grains forms a well-balanced diet for vegetarians. Common examples of such combinations are dal (lentils) with rice by South Indians and Bengalis, dal with wheat in Pakistan and North India, and beans with corn tortillas, tofu with rice, and peanut butter with wheat bread (as sandwiches) in several other cultures, including Americans. The amount of crude protein found in grain is measured as the grain crude protein concentration.

LESSON 12

by the accidental hybridization – в результате случайной гибридизации

to introduce – вводить, ввозить

starchy and nitrogenous food material – питательные вещества, содержащие крахмал и азот

in close contact with – окруженный

ample store – обильный запас

embryo – (бот.) завязь

artificial cross fertilization – искусственное перекрестное опыление thick-walled – толстостенный

straw – стебель, солома

resistant to lodging – устойчивый к полеганию hardiness – морозоустойчивость

deep-rooted – с глубоким корнем drought – засуха

loam – суглинок

peaty soils – торфяные почвы luxuriant – буйный, пышный

Упр. 2. Переведите слова без словаря:

prehistoric, Persians, Greeks, Egyptians, hybridization, embryo, selection, types, criterion, vegetation.

Упр. 3. Переведите «цепочки существительных».

Embryo plant, food material, yielding capacity, winter hardiness, winter varieties, spring and winter wheat, winter frost.

Упр. 4. Какие слова из колонки *Б* могут служить определениями к словам из колонки *А*? Переведите словосочетания.

А	**Б**
grass	green, old, young, rich
soil	poor, peaty, light, heavy
yield	average, light, great
crops	different, food, grain
straw	thick-walled, luxuriant, short
variety	winter, even, hardy

Упр. 5. Поставьте прилагательное в скобках в нужную степень сравнения. Переведите предложения.

1. (Important) criterion is yielding capacity of wheat. 2. Wheat gives (good) results in dry and sunny seasons. 3. Wheat is (resistant) to winter frost than barley. 4. When grown on peaty soils, the quality of wheat is (poor), while the vegetation is luxuriant.

Упр. 6. Поставьте глаголы в скобках в форму страдательного залога. Переведите предложения.

1. The cultivation of wheat (to begin) in prehistoric times. 2. This cereal (to value) by ancient people. 3. Wheat (to introduce) to Britain about 2400 B. C. 4. When wheat (to grow) on peaty soil the quality is poor.

Упр. 7. Прочитайте и переведите текст.

Wheat

The cultivation of wheat was begun in prehistoric times and the cereal was greatly valued by the ancient Persians, Greeks and Egyptians. Cultivated wheat originated by the accidental hybridization of certain species of wild grasses. Wheat was introduced to Britain about 2400 B.C.

Each grain of wheat consists of an embryo plant in close contact with an ample store of starchy and nitrogenous food material, the whole being surrounded by a coat.

Wheat, in common with many other species of cereals, is practically always self-fertilized. The great majority of wheats have been produced by artificial cross-fertilization of pre-existing distinct varieties, with selection of the best types.

The first and most important criterion is yielding capacity. Thick-walled and short straw is highly resistant to lodging, which is of prime importance under conditions of high fertility. Winter hardiness is of great importance in the winter varieties. There are many different varieties of spring and winter wheat.

Wheat is extremely deep rooted and drought resisting, and on all except very light soils gives the best yields in dry and sunny seasons; it is also more resistant to winter frost than either barley or oats.

Perfect crops of wheat can be grown on heavy loams and clays. Satisfactory crops can be grown or light land in good condition. When wheat is grown on peaty soils the quality is usually poor, while the vegetation is luxuriant and the yield of straw is very large.

Упр. 8. Переведите словосочетания на русский язык.

Prehistoric times, cultivated wheat, accidental hybridization, certain species, wiId grasses, distinct varieties, thick-walled and short straw, high fertility, light soils, perfect crops, heavy loams, satisfactory crops, light land, peaty soils, luxuriant vegetation.

Упр. 9. Дополните предложения недостающей информацией.

1. Cultivated wheat originated by _____.
2. Each grain of wheat consists of _____.
3. The most important criterion is _____.
4. ___is important in winter varieties.
5. Wheat is self- ____ .
6. Wheat is more resistant to winter frost than ___.
7. Perfect crops of wheat can be grown on _____.
8. ___can be grown on light land.

Упр. 10. Ответьте на вопросы.

1. When was the cultivation of wheat begun 2. When was wheat introduced to Britain? 3. What does each grain of wheat consist of? 4. Is wheat self-fertilized? 5. What is the first and most important criterion? 6. What straw is highly resistant to lodging? 7. On what soils does wheat give the best yields? 8. What crop is more resistant to winter frost: wheat, barley or oats? 9. On what soils can perfect crops of wheat be grown?

Упр. 11. Прочитайте текст и перескажите его.

National food from wheat

Vereshchaka became common in the Grand Duchy of Lithuania in the mid-18th century. It is made from buckwheat flour, wheat flour, salt, sugar, eggs and milk. At first it was known as one of the variations of machanka – a meat sauce for pancakes. Vereshchaka was invented by royal chef called Vereshchaka. The dish became widely known in the 19th century, because its name coincided with the family name of Maryla Wereszczakowna, Adam Mickiewicz's biggest love. Vereshchaka is one of the hallmarks of Belarusian cuisine. The recipe has many regional and individual variations.

LESSON 13

Упр. 1. Выучите следующие слова и словосочетания.

its cultivation is confined to districts – ее возделывание ограничено районами
inferior – худший
to succeed – (зд.) давать хороший урожай
fen – болото
forage – корм
seed-bed – пашня
broadcast – разбрасывать (семена)
drill – высаживать, сеять рядами
seed – посев
sowing – посев, засевание
before the ear has filled – до наливания колоса
threshing process – молотьба
stem – стебель
before it shoots – до выхода в трубку
unpalatable – невкусный

Упр. 2. Переведите «цепочки существительных».

Acid conditions, forage purposes, wheat sowing, rye straw, threshing process, forage crop, growing period.

Упр. 3. Переведите прилагательные в скобках и прочитайте предложения.

1. When rye is grown for grain on good soil it is (менее) profitable than other cereals. 2. Rye does (лучше всего) on good loams which yield (больше) profit under other crops. 3. Rye is (более) winter hardy than wheat.

Упр. 4. Переведите предложение, обращая внимание на перевод союза *either ... or ... – или ... или ... .*

The grain of rye may either be broadcast or drilled in the usual way.

Упр. 5. Заполните пропуски необходимыми модальными глаголами и переведите предложения.

may – можно, может ***should*** – следует

must – должен

1. Seeding ___take place before wheat sowing. 2. When rye is grown for special purposes, it _be cut before the ear has filled. 3. When rye is grown as a forage crop, it ___be cut early.

Упр. 6. Соотнесите антонимы.

1) dry	a) heavy
2) good	b) less
3) light	c) after
4) more	d) poor
5) before	e) late
6) early	f) wet

Упр. 7. Прочитайте и переведите текст.

Rye

Rye is a drought resistant plant which thrives under a great variety of conditions; it is productive upon almost any class of soil and very resistant to acid conditions. When rye is grown for grain on good soil it is usually less profitable than the other cereals, and its cultivation is therefore confined to districts of poor, dry, light land that produce inferior wheat and oats. It also succeeds on peaty soils and on the poorer sorts of black fen. Rye does best on good loams, which however, yield more profit under other crops. Rye is considerably more winter-hardy than wheat. When rye is grown on good

land it is mostly cultivated for forage purposes.

The seed-bed is prepared as for wheat, and the grain may either be broadcast or drilled in the usual way. Seeding should take place from two to three weeks before wheat sowing begins.

Cutting takes place about the beginning of August. When high-quality rye straw is required for special purposes it may be cut before the car has filled then dried and used: this avoids the threshing process which damages the stems considerably. Where it is grown as a forage crop, it must be cut early before it shoots as towards the end of its growing period it becomes hard, dry, and unpalatable.

In Britain rye is cultivated as a forage crop, but more largely for its grain and straw.

Упр. 8. Определите, соответствуют или не соответствуют тексту следующие утверждения.

1. Rye is a drought resistant plant, but it is not resistant to acid conditions.
2. Rye is usually less profitable than the other cereals.
3. Rye succeeds on peaty soils.
4. Rye does best on good loams.
5. Rye is considerably more winter-hardy than wheat.
6. Seeding should take place before wheat sowing begins.
7. Cutting takes place about the beginning of July.
8. In Britain rye is cultivated as a forage crop.

Упр. 9. Заполните пропуски в предложениях словами, данными под чертой.

1. Rye grows on any kind of _____and is very resistant to _____ .
2. When rye is grown for _____it is less profitable than the ____.
3. Rye is more _____than wheat.
4. The _____is prepared as for wheal.
5. When rye is grown as a _____it must be cut early.
6. In Britain rye is mostly cultivated for its _____.

Grain, winter hardy, grain and straw, acid conditions, soil, other cereals, seed-bed, forage crop.

Упр. 10. Ответьте на вопросы.

Under what conditions does the rye thrive? 2. What soils is rye productive upon? 3. How is the seed-bed prepared? 4. When should seeding take place? 5. When does cutting take place? 6. What is rye cultivated for?

Упр. 11. Прочитайте текст без словаря и расскажите, как используется рожь.

Tips for Preparing Rye

Like all grains, before cooking whole rye berries, rinse them thoroughly under running water and then remove any dirt or debris that you may find. After rinsing, add one part whole rye to two and one-half parts boiling water along with a pinch of salt. After the liquid has returned to a boil, turn down the heat, cover and simmer for about 1 to 1–1/2 hours. If you want the texture to be softer, you can soak the rye grains overnight and then cook them for two to three hours. To cook rye flakes, use about three parts water for each part rye flakes and cook for about 30 minutes.

