

МИНИСТЕРСТВО СЕЛЬСКОГО ХОЗЯЙСТВА  
И ПРОДОВОЛЬСТВИЯ РЕСПУБЛИКИ БЕЛАРУСЬ

ГЛАВНОЕ УПРАВЛЕНИЕ ОБРАЗОВАНИЯ,  
НАУКИ И КАДРОВОЙ ПОЛИТИКИ

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СЕЛЬСКОХОЗЯЙСТВЕННАЯ АКАДЕМИЯ»

Кафедра лингвистических дисциплин

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# **АНГЛИЙСКИЙ ЯЗЫК**

## **LIVESTOCK MANAGEMENT**

*Сборник текстов и упражнений для студентов,  
обучающихся по специальности  
1-74 03 01 Зоотехния*

Горки  
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Приведены задания и упражнения для развития и совершенствования  
навыков разговорной речи на английском языке на основе текстов по  
зоотехнии.

Для студентов, обучающихся по специальности 1-74 03 01 Зоотехния.

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## **ВВЕДЕНИЕ**

Данный сборник текстов и упражнений предназначен для студентов факультета биотехнологии и аквакультуры.

Цель сборника – совершенствование навыков изучающего чтения и развитие навыков говорения на основе проработанного материала.

Настоящий сборник состоит из восьми уроков, каждый из которых включает тексты по специальности, тематический словарь, грамматический материал, лексические упражнения и упражнения, направленные на развитие навыков устной речи.

Сборник включает такие разделы зоотехнии, как «Свиноводство», «Овцеводство», «КРС», «Искусственное осеменение», «Система скрещивания».

Сборник текстов и упражнений может быть использован как для самостоятельной, так и для аудиторной работы.

## UNIT 1

### Hog Management

**Exercise 1. Before reading the text practise the pronunciation of the following words and word combinations and learn them.**

- breeding ['bri:diŋ] – разведение  
management ['mæni:dʒmənt] – содержание  
outdoor system [,aut'dɔ: 'sistəm] – система содержания под открытым небом  
indoor system [ ,ɪn'dɔ: 'sistəm] – система содержания внутри помещения  
pigsty ['pigstai] – свиарник  
pregnant sow ['pregnənt sau] – свиноматка  
gilt [gilt] – подсвинок; молодая свинья  
pasture lot ['pɑ:sfə lɒt] – пастбищный участок  
hogbreeder [hɒg 'bri:də] – свиновод  
hogman ['hɒgmæn] – свиновод, свинопас  
thin [θɪn] – худой, худощавый  
litter ['lɪtə] – помёт, выводок (*животного*)  
farrowing ['færəʊɪŋ] – опорос  
pen [pen] – станок  
shelter ['ʃeltə] – навес  
to keep [tə ki:p] – содержать  
prolific [prə'lifɪk] – плодовитый  
gestation [dʒes'teɪʃən] – беременность  
to wean [tə wi:n] – отнимать  
suckling period ['slʌklɪŋ 'rɪəɪəd] – подсосный период  
thrifty [θrɪftɪ] – процветающий, в отличном состоянии  
over-fat ['əʊvə-fæt] – ожиревший  
half-starved [hɑ:f 'stɑ:vɪd] – полуголодный  
breeding season ['bri:diŋ si:zn] – период спаривания  
gland [glænd] – железа  
teat [ti:t] – сосок  
gland [glænd] – железа  
to secrete milk [tə sik'rei:t mi:lk] – выделять молоко  
boar [bo:] – хряк  
sire ['saɪə] – производитель  
ground [graʊnd] – молотый

service ['sɜ:vis] – случка (*животных*)

vigor ['vɪgə] – сила

to mate [tə meɪt] – спаривать

sparingly ['speərɪŋli] – умеренно; скудно

**Exercise 2. Read and translate the following sentences paying attention to the functions of the Infinitive.**

1. To get best results farmers should have high-yielding cows.
2. In order to obtain the maximum results from superior sires, artificial breeding is now being used.
3. To be stored for a long period, the semen should be frozen.
4. To improve the offspring only healthy animals are chosen for breeding purposes.
5. Carbohydrates supply most of the energy required by the animals in order to do work, to keep themselves warm.
6. To provide the animals with concentrates is very important.
7. It is very important to supply young animals with enough minerals.
8. To be in thrifty condition farm animals are to be provided with all substances in proper proportions.
9. Animals need food to provide themselves with heat and energy.
10. To make rapid gains pigs must be fed liberally from onwards.

**Exercise 3. Read and translate the following text.**

### Text A

1. Hog breeding is known to be a very important branch of animal husbandry. Hogs are bred for the production of bacon and pork. Best pork breeds of pigs produce pork at 4 to 5 months and bacon breeds at 6 to 7.5 months. Unlike the other farm animals hogs are rapid-growing ones.

2. Hogs may be kept under the outdoor systems, that is, on pasture, under the indoor system, that is, in pigsties or a combination of both. The hog-breeders consider the last system to be the most effective one. The best place for keeping the pregnant sow or a gilt is a pasture lot provided with a shelter to protect her from unfavourable weather. Every hogman knows exercise to be very important for sows. Locating the feed and water supply some distance from the shelter will make her take more exercise.

3. One must feed pregnant sows properly, for sows in thin condition will produce weak litter. Several days before farrowing the pregnant sow should be put in the farrowing pen. Some farmers are known to place sows in the farrowing pen just before farrowing in order not to restrict her exercise. It is

known that the sow and her litter are usually kept indoors, where it is easier to provide the necessary care. Hogbreeders want their sows to be healthy and prolific. If a sow is prolific and a good mother, she may be kept for breeding up to 5 years or longer.