LESSON 14

Упр. 1. Выучите следующие слова и словосочетания.

varieties in cultivation – выращиваемые сорта
abundant – обильный
respond to liberal manuring – реагирует на обильное удобрение
to treat (зд.) – удобрять
dressing – удобрение
kainit – каинит
to be in high condition – находиться в очень хорошем состоянии
to ripen – созревать
watertable – уровень грунтовых вод
clay loam – иловатый суглинок
1 to 3 cwt (hundred weight) – от 1-го до 3-х английских центнеров (1 cwt = 50,8 кг)

Упр. 2. Переведите «цепочки существительных».

Winter cold, oat varieties, soil and climate conditions, winter varieties, seed-time, summer temperature, feeding value, clay loam.

Упр. 3. Переведите следующие словосочетания, обращая внимание на степени сравнения прилагательных.

The most extensively cultivated cereal, much more successful crop, poorest soil, the most fertile soil, the best of the cultivated cereals, lower rainfall, better soil, better grain, less straw, lower feeding value, the best soil.

Упр. 4. Соотнесите антонимы.

1) low	a) dry
2) wet	b) early
3) poorest	c) the most fertile
4) late	d) less
5) more	e) after
6) before	f) high

Упр. 5. Соотнесите синонимы.

1) rainfall	a) dressing
2) distinction	b) fine
3) manuring	c) infertile
4) good	d) precipitation
5) poor	e) difference

Упр. 6. Прочитайте и переведите текст.

Oats

The oat is the most extensively cultivated cereal in Britain, and is grown in every country and under widely different conditions of soil and climate. While not as resistant to winter cold as wheat and barley, oats are much more successful than these cereals in wet districts.

The number of oat varieties in cultivation is very large, and since the crop is grown under a very wide range of soil and climate conditions, from the poorest to the most fertile soils, and under annual rainfalls of 20 to perhaps 70 in., it will be obvious that a wide choice of types is desirable. There is a fairly sharp distinction between true winter varieties (which are normally sown in October and are usually ripe for harvest before the end of July) and the spring varieties, for which seed-time ranges from late February to the middle of April and which ripen from early August to late September, or even as late as October in the extreme north. The oat is the best of the commonly cultivated cereals for growing on poor soil, in dull rainy districts and where the summer temperature is rather low; it can be ripened by a minimum of sunshine. Very high rainfall encourages the development of straw rather than grain. Lower rainfall and better soil lead to the development of more and better grain but less straw of lower feeding value.

In the fens the rainfall is low; very fine crops of oats can be grown because the soil receives a constant supply of moisture from the high water-table. A clay loam that is supplied with abundant moisture is the best soil for this crop, but black-top and peaty lands give almost as good results.

Manuring. While the oat crop is capable of producing a fair yield on very poor soil, it nevertheless responds to liberal manuring, and it is common to treat it with nitrogenous, phosphatic, and under certain circumstances, potassic dressing. A common treatment is to give 1 to 3 cwt. of super- phosphate according to local conditions, up to 2 cwt. of sulphate of ammonia at seed-time and if the soil is light, an addition of 2 cwt. of kainit applied a month or so before sowing. On good soils that are in high condition, first-class crops of oats can be grown without the application of any manure.

Упр. 7. Дайте английские эквиваленты следующих слов и словосочетаний.

Овес не так устойчив к зимнему холоду, как пшеница и ячмень, расти гораздо лучше этих злаковых в районах с влажным климатом, выращиваемые сорта, в самых разнообразных условиях, реагирует на обильное удобрение, за месяц или около этого до посева, находиться в очень хорошем состоянии, вызревать, бедная неплодородная почва, низкая температура летом, обильные осадки, постоянный запас влаги, высокий уровень грунтовых вод, иловатый суглинок.

Упр. 8. Заполните пропуски в предложениях словами, данными под чертой.

1. Oats are not _____to winter cold as wheat and barley.
2. Oats are more successful than some cereals in _____.
3. The number of oat _____is very large.
4. The oat is the best of the commonly cultivated cereals for _____.
5. _encourages the development of straw.
6. A _is the best soil for crop.
7. Oat crop can produce fair yield on _____.
8. Oat responds to _____.
9. On good soils that are in high condition, fine crops of oats can be grown without the _____.

Wet districts, varieties, high rainfall, growing on poor soil, clay loam, moisture, application of any manure, resistant, very poor soil, liberal manuring.

Упр. 9. Ответьте на вопросы.

1. What soil can oats be grown on? 2. What climatic conditions does the crop require? 3. What distinction is there between winter and spring varieties? 4. Does very high rainfall encourage the development of straw or grain? 5. What do lower rainfall and better soil lead to? 6. What crops of oats can be grown in the fen? 7. What is the best soil for oats? 8. Do oats respond to manuring? 9. What dressing is it common to treat oat with? 10. What is a

common treatment? 11. Where can first-class crops of oats be grown without application of any manure?

Упр. 10. Заполните пропуски в тексте словами, необходимыми по смыслу, и перескажите его.

Oats are an important g... crop. F... grow them to feed livestock, but oats also provide food for many people. Oats are a cereal grain and belong to the same family of plants as w..., r..., m... and b… . Oats have a higher food value than any other c… grain. They are rich in starch, protein, v… . Various diseases sometimes attack oats and reduce the y … Some farmers use chemical sprays to control d … and insects. But the best protection comes from planting resistant v… of oats. Researches continually develop new varieties that are more r... to diseases and i… The new varieties also produce higher yields and better grain.

Упр. 11. Прочитайте текст и перескажите его.

Oatmeal

Many foods fall in and out of favor as health trends come and go. Not oatmeal. This whole-grain powerhouse has been packing serious nutrition and hearty flavor into breakfast for generations. It's one of the few comfort foods that are as good for you as they are just plain good. Great oatmeal starts with plain rolled oats, or steel-cut oats, cooked in a little water or milk, and topped with wholesome ingredients. It's a feel-good start to the day, and if you make it a habit, it can do your health some favors.

LESSON 15

Упр. 1. Выучите следующие слова и словосочетания.

malting – солодоращение
suitability – годность
by-product – побочный продукт
rolling – прикатывание (каткование) почвы
harrowing – боронование
artificial fertilizers – искусственные удобрения
ripening – вызревание
to endanger – подвергать опасности
potash – углекислый калий
to supply – вносить
smut – головня, ржавчина (болезни растений)

leaf-stripe – красно-бурая гельминтоспориозная пятнистость

gout-fly – зеленоглазка (зеленоглазая муха)

the only cause of failure being soil acidity – единственной причиной неурожая является кислотность почвы

barley suffers from fungoid diseases – ячмень подвержен грибковым заболеваниям

insect pests – насекомые-вредители

Упр. 2. Переведите «цепочки существительных».

Bread cereal, soil acidity, malting purposes, root crop, insect posts.

Упр. 3. Укажите слово, выпадающее по значению из ряда.

Barley, cabbage, oats, wheat.

Fungoid diseases, smut, leaf-stripe, gout-fly. Soil, land, manure, ground.

Potash, nitrogen, superphosphate, manure. Fertile, poor, rich, good.

Упр. 4. Переведите модальные глаголы в скобках на английский язык. Переведите предложения на русский язык.

1. Seed-bed (следует) be prepared.
2. In late season crops (могут) be obtained from the seed put in May.
3. Late ripening (может) endanger the quality of the crop.

Упр. 5. Поставьте прилагательные в скобках в нужную степень сравнения. Переведите предложения на русский язык.

1. Barley does (good) on a moderately deep seed-bed.
2. Barley has a (short) period of growth than the other cereals.
3. In a late season crops can be obtained from the seed put in as (late) as May.

Упр. 6. Прочитайте и переведите текст.

Barley

Barley is derived from wild grasses native to northern Africa and western Asia. It is widely grown in all subtropical and temperate countries, and large areas are devoted to its cultivation in many parts of the British Isles. It is used for human food and is an important bread cereal in some parts of Europe. Barley is also used for malting, and its degree of suitability for this purpose determines the marked value of the crop, the straw being strictly a by-product. Barley can be grown under almost any conditions of soil and climate, the only cause of failure being soil acidity; but all conditions do not give equally-good barley for malting purposes. Barley does best on a very fine and moderately deep seed-bed, and this should be prepared by harrowing and rolling.

Barley has a shorter period of growth than the other cereals, and in a late season crops can be obtained from seed put in as late as May.

When barley is grown on land in high condition, or on land where a root crop has been consumed, it is not a rule necessary to supply any artificial fertilizers; but under conditions where the land is so rich that luxuriant vegetation and late ripening may endanger the quality of the crop, it may be desirable to apply 2 or even 3 cwt. of superphosphate per acre and to balance this with an appropriate amount of barley suffers from fungoid diseases, such as smut and leaf-stripe. It also is greatly damaged by insect pests (gout-fly).

Упр. 7. Составьте словосочетания и переведите их на русский язык.

1) wild	a) areas
2) subtropical	b) ripening
3) large	c) grasses
4) human	d) seed-bed
5) deep	e) vegetation
6) late	f) diseases
7) artificial	g) countries
8) luxuriant	h) fertilizers
9) fungoid	t) food

Упр. 8. Переведите на английский язык.

Ячмень происходит от диких злаковых растений; единственная причина неурожая, кислотность почвы, лучше всего расти; буйная вегетативная масса; ячмень подвержен грибковым заболеваниям; выращивание ячменя; на любых почвах, прикатывание почвы; семена; корнеплоды, вносить удобрения, вредители; солодоращение; солома является побочным продуктом.

Упр. 9. Исправьте следующие утверждения.

1. Barley is used only for melting purposes.
2. Barley does best on acid soils.
3. Barley has a longer period of growth than the other cereals.
4. When barley is grown on land in high condition it is necessary to apply artificial fertilizers.
5. Insect pests don’t attack barley.
6. Diseases may not reduce the yield and the quality of barley.

Упр. 10. Ответьте на вопросы.

1. Where (in what countries) is barley usually grown? 2. What is barley used for? 3. What soils can barley be grown on? 4. What is the only frequent cause of failure? 5. How should seed-bed be prepared? 6. Is it necessary to apply artificial fertilizers? 7. What diseases does barley suffer from? 8. What may endanger the crop? 9. What insect pests can attack barley?

Упр. 11. Дополните текст недостающими словами.

Barley is an important ... . It belongs to the same family of plants as maize, ... , rice and ... . Farmers grow barley for ... and for feeding to live-stock. Winter barley is planted in the ... and harvested the following summer barley is planted in the spring and becomes mature by the summer. ... is usually harvested with combine ... . Annual world barley totals about 180 million tons. Belgium, France, Ireland and Switzerland usually have the highest ... .

Упр. 12. Прочитайте и перескажите текст.

Barley is a major cereal grain, commonly found in bread, beverages, and various cuisines of every culture. It was one of the first cultivated grains in history and, to this day, remains one of the most widely consumed grains, globally. Barley and other whole grain foods have rapidly been gaining popularity over the past few years due to the various health benefits they provide. Whole grains are important sources of dietary fiber, vitamins, and minerals that are not found in refined or "enriched" grains. When refined, grains lose certain components (specifically, the bran and germ), which also removes most of the fiber and nutrients naturally found in most grains. Choosing whole grains over their processed counterparts reduces the risk of several chronic diseases such as obesity, diabetes, heart disease, and cancer.

LESSON 16

Упр. 1. Выучите следующие снова и словосочетания.

maize – кукуруза
to spread – распространяться
maturity – спелость, вызревание
minor forage crop – второстепенная культура
earliness – скороспелость
clay – глина
manure – компост, удобрение, удобрять
muriate – солянокислая соль
bushel – бушель (мера емкости 36,3 л)
germination – прорастание
at the rate of – при норме высева
to rot – гнить
to suppress – подавлять
singling – пикировка (растений), прореживание
shading – затенение

Упр. 2. Переведите «цепочки существительных».

Table purposes, forage crop, farmyard manure, crop plants, row-crop cultivation, fodder crops.

Упр. 3. Переведите прилагательные в скобках на английский язык. Переведите предложения на русский язык.

1. In Britain even (самые ранние) varieties have been found to ripen seed only in the (более теплые) years and in the (самые солнечные) and (самые жаркие) districts but continuous progress in the direction of (более раннее) maturity is being made in the USA.

2. The minimum temperature of germination of the seed is (выше) than for the general British crops.

3. Maize grows (лучше всего) on warm fertile loams.

Упр. 4. Переведите слова, обращая внимание на префиксы и суффиксы:

1) deep, depth, to deepen, deeper; 2) warm, warmth, to warm, warmer; 3) to grow, grown, growth; 4) sow, sowing; sown; 5) harrow, to harrow, harrowing; 6) to roll, rolling.

Упр. 5. Составьте словосочетания и переведите их.

early	maturity, variety, cultivation
late	summer, variety, seed
deep	seed-bed, soil, yield
warm	loams, soil, germination
rapid	germination, rotation, cultivation

Упр. 6. Соотнесите антонимы.

1) rapidly	a) maximum
2) minimum	b) warm
3) higher	c) small
4) cold	d) slowly
5) large	e) lower

Упр. 7. Прочитайте и переведите текст.

Maize

Maize originated in America and very soon after the discovery of the New World spread very widely throughout Africa, southern Europe, and southern Asia. In Britain even the earliest varieties have been found to ripen seed only in the warmer years and in the sunniest and hottest districts but continuous progress in the direction of earlier maturity is being made in the northern United States and Canada, and new strains are being tested in the south of England.

The sweet varieties are grown on a small scale for table purposes and some of these can produce ripe seed in the south-east of England.

In Britain maize is one of the minor forage crops for use in the late summer.

Maize grows best on warm, fertile loams, but when well manured it products good crops on light soils, provided that these are of fair depth. Light soils have the advantage of warmth and earliness; on clays it often fails to reach best stage of maturity.

The crop is generally grown on land that has received good dressing of farmyard manure and at seed-time it is give about 2 cwt. of sulphate of ammonia, 3 cwt. of superphosphate, and 1 cwt. of muriate of potash per acre. A deep seed-bed is prepared by harrowing, rolling and cultivating, and in mid May the seed is drilled in rows from 18 to 24 in. apart, at depth of about 21/2 in., and at the rate of about a bushel per acre.

The minimum temperature for germination of the seed is higher than that required for the general British crop plants, and if sown in cold soil the seed will rot.

After sowing, the crop is harrowed to suppress weeds. If sown thinly there is no need for singling. The maize grows rapidly and a good crop soon checks weeds by shading.

The advantage of the crop over barley is its larger yield and its adaptability to row-crop cultivation – it may replace fodder roots in the rotation.

Упр. 8. Переведите на английский язык.

Второстепенная кормовая культура; скороспелость; во время сева в почву; при норме высева; более раннее созревание; сладкие сорта; теплый плодородный суглинок; хороший урожай; глубина почвы; скороспелость; время сева; минимальная температура прорастания семян; гнить; подавлять сорняки; корнеплоды.

Упр. 9. Вставьте слова, данные под чертой, и переведите предложения.

1. Maize _____in America.
2. ___are grown for table purposes.
3. Maize grows best on _____ .
4. ___ soils have the advantage of warmth and ___.
5. Maize often fails to read) the best stage of _____on.
6. A deep seed-bed is prepared by _____, ____and ____ .
7. If maize is sown in cold soil the seed will _____.
8. After sowing maize is harrowed to suppress _____.
9. Maize _____may replace fodder roots in the ____.

Originated, fertile loams, maturity, light, harrowing, rot, weeds, cultivating, sweet varieties, earliness, clays, rolling, rotation.

Упр. 10. Ответьте на вопросы.

1. Where did maize originate? 2. What purpose is maize grown for? 3. On what soils does maize grow best? 4. What advantage do light soils have? 5. How is seed-bed prepared? 6. What is the minimum temperature for germination? 7. What will happen to the seed if it is sown in cold soil? 8. Why is the crop harrowed after sowing? 9. What advantage over barley does maize have?

Упр. 11. Прочитайте текст без словаря и перескажите его.

Maize is a cereal grass related to wheat, rice, oats and barley. Maize was first used for food about 10 000 years ago by Indians. Maize is a plant whose food value and wide variety of uses make it one of the most important crops in the world. Depending on the variety maize can be grown in most mild and tropical regions of the world. The USA is the world's leading producer and exporter of maize. It produces about two fifths of the world's supply. Other major maize producers include Brazil, China, Romania, Ukraine, and Yugoslavia.

LESSON 17

Упр. 1. Выучите следующие слова и словосочетания.

pulse crops – бобовые культуры
beans – бобы
arable districts – земледельческие районы
stiff clay soils – грубые глинистые почвы (глиноземы)
chalky boulder clay – известковая валунная глина
lime – известь
to drain – осушать
the yield of grain is often disappointing – урожай зерна часто вызывает разочарование
clover – клевер
legumes – бобовые (растения)
peas – горох
digestible protein – легкоусвояемый белок
low fibre content – низкое содержание волокон
soiling – зеленая подкормка
ensilage – силосование, силос
hay – сено
dwarf garden sorts – карликовые садовые сорта
pod – стручок
to thresh – молотить
to process – перерабатывать
calcareous loam – известковый суглинок sandy – песчаный

Упр. 2. Переведите «цепочки существительных».

Clay soils, boulder clay, soil reserves, fibre content, grain crop, dwarf garden sorts, early picking crops, pea soil.

Упр. 3. Определите, какие слова из колонки А могут служить определениями к словам из колонки Б. Переведите словосочетания.

А	Б
soil	suitable, clay, sandy, gravelly
yield	disappointing, average, high, harmful
plant	ancient, useful, green, cold
crops	grain, pulse, essential, forage

Упр. 4. Заполните таблицу словами, данным ниже.

Plants	Types of soil	Artificial fertilizers

Beans, clay soils, chalky boulder clay, clover, nitrogen, peas, oats, careous loam, dry sandy soil, gravelly land, potash, phosphate.

Упр. 5. Переведите следующие словосочетании с причастием II по образцу:

grown crop – выращенная культура

Cultivated plants, well-drained land, mixed crop, threshed dried peas, marked deficiency.

Упр. 6. Переведите следующие предложении, используя образец:

Some plants may be grown on any soil. – Некоторые растения можно вырастить на любой почве.

1. Peas may be grown in mixture with oats. 2. The mixed crop may be cut green. 3. Dwarf garden sorts may be grown in the field. 4. The crop may be sown. 5. The crop may be ripened and threshed. 6. Peas may be cleaned and stored, 7. Peas may be processed and canned.

Упр. 7. Переведите предложение на русский язык по следующему образцу (глагол в *Present Perfect* переводите глаголом в прошедшем времени).

We have read about famous agronomists. – Мы читали (прочитали) о знаменитых агрономах.

Experiments have shown that (he crop responds to potash and to phosphate.

Упр. 8. Прочитайте и переведите текст.

Pulse crops

Beans The common bean is one of the most ancient of cultivated plants.