4. The gestation period in sows lasting about 16 weeks, the sow may farrow twice a year. Weaning usually takes place 7 or 8 weeks after farrowing.

5. During the suckling period young pigs suck the same teat until they are weaned. That is why the smallest and the weakest pig in the litter should be put to the gland that secretes most milk.

6. As to the selection of the boar it is not less important than that of the sow. The boar should be managed so that he always be in thrifty condition. Neither an over-fat nor a half-starved one is a satisfactory sire. Two weeks before the breeding season and during it the boar should be fed enough grain in addition to pasture to keep him in good breeding condition but not enough to make him fat.

7. Grains may be fed either whole or ground. That the boar needs plenty of exercise is known to every breeder. Young boars in their first season of service are mated to a maximum of about five females a week and 20 or 30 in the season, depending on the vigour, temperament, and other factors. Boars should not be used for breeding until they are about 10 months old. Young boars should be used as sparingly as possible, for excessive use may be the cause of small and weak litters.

**Exercise 4. Find English equivalents to the following words and word combinations in the text.**

Содержание свиней; свинина; разводить свиней; система содержания в помещениях; свинарник; система содержания под открытым небом; свиноматка; обеспечить кров; моцион; помет; станок для опороса; ограничить моцион; быть плодовитым; период беременности; сосать; отлучать (отнимать) от матки; хорошее состояние; период спаривания; заводская кондиция; случка; спаривать.

**Exercise 5. Complete the sentences using the words from the text.**

1. Hogs may be kept under ..., that is on pasture.
2. The best place for keeping ... is a pasture lot.
3. Sows in thin condition will produce ... .
4. Several days before ... the pregnant sow should be put in ... .
5. The sow and her litter are usually kept ... .
6. Hogbreeders want their sows to be healthy and ... .
7. The ... in sows lasts about 16 weeks.
8. The litter should be put at birth to the gland that ... .

9. Neither an over-fat boar nor a half-starved one is a satisfactory ... .

10. Young boars in their first season of ... are ... to a maximum of 5 females a week.

**Exercise 6. Open the brackets and translate the words and word-combinations into English.**

1. (Свиноматка) should be kept in good condition but not fat.

2. Some (свиноводы) are known to raise pigs entirely on grain.

3. (Хряки) are (спариваться) to 20 or 30 females in the season.

4. Exercise is very important for (свиноматок).

5. (Период беременности) lasts for about 16 months.

6. Hogs are kept under 2 systems: (система содержания под открытым небом) and (система содержания в помещениях).

7. Young pigs are (отнимаются) 7 or 8 weeks after (опороса).

8. During the (подсосный период) young pigs suck the same teat.

9. A (плодовитая) sow may be kept for (разведения) up to 5 years.

**Exercise 7. Reading comprehension. Choose the best answer. Consult the text if necessary.**

1. Hogs are ... .

- a) rapid-growing like the other farm animals;
- b) rapid-growing unlike the other farm animals;
- c) slow-growing like the other farm animals.

2. The best place for keeping the pregnant sow is a pasture lot ... .

- a) provided with farrowing pen;
- b) without a shelter;
- c) provided with a shelter.

3. Sows in thin conditions will produce ... .

- a) prolific litter;
- b) healthy litter;
- c) weak litter.

4. Pregnant sows are put in the farrowing pen ... .

- a) several days before farrowing;
- b) several days after farrowing;
- c) several weeks before farrowing.

5. A sow may farrow ... .

- a) once a year;
- b) twice a year;
- c) three times a year.

6. Weaning takes place ... .

- a) 7 or 8 days after farrowing;

b) 7 or 8 weeks after farrowing;

c) 7 or 8 hours after farrowing.

7. A satisfactory sire is ... .

a) an over-fat boar;

b) a half-starved boar;

c) a well-managed boar.

8. Boars should be used for breeding until they are ... .

a) under 10 months old;

b) about 10 years old;

c) about 10 months old.

**Exercise 8. Translate the English words and word combinations into Russian.**

Branch of animal husbandry; bacon and pork; farm animal; on pasture; in pigsty; pregnant sow; unfavourable weather; water supply; produce weak litter; farrowing; provide the necessary care; healthy and prolific; farrowing pen; gestation period; weaning; suckling period; thrifty condition; satisfactory sire; good breeding condition; small and weak litter.

**Exercise 9. Choose the right translation.**

1. Unlike the other farm animals hogs are rapid-growing ones.

a) В отличие от других сельскохозяйственных животных свиньи растут быстро;

b) В отличие от других сельскохозяйственных животных свиньи являются быстрорастущими одними;

c) Подобно другим сельскохозяйственным животным свиньи растут быстро.

2. Feed pregnant sows properly, for sows in thin conditions will produce weak litters.

a) Кормите свиноматок правильно, потому что при содержании в плохих условиях они дадут слабое потомство;

b) Свиноматок кормят правильно, т.к. при плохом содержании они дадут хорошее потомство;

c) Кормите свиноматок правильно, т.к. при плохом содержании они дадут хорошее потомство.

3. Hogbreeders want their sows to be healthy and prolific.

a) Свиноводы хотят свиноматок, которые являются здоровыми и плодовитыми;

b) Свиноводы хотят, чтобы их свиноматки были здоровыми и плодовитыми;

c) Свиноводы хотят здоровых и плодовитых свиноматок.