Beans are grown to a greater or less extent in most of the arable districts of Britain, but they give best results when grown on stiff clay soils, and may even fail on the lighter portions of a field. Probably the very best soils are the chalky boulder clays, as the bean does best where there is plenty of lime; but the crop will not thrive unless the land be well drained. On land rich in humus, the yield of grain is often disappointing though the weight of straw may be very great.

Beans may take the place of clover in a rotation, as, being legumes, they tend to increase the soil reserves of nitrogen.

Peas. Peas are very similar in composition to beans, i.e. they contain nearly 20 per cent of digestible protein and have a low fibre content. When intended for animal food, peas may be grown either pure or in mixture with oats, and the mixed crop may be either treated as a grain crop or cut green for soiling, ensilage, or hay. Peas grown for human food are dealt with in three different ways. Firstly, any of the dwarf garden sorts can be grown in the field and be picked for market when the pods are still green and the seed still soft. Secondly, the crop may be sown and the whole material sent to a factory, either to be canned or to be preserved by "quick freezing". Thirdly, the crop may be ripened and threshed. The threshed dried peas may be cleaned, stored, and put up in packets for sale or they may be processed in order to soften them and then canned. The best pea soil is a medium calcareous loam, but dry sand or gravelly land is required for the production of early picking crops. Experiments have shown that the crop responds markedly to potash, and to phosphate only when the soil shows a marked deficiency.

Упр. 9. Переведите на английский язык слова в скобках и прочитайте предложения.

1. Beans are grown in most of the (земледельческие районы) of Britain. 2. The best soil for beans is (известковая валунная глина). 3. (На землях богатых гумусом) the yield of grain is often disappointing. 4. Beans may take place of clover (в севообороте). 5. Peas contain nearly 20 percent of (легко усваиваемый белок). 6. Peas have (низкое содержание волокон). 7. The best pea soil is (известковый суглинок).

Упр. 10. Заполните пропуски словами из текста.

1. Legumes increase the soil reserves of _____. 2. Peas may be cut green for _ 3. Peas can be picked for market the _ are green. 4. Gravelly land is required for _ crops. 5. Bean does best where there is a plenty of__. 6. On land rich in ___the yield of __is low, but the weight of may be green.

Упр. 11. Ответьте на вопросы.

1. On what soils must beans be grown? 2. What are the best soils for growing beans? 3. Are peas similar in composition to beans? 4. What are peas grown for? 5. What is the best pea soil? 6. When do peas respond most markedly to potash and to phosphate?

Упр. 12. Прочитайте текст без словаря и ответьте на вопрос:

«Why are beans among the most important vegetables grown on the farm and in many home gardens»

Many kinds of beans are cultivated throughout the world. Certain kinds of beans are among the most nourishing vegetables eaten by human beings. Cooked beans are popular food. Other kinds of greens provide valuable green fodder for cattle or yield the raw material for many kinds of manufactured articles. Another useful quality of beans is (their power to enrich the soil with nitrogen that their bacteria take from the air. That's why farmers use legumes to improve the quality of the soil.

LESSON 18

Упр. 1. Выучите следующие слова и словосочетания.

root crops – корнеплоды

sugar beet – сахарная свекла

biennial plant – двухлетнее растение red beet – красная свекла

high dry matter content – высокий процент содержания сухого вещества

tops – ботва

pulp – жом (мякоть)

tops are ploughed in as manure – ботву запахивают как удобрение

stony soils cause the roots to fork – на каменистых почвах свекла становится вилчатой (имеет форму вилки)

liming – известкование

with regard to – что касается

subsoiling – подпочвенная вспашка

furrow – борозда

to secure – (зд.) достигать

consolidating the surface soil with rollers – уплотнение верхнего слоя почвы катками

average land – умеренно плодородная почва

Упр. 2. Переведите «цепочки существительных».

Sugar beet, dry-matter content, sugar content, sugar beet cultivation, furrow slices, winter frosts, moisture supply, surface soil, insect pests.

Упр. 3. Заполните таблицу словами, данными ниже.

Soil types	Tillage operations	Root crops

Sugar beet, ploughing, deep loam, red beet, stony soils, light land, raddish, peaty soil, subsoiling, rolling, cultivation, harrowing.

Упр. 4. Поставьте прилагательные в скобках в нужную степень сравнения и переведите предложения на русский язык.

1. The (good) soil for beet is a deep loam. 2. The (high) sugar content is obtained when the beet is grown on light land and the (low) on peaty soil. 3. The ploughing should be as (deep) as the nature of the soil will permit.

Упр. 5. Переведите предложения, обращая внимание на конструкцию *модальный глагол + инфинитив* в страдательном залоге.

l. Beet cannot be grown on land that requires liming. 2. Ploughing may be accompanied by subsoiling. 3. Ploughing should be done early. 4. The yield of the crop depends on the number of beets that can be grown to the acre.

Упр. 6. Прочитайте н переведите текст.

Sugar Beet

Sugar beet is a biennial plant closely related to the red beet. Sugar beets are white-coloured; their average weight is about 1 lb. They have high dry-matter content, their sugar content alone amounting to from 13 to more than 20 per cent of their weight,

Sugar beet cultivation has now extended to every country in Europe, to America, and to many other temperate countries throughout the world. Although the main object of growing beet is the production of sugar, the by-products, tops and pulp, are important to many growers, especially dairy farmers. In other cases the tops are ploughed in as manure.

The best soil for beet is a deep loam, but the crop has been grown quite satisfactorily on well-drained soils of practically all types.

Stony soils are unsatisfactory because they cause the roots to fork. Beet cannot be grown profitably on land that requires liming. With regard to quality it is found the highest sugar content is obtained when the beet is grown on light land and the lowest on peaty soil.

Ploughing should be as deep as the nature of the soil will permit, and in some cases it may be profitably accompanied by subsoiling. It should be done early so that the furrow slices get the benefit of long exposure to winter frosts. A full germination of the seed depends on an adequate moisture supply, and this is best secured by consolidating the surface soil with rollers both before and after sowing.

The yield of the crop depends very largely on the number of beets that can be grown to the acre.

Beet is attacked by a number of the fungoid diseases and insect pests, but their incidence is seldom serious unless the crop is grown for several years on the same land.

Упр. 7. Дайте английские эквиваленты.

Сахарная свекла; двухлетнее растение; высокий процент содержания сухого вещества; ботву запахивают как удобрение; из-за них свекла становится вилчатой (имеющая форму вилки); глубокий суглинок; большие предосторожности при хранении; ее (вспашку) можно успешно сочетать с подпочвенной вспашкой; требует известкования; уплотнение верхнего слоя почвы катками; на умеренно плодородной почве; если эту культуру не выращивать на одной и той же земле в течение нескольких лет; торфяная почва; полное прорастание семян; влага; до и после посева; урожай; грибковые заболевания, насекомые-вредители.

Упр. 8. Заполните пропуски в предложениях словами из текста.

1. Sugar beets are w... . 2. The average w... of a crop is about 1 lb. 3. Tops and pulp are important to many g... . 4. S... soils cause the roots to fork. 5. The p... should be deep. 6. A full g ... of the seed depends on an adequate m... supply. 7. The y... of crops depends on the number of beets per acre. 8. Beet is attacked by f... diseases and i… . 9. The crop shouldn’t be grown for several years on the same I... .

Упр. 9. Ответьте на вопросы.

1. Are sugar beet and red beet related? 2. What color are sugar beets? 3. What is the average weight of a crop? 4. What countries is sugar beet cultivated? 5. What is the main object of growing beet? 6. Why are tops and pulp also important? 7. What is the best soil for beet? 8. Why are stony soils unsatisfactory? 9. What soils is the highest sugar content obtained from? 10. Why should the ploughing be deep and early? 11. What does a full germination of the seed depend on? 12. What does the yield of the crop depend on? 13. Do insect pests attack beet? 14. When is their incidence rather serious?

Упр. 10. Заполните пропуски в тексте словами, данными под чертой. Перескажите текст.

Beet is a plant grown for __ . The ball-shaped roots of a variety called _are cooked as a vegetable. Another variety with light tan roots called __is a leading source of sugar. Both kinds are important __. __ beet is also used as livestock __. __ beets are an excellent source of calcium, iron and vitamin A. Sugar beets provide much of the sugar produced in many countries. They grow best in areas that have cool nights during the ___.

Beetroot, food, commercial crops, fodder, sugar beet, beet leaves, growing season.

LESSON 19

Упр. 1. Запомните следующие слова и словосочетания.

small garden sorts – мелкие столовые сорта

white fleshed field carrot – крупные белые кормовые сорта rich in carotene – богатый каротином

shallow land – неглубокая почва stony – каменистый

slow-growing – тугорослые

they cannot compete with weeds – (зд.) сорняки заглушают их

to facilitate – облегчать

selective weed killer – гербицид

to produce a response – вызывать отдачу

main crop carrots – морковь основного урожая

hoe – мотыга; выпалывать

to single – прореживать

Упр. 2. Переведите «цепочки существительных».

Garden sorts, field carrots, field varieties, weed-killer, inter-row cultivation, sugar beet, main crop carrot, tractor-hoeing, hand-weeding, hoe-equipment, winter and early spring market, soil types, row width, tractor work.

Упр. 3. Определите, какие слова из колонки *А* могут служить определениями к словам из колонки *Б*. Переведите словосочетания.

А	**Б**
land	shallow, stony, heavy, light, clean carrots cultivated, wild, field, yellow, main crop
weed	annual, biennial, perennial, harmful, green cultivation large-scale, inter-row, green

Упр. 4. Определите, какой частью речи является выделенное слово. Переведите предложения на русский язык.

1. Our cultivated carrots originated from the wild carrot. Large-scale cultivation of carrots is restricted to two soil types. Field must be cultivated.

2. Farm crops grow best when there are no weeds in the field. Hand-weeding is very laborous. I need to weed my flower-beds.

3. Some growers treat the carrot in much the same way as sugar beet. Carrots cannot grow on shalow or stony land. Crops grown on heavy land are costly to harvest. The seedlings of carrots are slow-growing.

Упр. 5. Сравните формы глаголов *Present Indefinite* (*Active* or *Passive*). Обратите внимание на способы перевода пассивных конструкций. Определите залог выделенных глаголов и переведите следующие предложения на русский язык.

Active	Passive
Farmers cultivate their fields.	Fields are cultivated by farmers.
Фермеры обрабатывают поля.	Поля обрабатываются фермерами.

1. Carrots grow well under all climatic conditions. White-fleshed carrots are grown for stock. 2. A selective weed-killer is used to deal with annuals. Some growers use for carrots the same fertilizers as for sugar beet. 3. Farmers usually sow 4 lb. of seed an acre. Main crop carrots are sown in April or early May.

Упр. 6. Переведите предложения, обращая внимание на способы перевода модальных глаголов в пассивных конструкциях.

1. No attempt should be made to grow field varieties on stony land. 2. The importance of clean land for carrots can hardly be overestimated. 3. About 4 lb of seed is significant to sow an acre, if the plants are to be singled. 4. In the mildest districts crops for the early market may be sown in February. 5. Hand-weeding is very laborious and every effort should be made to eliminate it.

Упр. 7. Прочитайте и переведите текст.

Carrots

Our cultivated carrots have been obtained from the wild carrot, which is a common annual or biennial weed by a process of selection. There are numerous varieties, varying from the small sweet garden sorts to the large

white-fleshed field carrots which are grown exclusively for stock. The yellow varieties are very rich in carotene.

Carrots grow well under all climatic conditions, but for large-scale cultivation are almost restricted to two soil types – very deep, sandy loams and the light peats.

No attempt should be made to grow field varieties on shallow or stony land, as the crop is certain to be inferior and unprofitable. Crops grown on heavy land are very difficult and costly to harvest. The importance of clean land for carrots can hardly be overestimated, as the seedlings are so slow-growing and delicate that they cannot compete with weeds. About 4 lb. of seed is sufficient to sow an acre if the plants are to be singled. A row width of 14 to 18 in. facilitates tractor work. But if the land is free from perennial weeds, and if a selective weed killer is used to deal with annuals, little inter-row cultivation is required. Some growers treat the crop in much the same way as sugar beet. But on land that is in reasonably fertile condition the crop gives little response either to phosphate or nitrogen. Potash, however, will usually produce a response. Main crop carrots are sown in April or early May.

The subsequent cultivation consists of keeping the land thoroughly clean by spraying, tractor-hoeing, and hand-weeding. The last is very laborious, and every effort should be made to eliminate it.

Motorized hoe-equipment is very suitable. Although carrots can stand a certain amount of frost, it is usual to lift and store in October or November those intended for the winter spring market

Упр. 8. Дайте английские эквиваленты.

Наша окультуренная морковь была получена от дикой моркови, обычного однолетнего или двухлетнего сорняка путем селекции; от мелких столовых сортов до крупных белых кормовых сортов; богаты каротином; тугорослые; сорняки; гербицид; используется для уничтожения однолетних сорняков; морковь основного урожая; глубокие песчаные суглинки; глубокая или каменистая почва, убирать урожай, ширина ряда, плодородная земля, хранить урожай.

Упр. 9. Заполните пропуски в предложениях словами, данными под чертой.

1. Large-scale cultivation of carrots is practiced on _____and ____.
2. Growing carrots on _____is unprofitable.
3. Seedlings are so slow-growing that cannot _____.
4. The subsequent cultivation consist of keeping the land clean by _____, and____.
5. ____is very suitable.

6. Carrots can stand _____.

7. It is usual to _____and ____carrots in October or November.

Lift, motorized hoe-equipment, store, sandy loams, stony land, light peats, spraying, hand-weeding, compete with weeds, a certain amount of frost, tractor hoeing.

Упр. 10. Ответьте на вопросы.

1. What crop has our cultivated carrot been obtained from? 2. What varieties of carrot can you name? 3. What climatic conditions do carrots require? 4. On what soils do carrots grow best? 5. Why is clean land important? 6. What artificial fertilizers usually produce a response? 7. When are main crop sown? 8. What operations do the subsequent cultivation consist of? 9. Can carrot stand frost? 10. When is it usual to lift and store carrots?

Упр. 11. Прочитайте текст без словаря и перескажите его.

Carrot is a plant with an orange root that is eaten as a vegetable. Carrots contain B_1, B_2 and C. People eat raw carrot or in salads.

Carrots are grown from tiny seeds planted from 45 to 60 centimeters apart. They grow best in deep, rich soils that contain sand or manure, and are well-drained. Carrots can survive cold winters and can withstand much summer heat.

Carrots are native to the Mediterranean region (регион Средиземноморья). The ancient Greeks and Romans grew carrots. They used the plants as medicine but not as a food. Carrots resembling (напоминающие) modem types were later developed in France and were common in Europe by 1200's. Three main types of carrots are grown: long-rooted, medium-rooted and short-rooted.

LESSON 20

Упр. 1. Выучите следующие слова и словосочетания.

potato – картофель

to tolerate a rather highly acid conditions of the soil – выносить довольно высокую кислотность почвы

extreme deficiency of calcium – большая недостаточность кальция

do badly – плохо расти

moderate rainfall – умеренные осадки

blight – болезнь растений, характеризующаяся увяданием, гниением или прекращением роста

tubers – клубни

lowest moisture content – самый низкий процент содержания влаги
in good work in order – в хорошем состоянии для обработки
starch – крахмал
niacin – ниацин (никотиновая кислота)
riboflavin – витамин B_2
thiamine – витамин B_1
stem – стебель

Упр. 2. Переведите словосочетания, обращая внимание на степени сравнения прилагательных.

The most valuable crop, the most suitable soil, the most favourable season, the best eating quality, the lowest moisture content

Упр. 3. Переведите «цепочки существительных».

Farm plants, water supply, growing season, moisture content, planting time, potato plants.

Упр. 4. Соотнесите антонимы.

1) do well	a) often
2) low	b) warm
3) wet	c) high
4) seldom	d) do badly
5) cold	e) shallow
6) few	f) dry
7) deep	g) many

Упр. 5. Переведите интернациональные слова без словаря.

Calcium, seasons, temperature, optimum, limit, phase, per cent, material, protein, vitamins, niacin, thiamine, phosphorus, insecticides, pesticides.

Упр. 6. Прочитайте и переведите текст.

The tubers

The potato was introduced from South America in the sixteenth century. As a producer of human food the potato is the most valuable crop grown in the world.

A potato consists of about 80 per cent water and 20 per cent solid matter. Starch makes up about 85 per cent of the solid material, and most of the rest is protein. Potato contains many vitamins, including niacin, thiamine and vitamin C. It also contains such minerals as calcium, iron, magnesium, phosphorus, potassium, sodium and sulphur.

The most suitable soil for potatoes is a light deep loam, but the crop does well on black-top or peaty land. The potato is one of the few farm plants that

tolerate a rather highly acid condition of the soil, but the yield suffers where there is an extreme deficiency of calcium.

Potatoes do badly on heavy soils and under wet conditions. The most favourable seasons are those of moderate rainfall: in rainy seasons the temperature is too low for optimum growth and the incidence of blight is high; in dry summers the yield is often limited by the water supply. The best eating quality is generally obtained when the last phase of the growing season is fairly dry, as it is then that the tubers are formed with the lowest moisture content.

The time of planting depends upon the district and the variety that is being grown. It is a matter of prime importance that the land should be sufficiently dry and in good working order at planting time as a crop put in cold wet soil seldom develops satisfactorily.

A number of insects can attack potato plants and tubers. Insects that feed on potato plants can be controlled by spraying insecticides into the furrow at planting time. The roots absorb the insecticides and transport them to the stems and to the leaves. The pesticides kill insects that feed on the leaves. The pesticides kill insects that feed on the leaves. Other insecticides may be sprayed directly on the leaves. Insects that attack the tubers are controlled by spraying insecticides into the soil before planting.

Упр. 7. Дайте английские эквиваленты.

Самая ценная культура; легкий суглинок; хорошо расти; торфяные почвы; довольно высокая кислотность почвы; большая недостаточность кальция пагубно сказывается на урожае; картофель плохо растет; так как именно тогда образуются клубни с самым низким процентом содержания влаги (или с высоким содержанием сухого вещества); в хорошем состоянии для обработки; умеренные осадки; вегетационный период; корни; листья; стебли; до посадки.

Упр. 8. Заполните предложения словами, данными под чертой.

1. Potatoes consist of 80 percent water and 20 per cent of_____.
2. ___makes up 85 per cent of solid matter.
3. The most suitable soil for potato is_____.
4. Potatoes do badly on _____.
5. The time of_____depends upon the district and the_____.
6. Insects can attack potato plants and_____.
7. Insecticides can be sprayed into the_____or directly on the_____.

Starch, heavy soils, variety, furrow, light deep loam, tuber, solid material, planting, leaves.

Упр. 9. Ответьте на вопросы.

1. What substances does potato consist of? 2. What vitamins does potato contain? 3. What is the most suitable soil for potato? 4. Can potatoes tolerate highly acid conditions of soil? 5. On what soils do potatoes grow badly? 6. When is the best eating quality obtained? 7. What does the time of planting depend on? 8 How can harmful insects be controlled?