4. Neither an over-fat boar nor a half-starved one is a satisfactory sire.

a) Ни перекормленный, ни полуголодный хряк является плохим производителем;

b) И перекормленный, и полуголодный хряк является плохим производителем;

c) Ни перекормленный, ни полуголодный хряк не является удовлетворительным производителем.

**Exercise 10. Answer the following questions.**

1. What are hogs bred for?

2. Are hogs slow or rapid-growing?

3. What systems are used in keeping hogs?

4. What is the best place for keeping the pregnant sow? Why?

5. Where are sows put several days before farrowing?

6. Why are sows and their litters kept indoors?

7. How long does the gestation period last?

8. How many times a year may the sow farrow?

9. At what age are litters weaned?

10. What sire is a satisfactory one?

11. How many females are young boars mated in their first season of service?

12. At what age are they used for breeding?

**Exercise 11. Look through the text and answer the following questions.**

1. What conditions should be in a piggery for pigs to grow rapidly?

2. Why do pigs grow and develop well when they are kept on pasture?

3. What are best pasture grasses?

4. What should be done to make rapid pig gains?

5. What is it important to do when pigs are kept on pasture?

6. What activity is it done by?

## **Text B**

### **Systems of Feeding Pigs**

1. There are two main systems of keeping pigs the indoor system and the outdoor one. Pigs kept under the indoor system require more vitamins and minerals than those kept under the outdoor system. For pigs to grow rapidly due conditions in a piggery should be not less than 16-21 degrees C. The

humidity should not be higher than 70 %. The floor of the piggery should be warm. If it is not warm, it should be bedded.

2. When pigs are kept on pasture in summer they grow and develop well. Green grass is high in vitamins and minerals required by the animals. Pigs on pasture take plenty of exercise, which is very essential for their health.

3. The best pasture grasses are alfalfa and clover. The animals should be given some concentrate, silage or root crops in addition to pasture, even if pastures are good.

4. To make rapid gains pigs must be fed liberally from birth onwards. Their rations are to be properly balanced with protein, minerals and vitamins. It is very important to control diseases and parasites when pigs are kept on pasture. This is done by rotational grazing.

**Exercise 12. Translate the following text in written.**

### **Text C**

#### **Selecting of Sows**

1. In selecting sows and boars for the breeding herd it is best to take individuals from large litters. By selecting sows and boars from stock that is known to be prolific, the farmer can maintain a productive breeding herd.

2. Pregnant sows should be kept in good condition but not fat. Pasture grass that is rich in protein and essential minerals is ideal for pregnant sows. If good pasture is not available, grain or other protein-concentrate feed may be used to provide a balanced ration. A mineral supplement is often good for sows and pigs. Sows tending to fatten excessively, the hograiser should feed them low-energy ration.

3. Sows are usually placed in farrowing pens a few days before the pigs are born. The farrowing pens should be clean, dry and well ventilated. If farrowing takes place in very cold weather the sows and pigs need additional care and protection. After the pigs are a day old the sow needs a small amount of feed and plenty of water. The feeding should be increased gradually for several days until the sow is on full feed.

**Exercise 13. Your friend is a private farmer. He breeds pigs. Ask him questions about his farm. Make a report about your friend's farm.**

## UNIT 2

### Care of Pigs

**Exercise 1. Before reading the text practise the pronunciation of the following words and word combinations and learn them.**

care [keə] – уход, забота

due [dju:] – должный, надлежащий

advisable [əd'vaɪzəbl] – желательный, целесообразный

solid food ['sɒlɪd fu:d] – твёрдая пища

thin [θɪn] – водянистый, разбавленный

slop [slɒp] – пойло; жидкий корм

middlings ['mɪdlɪŋz] – мука грубого помола, перемешанная с отрубями

oatmeal ['əʊtmɪ:l] – овсяная мука, толокно

enclosure [ɪn'kləʊzə] – огороженный загон

shelled corn [ʃeld kɔ:n] – обмолоченная кукуруза

creep [kri:p] – загородка с лазами (для подкормки молодняка)

creep feeding [kri:p 'fi:dlɪŋ] – подкормка для молодняка

pigling ['pɪglɪŋ] – поросёнок

palatable ['pælətəbl] – вкусный

supplement ['sʌplɪmənt] – добавка (кормовая)

steamed bone meal [sti:m d bəʊn mi:l] – обезжиренная костная мука

ground limestone [graʊnd 'laɪmstəʊn] – измельчённый известняк

iron ['aɪə] – железо

copper ['kɒpə] – медь

portable ['pɔ:təbl] – передвижной

rotational grazing [rə'teɪʃənəl 'greɪzɪŋ] – пастбищеоборот

parasite ['pærəsait] – паразит

piggery ['pɪg(ə)rɪ] – свинарник, хлев

bedding ['bedɪŋ] – подстилка (для скота)

udder ['ʌdə] – вымя

to be due [tə bi: dju:] – обуславливаться

**Exercise 2. Read and translate the following sentences paying attention to the translation of the construction “for + noun + infinitive”.**

1. For pigs to develop fast due conditions should be provided in the piggery. 2. For pigs to develop normally a mineral supplement should be provided. 3. For pigs to grow rapidly due temperature in a piggery should be not less than 21 °C. 4. For pigs to make rapid gains hogbreeders feed them

liberally from birth onwards. 5. For sows to produce healthy litters hograisers must feed them properly. 6. For boars to be used for breeding they must be about 10 months old.

**Exercise 3. Read and translate the following text.**

**Text A**

1. The first week of a pig's life is known to be especially critical. During this period due temperature, ventilation and sanitation in the pen are the most important. Sometimes it is advisable to put newborn pigs in a warm place and bring them to their mother every two hours. In four or six hours they may be left with their mother.

2. Young pigs begin eating solid food at the age of 3 to 4 weeks. At this age they are known to be fed a thin slop of milk, wheat middlings and oatmeal. As they become older they may be fed shelled corn. The feed is usually given to them in a separate enclosure known as a creep. Due to the creep feeding little pigs may be fed the best feed.

3. The weaning of piglings is usually done at 6 or 8 weeks of age. The best practice is to remove the sow from the pen, leaving the piglings in familiar surroundings. During the period of weaning the ration should be palatable and nutritious. More than 600 pounds of a balanced ration is required in feeding a pig from its weaning until it has a little weight of about 200 pounds.

4. Some hogmen are known to raise pigs entirely on grains. For such pigs to develop normally a mineral supplement should be provided. The mixture that is generally satisfactory includes equal parts of steamed bone meal, ground limestone and common salt. Young pigs require more iron and copper than is supplied in the sow's milk. That is why they eat some turf and soil.

5. Pigs on good pastures require 10 to 15 per cent less feed than those raised without pasture. Pigs being kept on pasture, one of the main tasks of the hogbreeder is to prevent diseases and parasites. This is achieved best of all by using portable houses and by dividing the pasture into many plots. Provided that portable houses and temporary fences are used, the grazing should be large enough to provide forage for two or three weeks. Then the pigs are moved to a new plot. Thus, the rotational grazing is known to be one of the best ways to prevent diseases and control parasites.

6. For pigs to develop normally due conditions in the piggery should be provided. The bedding ought to be short not to irritate the udder of the sow

and to allow the pigs to move freely. The piggery should be thoroughly cleaned and disinfected to prevent infection.

7. Rapid growth of pigs is due to both the proper feeding and the sanitary conditions in the piggery.

**Exercise 4. Find English equivalents to the following words and word combinations in the text.**

Санитарная профилактика; новорождённый; кормить; загородка с лазами; поросята; знакомая окружающая среда; питательный; сбалансированный рацион; минеральная добавка; требовать; предупредить болезнь; разделять пастбище; пастбищеоборот; бороться с паразитами; должные (надлежащие) условия; раздражать вымя; предупреждать инфекцию в свинарнике; надлежащее кормление.

**Exercise 5. Complete the sentences using the words from the text:**

1. It is advisable to put ... in a warm place.
2. At the age of 3 or 4 weeks young pigs are fed wheat ... and ... .
3. The feed is given in an enclosure called a ... .
4. During the period of weaning the ration should be ... and ... .
5. Some hogmen raise pigs entirely ... .
6. Pigs being kept on pasture, one of the main tasks of the ... is to ... .
7. This is achieved by using ... .
8. Rotational grazing is one of the best ways to ... and ... .
9. The bedding should be short not to ... .
10. The piggery should be thoroughly cleaned and disinfected to ... .

**Exercise 6. Open brackets and translate the words and word-combinations into English:**

1. The floor of the (свинарник) should be warm.
2. Sows are usually placed in farrowing (станки).
3. They are usually supplied with legume and (обмолоченная кукуруза).
4. For the winter (рацион) legume should be the main roughage feed.
5. A (сбалансированный рацион) should consist of a proper proportion of roughages, succulents and concentrates.
6. Farm animals are bred for the production of highly (питательных) products.
7. This system of using pastures is known as (пастбищеоборот).
8. Sheep, pigs as well as poultry are (выращивают) on large farms.
9. Farm animals may be (содержаться) on pasture all the year round.
10. (Вкусные) and digestible feeds must be supplied.

**Exercise 7. Translate the English words and word combinations into Russian.**

Temperature; ventilation; warm place; wheat middlings; oatmeal; separate enclosure; little pigs; to remove the sow; period of weaning; little weight; to raise pigs on grains; steamed bone meal; ground limestone; common salt; iron and copper; sow's milk; turf and soil; portable house; temporary fence; to provide forage for three weeks; piggery; to move freely.

**Exercise 8. Reading comprehension. Choose the best answer. Consult the text if necessary.**

1. Newborn pigs may be left with their mother in ... .
  - a) 2 hours;
  - b) 3–4 hours;
  - c) 4–6-hours.
2. Young pigs are fed wheat middlings and oatmeal at the age of ... .
  - a) 3 to 4 weeks;
  - b) 3 to 4 months;
  - c) 6 to 8 weeks.
3. Pigs are weaned at the age of ... .
  - a) 6 to 8 weeks;
  - b) 3 to 4 weeks;
  - c) 4 to 6 hours.
4. When pigs are kept on pasture the main task is to ... .
  - a) provide good feeding;
  - b) prevent diseases and parasites;
  - c) allow the pigs to move freely.
5. Preventing diseases is achieved by ... .
  - a) providing forage;
  - b) using portable houses and dividing the pasture into many plots;
  - c) using temporary fences.
6. The piggery is cleaned and disinfected to ... .
  - a) control parasites;
  - b) prevent diseases;
  - c) prevent infection.
7. Pigs grow rapidly due to ... .
  - a) proper feeding and controlling parasites on pasture;
  - b) proper feeding and sanitary conditions in the piggery;
  - c) feeding shelled corn.