Упр. 10. Прочитайте текст и расскажите об истории картофеля.

The potato is originated in South America. Most botanists believe the potato comes from a species that first grew in Bolivia, Chile and Peru. More than 400 years ago the Inca Indians of those countries grew potato in the valleys of the Andes Mountains.

Spanish explorers in South America were the first Europeans to eat potatoes. The Spaniards introduced them into Europe in the mid 1500's. About the same time, English explorers brought potato to England From there potatoes were introduced into Ireland and Scotland. Potatoes were introduced into North America in the early 1600's. Today potato is the world's most widely grown vegetable and one of the most important foods.

LESSON 21

Упр. 1. Выучите следующие слова

cabbage – капуста
cruciferous – крестоцветный
appearance – внешний вид
to attain – достигать
body – структура
by manuring – благодаря удобрению навозом
to establish – (зд.) приниматься (о растении)
a good deal of – достаточное количество
parasite – паразит
greenhouse – теплица
hot bed – парник, паровая грядка, рассада
outdoor planting – высадка в открытый грунт
to prick out – пересаживать
to transplant – пересаживать (о растении)
2–6 inches apart – на расстоянии 2–6 дюймов
frame – защищенный грунт
acreage – площадь земли в акрах
to injure the roots – повредить корни
to reduce the yield – уменьшить урожай
irrigation – орошение
transplant – пикированная рассада, саженец, пересаженное растение

Упр. 2. Переведите следующие слова.

1) selection, selective, to select; 2) transplant, transplanting, to transplant; 3) to plant, planting, plant; 4) hardiness, hardy; 5) to resist, resistant, resistance.

Упр. 3. Переведите «цепочки существительных».

Cabbage varieties, heavy-land crop, seed boxes, transplanting machines, planting time, cabbage transplants.

Упр. 4. Соотнесите слова с их русскими эквивалентами.

1) seedtime	a) семенной ящик
2) seedbed	b) выведение сортовых семян
3) seedbox	c) рядовая сеялка
4) seed-breeding	d) сеянец, рассада
5) seed-cleaning	e) рассадочная грядка; почва, подготовленная для посева
6) seed-drill	f) сортоиспытательный участок
7) seed-grower	g) питомник, рассадник
8) seedling	h) зерноочистка
9) seed-plot	i) семеновод
10) seed trial ground	j) сев

Упр. 5. Переведите предложения, обращая внимание на перевод модальных глаголов с инфинитивом в пассивном залоге.

1. The seedlings are to be pricked out or transplanted to hotbeds. 2. The plant should be set deep enough so that the first leaves are almost touching the ground. 3. Provided (при условии если) the soil is dry at transplanting time, water should be added.

Упр. 6. Соотнесите синонимы.

1) a good deal of	a) to transplant
2) greenhouse	b) to vary
3) grow well	c) watering
4) to prick out	d) area
5) acreage	e) plenty of
6) irrigation	d) do well
7) to differ	e) hotbed

Упр. 7. Поставьте глаголы в скобках в форму *Present Indefinite Passive*. Переведите предложения,

1. The seedlings (to transplant) to hotbeds. 2. Seed (to sow) in rows 2–6 inches apart. 3. For small acreages the plants (to transplant) by hand. 4. Transplanting machines (to employ) on large acreages. 5. Cabbage transplants (to give) the first irrigation soon after they (to transplant) in the field.

Упр. 8. Прочитайте и переведите текст.

Forage crops

Cabbage. The cabbage is a cruciferous plant which has been obtained by a long process of selection from the wild cabbage. Cabbage varieties differ in appearance, size, hardiness, and the time required for their development.

The cabbage is a typical heavy-land crop and attains its greatest perfection on strong clays that contain plenty of lime. However it grows well on light soils which have been given body by manuring. The crop does well anywhere in Britain and resists drought when once it is well established but it does not start well unless it gets a good deal of rain; in dry climate it is less resistant to parasites.

A common method of growing cabbage is to sow the seed in a green house or hotbeds in seed boxes 4–6 weeks before outdoor planting. As soon as the true leaves appear about 2 weeks after sowing, the seedlings are to be pricked out to other flats or transplanted to hotbeds directly in the seed bed from 1 to 2 inches apart. Sometimes the seed is sown thinly in rows 2–6 inches apart in hotbeds and the seedlings are transplanted to other hotbeds or cold frames to be later transplanted in the field.

Provided the soil is dry at transplanting time, water should be added. The plant should be set deep enough so that the first leaves are almost touching the ground. For small acreages the plants are usually transplanted by hand. Transplanting machines equipped to add water are usually employed where large acreages are to be set. In order to apply cultivation there should be ample space between plants at planting time. The cultivation should be shallow and only frequent enough for good control of weeds.

Deep cultivation can injure the roots and reduce the yield.

Cabbage transplants are generally given the first irrigation soon after they are transplanted in the field.

Упр. 9. Найдите в тексте эквиваленты следующих слов и словосочетаний.

Легкие почвы, которые получили свою структуру благодаря удобрению навозом; растения семейства крестоцветных; различаться по внешнему виду, размеру, морозоустойчивости; если она уже хорошо принялась; достаточное количество; множество; высадка в открытый грунт; должны быть пересажены, на расстоянии 2–6 дюймов.

Упр. 10. Заполните пропуски в предложениях словами, данными под чертой.

1. The cabbage is a _____.
2. Cabbage varieties differ in appearance, _____and ___.
3. The cabbage is a typical_____.
4. Cabbage grows well on _____.
5. Seed is sown in _____in ____.
6. In two weeks after sowing ___are transplanted to hotbeds.
7. There should be ample space between plants at _____.
8. The cultivation should be _____.
9. Deep cultivation can _____ and ____.

Size, hardiness, greenhouse, planting time, seedlings, shallow, strong clays, seed boxes, injure the roots, cruciferous plant, heavy-land crop, reduce the yield.

Упр. 11. Ответьте на вопросы.

l. What plant has the cabbage been obtained from? 2. Do cabbage varieties differ in appearance, size and hardiness? 3. On what soils does the cabbage grow well? 4. What is a common method of growing cabbage? 5. When are the seedlings to be pricked out? 6. How is the seed sown? 7. How should the plant be set? 8. Why should the cultivation be shallow? 9. When are cabbage transplants given the first irrigation?

Упр. 12. Прочитайте текст и расскажите о видах капусты.

There are three kinds of cabbage; white, red and savoy (савойская капуста). The leaves of the plant grow close together to form a hard round head (кочан). The leaves of the white and red cabbage are usually smooth (гладкий), but have veins (прожилки). White cabbage, which has pale green leaves, is the most popular type in most countries. People eat it raw in salads, cooked as a hot vegetable, or pickled as a sauerkraut (квашеная капуста). Red cabbage, with its reddish purple leaves, is not so popular as the white, bill it can be eaten raw or cooked. The savoy type has the best flavor (вкус) Chinese cabbage is not a true cabbage. Its long, thin leaves form stalks similar to celery (сельдерей).

SUPPLEMENTARY TEXTS

Text 1. Agriculture

Nature was generous in giving the United States plenty of fertile soil, along with a climate that is mostly moderate. Forty-seven percent of the land area of the United States is farmland. Some 375 million acres (152 million hectares) are permanent pastureland. Almost 50 million acres (20 million hectares) of the cropland is irrigated.

There are about 2 370 000 farms. The average size is 437 acres (177 hectares), but in the eastern part of the country many farms are much smaller and family members do most of the work.

Over the past 50 years farm population has decreased greatly, so that by today only about 5,6 million persons live on farms. Nevertheless, there has been a tremendous increase in production. Besides providing ample food for its own people, the United States for years has sent millions of kilograms of food to other countries. The principal crops are corn (maize), wheat, cotton, tobacco and fruit.

Scientific methods of farming, including development of sturdy disease-resistant hybrid seeds and the use of machines, are responsible for the production increase. Over 1 million machines (combines) for harvesting grain and some 5 million tractors are in use. In fact, tractors have reduced the need for work animals so much that 80 million acres (32 million hectares) once used to grow feed for the animals are now available for other crops.

Uses of fertilizers and chemicals to control or destroy weeds and harmful insects, and improved methods to control plant and animal diseases have boosted farm production. Modern methods of canning, storing, packaging and marketing farm products avoid spoilage and make it possible for consumers to enjoy perishable foods not only during the growing season but year-round.

Text 2. Grain crops

The Cycle of Plant Growth

A given species of plants may be thought of as having a definite cycle of growth carrying it from seed stage to seed stage. In general, the phases of this cycle are (1) germination, (2) seedling growth, (3) active or developmental growth, (4) reproduction, (5) maturation, and (6) dormancy. Each part of the cycle presents certain problems pertinent to crop production.

Germination

The ability of a seed to germinate is based upon both genetic and physiologic factors. Proper maturation, and the storage of seeds under favorable environmental conditions contribute much to their ability to germinate. If it is assumed that the seed was stored properly, it may be expected to germinate when placed under the proper environmental conditions of heat, water, and aeration. For example, corn is not planted until the ground is warm, while wheat, oats, barley, and flax may be seeded in soil that is rather cold. Usually in the spring of the year, when most small grains are planted, seeding must be delayed until the excess water has been drained or evaporated from the soil. The presence at an excess of water is closely allied to aeration, since a wet soil will not possess enough oxygen for optimum germination. This is one of the most common causes of poor germination of seeds, particularly of corn, during a period of cold, rainy weather. Other unfavorable environmental conditions, such as the presence of disease organisms, may also prevent normal germination.