**Exercise 9. Choose the right translation.**

1. Due to the creep feeding.
  - a) за исключением подкормки;
  - b) благодаря подкормке;
  - c) несмотря на подкормку.
2. Pigs being kept on pasture ...
  - a) Когда свиней не содержат на пастбище;
  - b) Свиньи, когда содержатся на пастбище;
  - c) Свиньи, содержащиеся на пастбище.
3. Provided that portable houses and temporary fences are used.
  - a) Обеспеченные тем, что используются загоны и временные ограждения;
  - b) Когда используются загоны и временные ограждения;
  - c) Если используются загоны и временные ограждения.
4. Rapid growth of pigs is due to both the proper feeding and the sanitary conditions in the piggery.
  - a) Свиньи растут быстро в свинарнике благодаря как правильному питанию, так и санитарным условиям;
  - b) Свиньи быстро растут в свинарнике из-за правильного питания и санитарных условий;
  - c) Быстрый рост свиней – это обеспечение правильного питания и санитарных условий в свинарнике.

**Exercise 10. Answer the following questions.**

1. What things are important during the first week of a pig's life?
2. At what age do young pigs begin eating solid food?
3. What solid food do pigs begin eating?
4. What should the ration be during the period of weaning?
5. What feeds and crops do hogmen use to raise pigs?
6. What is the main task for the hogbreeders when pigs are kept on pasture?
7. How is it achieved?
8. What is one of the best ways to prevent diseases and control parasites?
9. What is done to prevent infection when pigs are kept indoors?

**Exercise 11. Look through the text and answer the following questions.**

1. Why are many kinds of hogs raised around the world?
2. What do often raised breeds of hogs reflect?
3. How many hog breeds are there in Europe?

4. Are the regional differences among breeds of hogs in the United States considerable?
5. What hogs are raised in the United States?
6. How are crossbred hogs produced?
7. What is the difference between hybrids and purebreds?
8. Why are meat-type hogs raised in the United States?

### **Text B**

#### **Kinds of Hogs**

1. There are many kinds of hogs raised around the world. Because hogs have a short reproduction cycle, new breeds can be developed over a relatively short period of time. Often, such breeds of hogs reflect the climate and production methods of the region in which they are raised. In Europe, for example, each country has developed its own breeds of hogs. In the United States, regional differences among breeds of hogs are slight.

2. Farmers in the United States raise chiefly crossbred hogs. Crossbred hogs are produced by mating parents of different breeds. Crossbreds, also called hybrids, are more active at birth, grow more rapidly, and have higher reproduction rates than purebreds.

3. Hogs raised in the United States are classified as meat-type hogs. Meat-type hogs produce more lean meat in proportion to fat. Pork from such hogs is low in fat and is a good source of high-quality protein.

**Exercise 12. Translate the following text in written.**

### **Text C**

#### **Hog Breeding**

1. The period from birth to 75 pounds in weight is the most critical one in the pig's life. That is why after weaning it is necessary to continue to feed the pigs a good balanced ration.

2. Pigs should not be weaned until they are eight weeks of age. At weaning time they should weigh 35 to 40 pounds or more. For a few days before weaning the ration of the sow should be reduced to decrease her milk flow. Then the sow is taken away from the pen, the pigs being left in their familiar surroundings.

3. The hogbreeder should feed liberally to obtain rapid gains. Palatable and digestible feeds such as barley and corn grain, oat meal, clover or alfal-



fa grass must be supplied. Concentrated and other feeds should be ground. The quality of grinding should be carefully tested, as fine grinding increases the digestibility of feed.

**Exercise 13. Make up a report about feeding pigs.**

**Exercise 14. Speak to your friend about caring pigs in our Republic.**

1. At what age are young pigs given solid food in Belarus?
2. What solid food are they given?
3. At what age are young pigs weaned in our country?
4. What crops are used in feeding pigs in Belarus?
5. Are pigs kept indoors or outdoors in our country?
6. What problems do Belarusian hogbreeders face keeping pigs outdoors?
7. Do hogbreeders use bedding keeping pigs indoors?
8. Are piggeries cleaned and disinfected? How often?

### UNIT 3

#### Raising of Pigs

**Exercise 1. Before reading the text practise the pronunciation of the following words and word combinations and learn them.**

indoors [ˌɪnˈdɔːs] – внутри помещения

market ['mɑːkɪt] – рынок

fattening period ['fætənɪŋ 'rɪəpɪəd] – период откорма

fencing ['fensɪŋ] – огораживание, возведение изгородей

pasture maintenance ['pɑːstʃə 'meɪntənəns] – уход за пастбищем

to avoid [tə ə'vɔɪd] – избегать

housing ['haʊzɪŋ] – стойловое содержание, содержание скота в помещении

gain [geɪn] – привес, прирост

marketing ['mɑːkɪtɪŋ] – реализация

root crops [ruːt krɒps] – корнеплоды

quantity ['kwɒntəti] – количество

legumes ['legjuːm] – бобовые

forage ['fɔːrɪdʒ] – фураж

alfalfa [æɪ'lʌlfə] – люцерна

antibiotics [ˌæntɪbaɪ'ɒtɪks] – антибиотики

to interfere [tə ɪntə'fɪə] – вмешиваться

to turn into field [tə tɜːn ɪntə fiːld] – переводить на поле

to hog off [tə hɒg ɒf] – скармливать свиньям

to fence [tə fens] – огораживать, ограждать, обносить изгородью

soybean ['sɔɪbi:n] – соя

source [sɔ:s] – источник

protein ['prəʊti:n] – белок, протеин

**Exercise 2. Read and translate the following sentences, paying attention to the translation of the construction “Complex Subject”.**

1. Hog breeding is known to be a very important branch of animal husbandry.

2. Some farmers are known to place sows in the farrowing pen just before farrowing.

3. Certain antibiotics are known to increase the rate of gain.

4. The first week of a pig’s life is known to be especially critical.

5. Some hogmen are known to raise pigs entirely on grain.

6. Mutton is likely to be much more valuable than wool in Great Britain.

7. Artificial insemination technique is known to be extremely valuable aid in carrying out various mating systems.

8. The results obtained have proved to be successful.

**Exercise 3. Read and translate the following text.**

**Text A**

1. There is an increasing tendency to raise pigs for market indoors. In this case many problems such as parasites, fencing, pasture maintenance and others will be avoided.

2. For indoor housing pigs should be divided into weight groups of 50 to 60 in each. Good pigs managed and fed properly require less than 3 pounds of feed per pound of gain during the fattening period, and 4 to 5 pounds of feed will be used per pound of gain during the period just before marketing. Grains are mainly used in the ration.

3. To produce less fat pigs should be marketed at weights of 200 pounds or less. For raising breeds of pigs of bacon types there should be used low-energy rations. Besides, these breeds should be fed during the 120-200 pound stage.

4. Hogs like root crops but these crops should not be used alone. Better results are usually obtained by feeding small quantities of the root crops with grain and legume forage or by using alfalfa as the main feed.

5. Antibiotics are sometimes added to the feeds of hogs and other livestock to control harmful bacteria and other organisms that may interfere with the growth of the animals. In this way more economical gains and better growth are obtained.

6. One of the economical ways to harvest corn is to turn hogs into the field. This method of harvesting corn is known as “hogging off”. Small fenced fields are best for this system. Temporary fences may be used to divide large fields into smaller areas so that the hogs may use them better. Soybeans planted with corn are a good source of protein.

**Exercise 4. Find English equivalents to the following words and word combinations in the text.**

Избегать проблемы; уход за пастбищем; весовые группы; кормить надлежащим образом; на фунт привеса; главным образом; низкоэнергетический рацион; откормленная свинья; бобовый фураж; люцерна; добавлять антибиотики; бороться с вредными бактериями; переводить на поле; огороженные поля; источник белка.

**Exercise 5. Complete the sentences using the words from the text.**

1. Many hogbreeders raise pigs for ... .
2. For indoor housing pigs should be divided into ... .
3. Grains are mainly used ... .
4. For raising breeds of pigs of bacon types there should be used ... .
5. Farmers receive better results when they feed pigs using root crops with grain and ... .
6. Hogbreeders sometimes add ... to the feeds of hogs.
7. Antibiotics are added to the feeds to ... .
8. In such a way farmers obtain more economical ... .
9. One economical way to harvest corn is to ... .
10. To divide large field into smaller areas ... are used.

**Exercise 6. Open brackets and translate words and word combinations into English.**

1. Regularity in the time of (кормления) is very important.
2. Cattle should be given not too much (зерно) at the beginning of the (период откорма).
3. Cattle may lose their (вес) before supplementary (кормление) starts.
4. For the winter (рацион), (бобовое) hay should be the main roughage feed.
5. Corn silage is low in (белок).
6. Milk is one of the best (источник) of calcium.
7. Calves raised for veal production are generally ready for (реализации) at the age of 6 or 8 months.
8. Farmers take the milk and eggs to the (рынок).
9. (Временные) pastures are used only 2 or 3 years.

**Exercise 7. Reading comprehension. Choose the best answer. Consult the text if necessary.**

1. Many hogbreeders raise pigs for market ... .
  - a) outdoors;
  - b) indoors;
  - c) in pens.
2. Raising pigs indoors farmers avoid the problems of ... .
  - a) parasites and fencing;
  - b) controlling harmful bacteria;
  - c) preventing diseases.
3. During the fattening period one pound of gain requires ... .
  - a) one pound of feeds;
  - b) three pounds of feeds;
  - c) five pounds of feeds.
4. Hogbreeders obtain better results by feeding pigs with ... .
  - a) root crops, grain and legume forage;
  - b) root crops, corn;
  - c) alfalfa and corn.
5. Antibiotics are used to ... .
  - a) prevent diseases;
  - b) prevent parasites;
  - c) control harmful bacteria and other organisms.
6. Best for "hogging off" system are ... .
  - a) fenced fields;
  - b) indoor system;
  - c) paddocks.
7. A good source of protein is ... .
  - a) corn and grains;
  - b) legumes and alfalfa;
  - c) soybeans and corn.

**Exercise 8. Translate the English words and word combinations into Russian.**

Increasing tendency; parasites; fencing; pasture maintenance; indoor housing; weight groups; 4 to 5 pounds of feed; at weights of 200 pounds; breeds of pigs; bacon types; low-energy ration; small quantities; root crops; legume forage; alfalfa; the main feed; antibiotics; feeds of hogs; livestock; to control harmful bacteria; growth of animals; economical ways; to harvest corn; fenced fields; temporary fences; good source of protein

### **Exercise 9. Choose the right translation.**

1. To produce less fat, pigs should be marketed at weights of 200 pounds or less.

a) Производство меньшего количества жира требует чтобы свиней продавали при весе 200 фунтов или меньше.

b) Чтобы производить меньше жира, свиньи должны продаваться весом 200 фунтов или меньше.

c) Чтобы получить меньше салтных свиней, их следует продавать при весе 200 фунтов или меньше.

2. Low-energy ration should be fed during the 120–200 pound stage.

a) Когда свиньи весят 120–200 фунтов, они получают низкоэнергетический рацион.

b) Когда свиньи весят 120–200 фунтов, их следует держать на низкоэнергетическом рационе.

c) Низкоэнергетический рацион скармливается при весе 120–200 фунтов.