Seedling Growth

The cultivated crops such as corn and the sorghum respond to tillage in their early period of growth and it is important that tillage be as deep and as close to the plants as possible to provide good aeration for the developing roots. In the small grain crops, the seedling stage IS important because a favourable environment at this time may result in the development of many tillers or stools and increase the number of potential fruiting stems.

Active or Developmental Growth

It is difficult to differentiate between the seedling stage and that of active growth. During active growth the plant should be so cultivated and fertilized that there is no interruption in its vital growth processes. It is in this stage that the small grain plant heads and the corn and sorghum plants elongate rapidly and prepare for the production of flowers. A drought at this time may greatly reduce the yield. The strong, vigorous plant is much less suffer damage from the many plant diseases such as black stem rust and the smuts, and from other parasitic organisms.

Reproduction

It is Nature's rule that the plant perpetuate its kind. In the annual seed bearing plant, the formation of seed is essential to reproduction. Early seedling and rapid growth are desirable to avoid the hot summer weather at the time when the grain crop produces its flowers.

Most of the small grain crops are self-pollinated, i.e. the flowers contain both male and female organs, and fertilization usually occurs within the individual flower. Of the grain crops, corn and rye are cross-pollinated; pollen from one plant is carried by the wind to the flowers of another plant. The sorghums have both, male and female flowers on the flowering stalk, and while self-pollination is normally more frequent than cross-pollination, considerable cross-pollination may occur.

Maturation

Following pollination and fertilization, the embryo develops and the seed is formed. During the period of active development, the seed contains much water, but the water content is gradually reduced until the seed reaches a stage when it may be said to be mature.

Dormancy

The period of dormancy is a natural follow-up of maturation. Some seeds have a period of after-ripening and will not geminate even when placed under favorable conditions. Generally this period is short for the grain crops, although trouble may be experienced where winter wheat is seeded soon after harvest.

Environmental Factors

While the response of different species of plants is dependent upon their genetic make-up, the factors of environment also play a most important part in crop production. Each of the grain species is directly affected by the environment in which it is grown. In fact, these factors limit the growing of the species to certain sections of the world. The most important factors of environment are (1) soil, (2) rainfall, (3) temperature and length of growing season, (4) light, and (5) air movements.

Text 3. Food Crops

The greater proportion or man's food is derived from relatively few plant species. Most of the staple crops are members of the grass family that yield grains. Recent statistics show rice, wheat, and corn closely grouped as the "big three" in world cereal production. Each accounts for essentially one-quarter of the world's total cereal supply of more than a billion metric tons annually. Barley, oats, rye, millets, and sorghum together make up the remaining quarter.

Only one other food plant, the potato, a root crop, gives the cereals much of a run so far as world importance is concerned. Total tonnage of the potato is approximately equal to that of the leading grains but since the potato is fleshy and consists of only 22 percent dry matter, its total food value is considerably less. Sweet-potatoes and yams, various seed legumes (beans, peas, soybean, peanut, etc.), and sugar cane ate the other major non-cereal food crops. For all practical purposes man relies upon this handful of crop plants for his existence.

The modem world would grind to a standstill if it could not depend upon the gradual improvement of varieties of these domesticates, which lend themselves so well to modem mechanized agriculture. Many thousands of wild plants were utilized by primitive cultures. Since the fifteenth century these species have been spread widely over the globe, wherever they proved adaptable to local climate. Area of origin and major zone of today’s production do not often coincide.

Text 4. Cereals

Cereals are the staff of life to civilization. Around 70 percent of the world's harvested acreage of about a billion hectares, is devoted to growing them. They are the direct source of half the food needs of the world, and the secondary source of much additional food when converted to meat, milk, eggs, and other animal products.

The true cereals are all members of the grass family. The fruit they yield is a grain, a type of fruit in which the ovary wall turns hard and durable, fusing with the single seed. Buckwheat and a few similar seeds of other families ("pseudo-cereals") are sometimes regarded as grains because their seeds are quite similar to those of grasses. Major cereal crops are rice, wheat, maize, barley, oats, rye, sorghum, various millets, and a few other species of lesser world importance.

There are a number of reasons why cereals have evolved into man's leading food source. Most of them are annuals, or are at least adapted to cultivation as annuals, permitting facility in cropping, whether on the midden of an early domestication center or as a component of today's highly mechanized farming. Grasses in general are quite versatile, too; they adapt well to a variety of soils, climates, and ways of handling. They are also relatively efficient in garnering the sun's energy, transforming it into usable food substance. They are generally hardy and recuperative, and are plagued by no more than their share of diseases and pests. But above all, the grain is a neat package of stored, energy, conveniently harvested, easily cleaned and handled, amenable to storage without special drying.

Text 5. Soil

Soil Formation. Soil is produced from rock by the process of weathering and by the activities of plants, animals and man. Primitive or igneous rocks, formed by the solidification of the magma in the process of the cooling of the earth consist of aggregates of mineral crystals which large or small according to the rate at which cooling took place. Each mineral is a chemical compound with specific chemical and physical properties. As soon as igneous rocks are exposed to changing temperatures, moisture, etc. slow processes of disintegration and decomposition begin.

The weathering of a rock is generally due to a combination of physical and chemical actions. The weathered products of rock alone do not constitute a soil. Plants establish themselves very soon after weathering begins, and the mineral material thus becomes mixed with plant remains. These remains, in the process of decay, form an addition to the products of rock weathering. Soil is therefore a mixture of organic and inorganic material containing a large and complex population of living things.

The general character of a soil depends to a considerable extent on the nature of the parent material. Thus coarse grained sandstone will generally produce a sandy soil, and a stratum of shale a "heavy" soil.

Text 6. Soil Fertility and Its Productivity

Soil fertility is a rather loose term used to indicate the potential capacity of a soil to grow a crop (or sequence of crops). The productivity of a soil is the combined result of fertility and management.

The fertility of a soil at any one time is partly due to its natural make-up (inherent or natural fertility) and partly due to its condition (variable fertility) at that time.

Natural fertility has an important influence on the rental and sale value of land. It is the result of factors which are normally beyond the control of the farmer, such as:

1) the texture and chemical composition of the mineral matter,

2) the topography (natural slope of the land) – this can affect drainage, temperature and workability of the soil,

3) climate and local weather – particularly the effects on temperature, and rainfall (quantity and distribution)

Soil condition is largely dependent on the management of the soil in recent times. It can be built up by good husbandry but if this high standard is not maintained the soil will soon return to its natural fertility level. The application of fertilizers can raise soil fertility by increasing the quantities of plant food in the growth and decay cycle.

Management can control the following production factors:

1) the amount of organic matter in the soil;
2) artificial drainage and irrigation;
3) erosion (removal of soil by wind and water);
4) pH of the soil, and the plant nutrients applied;
5) cultivations and time of planting;
6) variety and plant spacing;
7) sequence of cropping;
8) weeds, pests and diseases.

Text 7. Improved Plant Breeding

During the mid-1800's, 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 during the 1900's has made it possible to breed plants and animals scientifically.

In the early 1900's, plant breeders in the United States developed a hybrid com that produced unusually high yields. Various com hybrids became commercially available in the 1920's. By the early 1960's, more than 95 per cent of all U.S. corn acreage was planted with hybrid seed. Average corn yields increased dramatically – from about 28 bushels per acre (69 bushels per hectare) in the early 1920's to as much as 118 bushels per acre (292 bushels per hectare) in the mid-1980s.

During the I960's, scientists introduced varieties of wheat and rice that gave much higher yields than earlier varieties. The new varieties were in-

tended 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.

Text 8. New 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. Arsenic, pyrethrum, and other natural poisons have long served as insecticides. Such substances were used because they worked. But little was known about why or how they worked.

Since the beginning of modern chemistry in the late 1700's, scientists have produced many kinds of synthetic chemicals for use in agriculture. These chemicals include (1) fertilizers; (2) insecticides; (3) herbicides, or plant killers; and (4) chemicals to control plant and animal diseases. All these chemicals have helped increase farm production dramatically during the 1900's. But in some instances, agricultural chemicals have been over- used or used improperly and so have contributed to environmental pollution. In the United States, federal and state laws limit such practices and prohibit the use of chemicals that have been proved harmful.

Insecticides. In 1939, scientists in Switzerland developed a powerful chemical, called DDT, for use as an insecticide. By the early 1950's, U.S. farmers were using great quantities of DDT on their crops. But scientists then discovered that although DDT killed insect pests, it also endangered other animal life. In 1972, the U.S. government banned most uses of DDT, including its use in limning. Today, most American farmers use insecticides made of the chemical compounds organophosphate and carbamate.

Herbicides. Throughout history, farmers have had to fight against weeds. Hut until the mid-1900's, hand weeding, hoeing, and machine cultivating were almost the only methods fanners had to control weed growth. The first chemical herbicide, called 2,4-D, was patented in the United States in 1945. It quickly became and still is – the most widely used herbicide.

Chemicals to Control Diseases. Like weed growth, plant and animal diseases have always been difficult and costly problems for farmers. Many plant diseases are caused by tiny organisms called fungi. Since the mid-1800's, scientists have developed a number of chemicals known as fungicides to help fight these diseases. Some plant diseases are caused by viruses or bacteria. Chemicals have also been developed to help control these dis- eases. In addition, scientists continually develop plant varieties that have greater resistance to disease.

Text 9. Fertilizers

Fertilizer is a substance that is added to soil to help plants grow. Farmers use various kinds of fertilizers to help produce abundant crops. Home gardeners use fertilizers to raise large, healthy flowers and vegetables. Land-scrapers spread fertilizers on lawns and golf courses to help grow thick, green grass.

Fertilizers contain nutrients (nourishing substances) that are essential for plant growth. Some fertilizers are made from organic waste, such as manure or sewage. Others are manufactured from certain minerals or are produced as synthetic compounds in factories.

People have used fertilizer for thousands of years – even though at one time they did not know why it was beneficial for plants. Long before they gained an understanding of plant nutrition, people noticed that animal droppings, wood ashes, and certain minerals helped plants thrive. During the 1800's and early 1900's, scientists identified the chemical elements that are essential for plant nutrition.

Today, farmers throughout the world use billions of dollars worth of fertilizer yearly. Increased production resulting from the use of fertilizer probably accounts for about a fourth of all crop production. Without fertilizer, greater amounts of land arid labor would be needed to produce the same quantity of food and fiber.

Text 10. The Importance of Fertilizer

Green plants produce the food they use. They produce it by means of the process of photosynthesis. This process requires large amounts of nine chemical elements – carbon, hydrogen, oxygen, nitrogen, phosphorus, potassium, calcium, magnesium, and sulfur. It also requires smaller amounts of several other elements. These elements, called micronutrients because so little of each is needed, include boron, chlorine, copper, iron, manganese, molybdenum, and zinc.

Air and water provide most of the carbon, hydrogen, and oxygen that green plants need for growth. The other elements must come chiefly from the soil.

The elements plants receive from soil are normally provided by decaying plant and animal matter and dissolved minerals. But sometimes soil does not have enough of these substances, resulting in a need for fertilizer. The harvest of crops, for example, involves removing plants from the soil before they die

and decay. The mineral elements contained in the crops do not return to the soil, and so fertilizer must be added to replace the elements. Nitrogen, phosphorus, and potassium are the elements in which soil is most frequently deficient.

Text 11. Kinds of Fertilizers

There are two chief kinds of fertilizers, mineral and organic. Manufacturers produce mineral fertilizers from certain minerals or synthetic substances. Organic fertilizers come from decayed plant or animal matter.

Mineral fertilizers are the most widely used fertilizers. They supply three main elements: 1) nitrogen, 2) phosphorus, and 3) potassium.

Nitrogen fertilizers, the most widely used mineral fertilizers, are produced mainly from ammonia gas. Manufacturers compress the gas into liquid forms, such as anhydrous ammonia and aqua ammonia, which may be applied directly to the soil. They also use ammonia in producing solid fertilizers, such as ammonium sulfate, ammonium nitrate, ammonium phosphate, and an organic compound called urea. Each of these fertilizers provides the soil with large amounts of nitrogen. Some, including ammonium sulfate and ammonium phosphate, furnish other elements as well as nitrogen.

Phosphorus fertilizers, also called phosphates, are made from the mineral apatite. Finely ground apatite may be applied to soil as a solid fertilizer called rock phosphate. Apatite also may be treated with sulfuric acid or phosphoric acid to make liquid fertilizers called superphosphates.

GLOSSARY

A

to absorb – поглощать, всасывать
abundant – обильный
acid – кислотный
acreage – площадь земли в акрах
to adapt – приспособлять
to affect – влиять
agriculture – сельское хозяйство
air – воздух
alfalfa – люцерна
ample store – обильный запас
anchor – держать
animal – животное
annual – однолетний, однолетнее растение
appearance – внешний вид
application – применение
to apply – применять
arable districts – земледельческие районы
area – площадь
artificial cross fertilization – искусственное перекрестное опыление
artificial fertilizers – искусственные удобрения
at the rate of – при норме высева
attain – достигать
average land – умеренно плодородная почва

B

barley – ячмень
barley suffers from fungoid diseases – ячмень подвержен грибковым заболеваниям
beans – бобы
beef cattle – мясной скот
biennial – двухлетний, двухлетнее растение
blight – болезнь растений, характеризующаяся увяданием, гниением или прекращением роста
body – структура to
breed (bred) – разводить
broadcast – разбрасывать (семена)
bushel – бушель (мера емкости 36,3 л)
by manuring – благодаря удобрению навозом
by- product – побочный продукт

C

cabbage – капуста
calcareous loam – известковый суглинок
cereals – злаковые культуры
chalky boulder clay – известковая валунная глина
clay – глина
clay loam – иловатый суглинок
to clean – чистить
clover – клевер
coarse seed – крупное семя
cold – холодный
common – обычный, распространенный
control – борьба, уничтожение
corn – кукуруза
cotton – хлопок
crop – культура
cruciferous – крестоцветный
to cultivate – возделывать
cultivation – обработка

D

dairy cattle – молочный скот
deep-rooted – с глубоким корнем
depth – глубина
to develop – развивать
development – развитие
digestible protein – легко усвояемый белок
disease – болезнь
drain – осушать
drill – высаживать, сеять рядами
drought – засуха
dwarf garden sorts – карликовые садовые сорта

E

earliness – скороспелость
egg – яйцо
embryo – (бот.) завязь
endanger – подвергать опасности
ensilage – силосование, силос
environment – окружающая среда
extreme deficiency of calcium – большая недостаточность кальция

F

facilitate – облегчать
farm – хозяйство, ферма
favourable – благоприятный
feed – корм
to feed (fed) – кормить
fen – болото
fertilizer – удобрение
fertile – плодородный
fertility – плодородие
fertile – плодородный
fibrous – мочковатый (о корне)
fine seed – мелкое семя
fine soil – мелкокомковатая почва
firm seedbed – уплотненная пашня
flower – цветок
food – пища
forage – корм
frame – защищенный грунт
frost – мороз
furrow– борозда

G

germination – прорастание
gout-fly – зеленоглазка (зеленоглазая муха)
grain – зерно
granary – зернохранилище
grass – трава
grasses – злаковые травы
greenhouse – теплица
ground – земля, грунт
to grow (grew, grown) – выращивать, расти
grower – фермер, земледелец
growing season – вегетационный период
growth – рост

H

hardiness – морозоустойчивость
hardy – морозоустойчивый
harrowing – боронование
to harvest – убирать
hay – сено
hoe – мотыга
hotbed – парник, паровая грядка, рассада
hog – свинья

I

to improve – улучшать
to increase – увеличивать
inferior – худший
injure the roots –повредить корни
insect – насекомое
insect pests – насекомые-вредители
introduce – вводить, ввозить
irrigation – орошение

K

to keep (kept) – содержать

L

leaf (pl. leaves) – лист
leaf-stripe – красно-бурая гельминтоспориозная пятнистость
legume– бобовое (растение)
level seedbed – ровная пашня
lime – известь
liming – известкование
livestock – скот
loam – суглинок
loss – потеря
low fibre content – низкое содержание волокон
luxuriant – буйный, пышный

M

maincrop carrots – морковь основного урожая
maize – кукуруза
malting – солодоращение
manure – компост, удобрение, удобрять
to mature – созревать
maturity – спелость, вызревание
meat – мясо
mellow soil – рыхлая почва
milk – молоко
millet – просо
minor forage crop – второстепенная культура
moderate rainfall – умеренные осадки
moisture – влага
muriate – солянокислая соль

N

niacin – ниацин (никотиновая кислота)
nutrient – питательное вещество
nutritious – питательный

O

oats – овес
to obtain – получать
outdoor planting – высадка в открытый грунт

P

parasite – паразит
pasture – пастбище
peas – горох
peaty soils – торфяные почвы
perennial – многолетнее растение
to perform – выполнять
plant – растение
to plant – сажать
pod – стручок
to plow – пахать
pod – стручок
poor soil – неплодородная почва
potash – углекислый калий
potato – картофель
prick out – пересаживать
process – перерабатывать
pulp – жом (мякоть)
poultry – домашняя птица
to produce – производить
proper – надлежащий
to provide – обеспечивать
pulse crops – бобовые культуры

Q

quality – качество

R

radish – редис
rainfall – осадки
to raise – выращивать
rate – норма
to reduce – уменьшать, сокращать
to reduce the yield – уменьшить урожай

red beet – красная свекла
to reduce – уменьшать, сокращать
to require – требовать
resistant to lodging – устойчивый к полеганию
riboflavin – витамин B_2
ripen – созревать
ripening – вызревание
to roll – прикатывать (почву)
rolling – прикатывание (каткование) почвы
root – корень
rootcrops – корнеплоды
rot – гнить
rye – рожь

S

sandy – песчаный
seed – семена, зерно
to seed – сеять
seedbed – пашня
selective weed killer – гербицид
shading – затенение
shallow land – неглубокая почва
sheep – овца, овцы
silage – силос
single – прореживать
singling – пикировка (растений), прореживание
size – размер
slow-growing – тугорослые
smut – головня, ржавчина (болезни растений)
soil – почва
soil acidity – кислотность почвы
soil fertility – почвенное плодородие
soiling – зеленая подкормка
sorghum – сорго
source – источник
sowing – посев, засекание
spread – распространяться
spring crop – яровая культура
stand – всходы, травостой
starch – крахмал
starchy and nitrogenous food material – питательные вещества, содержащие крахмал и азот
stem – стебель
to store – хранить

sugar beet – сахарная свекла
sunlight – солнечный свет
to supply – снабжать

T

tap – стержневой (о корне)
tillage – обработка земли
tuber crops – клубнеплоды
thiamine – витамин В
thick-walled – толстостенный
thresh – молотить
threshing process – молотьба
till the soil – обрабатывать почву
tillage – обработка земли
tops – ботва
transplant – пикированная рассада, саженец, пересаженное растение
to transplant – пересаживать (о растении)
tuber – клубень
tuber crops – клубнеплоды

U

unpalatable – невкусный, неприятный на вкус
to use – использовать

V

valuable – ценный
variety – сорт

W

warm – теплый
watertable – уровень грунтовых вод
weeds – сорняки
wheat – пшеница
winter crop – озимая культура

Y

yield – урожай

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