3. In this way more economical gains and better growth are obtained.

a) Таким образом получают более экономичный привес и лучший прирост.

b) Таким путём получают самый экономичный привес и лучший прирост.

c) При таком пути получается более экономичный привес и лучший прирост.

4. Soybeans planted with corn are a good source of protein.

a) Сою сажают с кукурузой и они являются хорошим источником белка.

b) Соя, посеянная с кукурузой, является хорошим источником белка.

c) Сою сеют с кукурузой, чтобы получить хороший источник белка.

### **Exercise 10. Answer the following questions.**

1. What is the increasing tendency to raise hogs for market? 2. What problem do hogbreeders avoid in this case? 3. How many pounds of feed per pound of gain during the fattening period do good pigs require just before marketing? 4. At what weight should pigs be marketed to produce less fat? 5. What types of breeds should be used? 6. What are the best feeds for pigs? 7. Why are antibiotics added to the feed of hogs? 8. What is an economical way to harvest corn? 9. How is this method called? 10. What fields are best for this system? 11. What is a good source of protein?

**Exercise 11. Look through the text and answer the following questions.**

1. What proportion of meat eaten in the US comes from hogs?
2. What kind of food is made of pork?
3. Do you know products made from hogs?
4. What do we call farmers who raise hogs?
6. How many hogs are there on farms throughout the world?
7. What other animals do hogs rank with?

### **Text B**

#### **Hogs**

1. About a fourth of the meat eaten in the United States comes from hogs. These animals provide pork, which is eaten as pork chops, ham, bacon, and sausage. The fat, skin, hair, glands, and other parts of hogs are used to make a variety of products. These products include lard, leather, brushes, soap, fertilizer, glue, and medicines.

2. Farmers in almost every country raise hogs. Both young and adult hogs are also called pigs or swine. Young hogs are almost always called pigs. Farmers who raise hogs are sometimes called pork producers. Hogs are among the most intelligent of the domesticated animals.

3. There are about 840 million hogs on farms throughout the world. China has the most hogs, about 40 per cent of the world total. About one-fifth of the farms in the United States raise hogs. Hogs rank with cattle, poultry, and dairy products as an important source of farm income.

**Exercise 12. Translate the following text in written.**

### **Text C**

#### **Main Breeds**

1. The eight commonly raised breeds of hogs in the United States are the American Landrace (*ландрас*), Berkshire (*беркширская порода*), Chester White (*белый честер*), Duroc (*дюрок*), Hampshire (*гемпшир*), Poland China (*польско-китайская порода*), Spotted Swine (*пятнистая свинья*), and Yorkshire (*йоркшир*). Farmers in the United States developed all these breeds except the Berkshire and Yorkshire, which were imported from England in the 1800's.

2. The American Landrace breed includes hogs bred from Landrace stock from such countries as Denmark, England, Germany, and Sweden. No one breed is greatly superior to another in its ability to produce meat or to grow swiftly. However, pork producers are increasingly using Yorkshire and Landrace sows for crossbreeding because of their ability to produce large litters.

**Ex. 13. Speak to your friend about raising hogs in our republic.**

1. What is the tendency to raise pigs for market in Belarus?
2. Do farmers face the problem of parasites?
3. How many pounds of feed per pound of gain during the fattening period do farmers give to their pigs in our country?
4. What breeds of pigs do Belarusian farmers raise: fat or bacon?
5. What grains are used in feeding pigs in Belarus?
6. Are antibiotics used? Why?
7. Are there any differences in raising pigs abroad and in Belarus? If yes, what are they?

## UNIT 4

### Sheep Breeding

**Exercise 1. Before reading the text practise the pronunciation of the following words and word combinations and learn them.**

sheep breeding [ʃi:p 'bri:diŋ] – овцеводство

reverse [ri'vz:s] – полностью противоположное, совсем обратное

mountain flock (sheep [ʃi:p]) ['mauntɪn flɒk] – горные овцы (*породы английских и шотландских овец типа шевииот и дартмур*)

low ground flock [ləu graʊnd flɒk] – овцы для разведения на равнинном пастбище

former ['fɔ:mə] – первый (*из двух вариантов*)

latter ['lætə] – последний (*из двух вариантов*)

branch [brɑ:nʃ] – отрасль

to rear [tə riə] – разводить, выращивать

wool [wul] – шерсть

mutton ['mʌt(ə)n] – баранина

maturity [mə'ʃʊərəti] – зрелость

merino [mə'ri:nəu] – меринос (*порода овец*)

hardiness ['hɑ:dməs] – выносливость, стойкость

prolificacy [prə'lifɪkəsi] – плодовитость

ewe [ju:] – овца

to differentiate [tə ,dɪfə'renʃieɪt] – различать(ся), отличать(ся)  
 flock [flok] – стадо, отара  
 supplementary feeding [sʌplɪ'mentəri 'fi:diŋ] – дополнительное пита-  
 ние, подкормка  
 to improve [tu ɪm'pru:v] – улучшать  
 offspring ['ɔfsprɪŋ] – потомство, помёт, приплод  
 vigorous ['vɪg(ə)rəs] – сильный  
 ram [ræm] – баран  
 breeding condition ['bri:diŋ kən'dɪʃən] – условия разведения  
 flesh [fleʃ] – мясо, плоть  
 linseed meal ['lɪnsi:d mi:l] – мука из жмыха льняного семени  
 ration ['ræʃən] – рацион  
 fine wool [faɪn wul] – тонкая рунная шерсть  
 long wool [lɒŋ wul] – длинноволокнистая шерсть  
 crossbred wool ['krɒsbred wul] – кроссбредная шерсть  
 medium wool ['mi:diəm wul] – шерсть средней длины  
 coarse wool [kɔ:s wul] – грубая шерсть  
 white-faced sheep ['waɪt'feɪst] – беломордая овца

**Exercise 2. Read and translate the following sentences paying attention to the functions of the Participles.**

1. It was a very smiling boy. 2. Look at the trees growing in our garden. 3. Reading an English book he wrote out many new words. 4. When traveling abroad, he attended few courses. 5. They will be working at that time tomorrow. 6. They are swimming together. 7. I see him looking at me right now. 8. She notices us studying. 9. The research being carried out is of great importance. 10. Being discovered, the new wells will provide with oil all near-by regions. 11. When being heated, a magnet loses some or all its magnetism. 12. I love to watch my city waking up. 13. She caught Tom and Peter eating jam. 14. He was seen driving the car. 15. She was heard talking about the latest events in our college.

**Exercise 3. Read and translate the following text.**

**Text A**

1. Sheep breeding is one of the most important branches of animal husbandry. Sheep are reared for two purposes: wool and mutton production. Early maturity and quality of meat are known to be the most important thing in sheep kept for mutton. Mutton is likely to be much more valuable than wool in Great Britain. The reverse is true for Australia, South Africa and other countries where the Merino is predominant.



2. The necessary qualities common to all breeds of sheep are hardiness, prolificacy, milking capacity of ewes, activity and good wool characteristics. There are two main divisions of sheep in Great Britain which have to be carefully differentiated. They are mountain flocks and low ground flocks. The former are kept for breeding purposes only, the latter are kept for fattening as well as breeding.

3. As to mountain sheep feeding it is considered to be simplest and most natural method of sheep rearing. The flock is very hardy and eats all kinds of mosses and grasses growing on hills and these seem to be sufficient for the sheep. Supplementary feeding is unlikely to take place in ordinary years, unless the ground is heavily covered with snow. Winter being very stormy, however, it becomes necessary to supply the sheep with hay during the period when the ground is covered. If only a thin layer of snow covers the ground most sheep seem to be able to find the feed, provided the surface is not frozen hard. Where hay cannot be supplied some sheep farmers provide the flock with maize and turnips.

4. To improve the offspring only healthy, vigorous rams are chosen for breeding purposes. Pasture being good, little grain is fed to the rams. Concentrates are fed before the breeding time and during it to keep the rams in breeding condition during the mating period. Rams being in thin flesh, some linseed meal may be added to the grain part of their ration.

5. Today, there are more than 800 breeds and varieties of domestic sheep throughout the world. There are five main groups of sheep, depending on their fleece. They are fine wool, long wool, crossbred wool, medium wool, and coarse wool.

**Exercise 4. Find English equivalents to the following words and word combinations in the text.**

Овцеводство; шерсть; производство баранины; ценный; преобладать; выносливость; удоимость; овца; содержащихся в горной местности; отара овец, овцы для разведения на равнинном пастбище; подкормка; улучшить потомство; племенное назначение; быть худым (тощим); породы и разновидности домашних овец.

**Exercise 5. Complete the sentences using the words from the text:**

1. Sheep are reared for ... and ... production.
2. The necessary qualities of sheep are ... .
3. Sheep in Great Britain are divided into ... and ... .
4. Mountain sheep are bred for ... .
5. Low ground flocks are kept for ... .
6. The flock eats all kinds of ... and grasses.
7. Supplementary feeding takes place when the ground is ... .

8. For breeding purposes only ... and ... rams are chosen.
9. If pastures are good, little grain is fed to the ... .
10. To keep rams in ... farmers give them concentrates.

**Exercise 6. Open the brackets and translate the words and word combinations into English.**

1. (Овец) are raised in all parts of the world.
2. (Бараны) usually have horns.
3. This breed was developed to produce (шерсть) and (баранину).
4. Concentrates are used for (разведения) whitefaced range of (овец).
5. Wool is very (ценна) in proportion to its bulk.
6. Wool sheep are (преобладающий) in the west.
7. In general (овцеводство) is not practiced in regions where it is too hot and too wet.

**Exercise 7. Reading comprehension. Choose the best answer. Consult the text if necessary.**

1. Sheep are reared for two purposes ...
  - a) mutton and milk;
  - b) mutton and wool;
  - c) wool and milk.
2. When sheep are kept for mutton, the most important are ...
  - a) palatability and digestibility;
  - b) early maturity and quality of wool;
  - c) early maturity and quality of meat.
3. Sheep are valued for their ...
  - a) maturity, activity, sperm preservation;
  - b) hardiness, prolificacy, milking capacity of ewes;
  - c) breeding qualities, resistance to diseases.
4. Low ground flocks are kept for ...
  - a) only fattening;
  - b) fattening and breeding;
  - c) only breeding.
5. Sheep eat all kinds of ...
  - a) mosses and grasses;
  - b) mosses and hay;
  - c) hay and concentrates.
6. For breeding purposes are chosen ...
  - a) prolific, vigorous rams;
  - b) healthy, vigorous rams;
  - c) only vigorous rams.

7. Concentrates are given to rams ...
- during and after the breeding time;
  - during the mating period;
  - before the breeding time and during it.
8. There are five main groups of sheep, depending on ...
- their horns;
  - their milk;
  - their fleece.

**Exercise 8. Translate the English words and word combinations into Russian.**

Branches of animal husbandry; wool and mutton production; sheep kept for mutton; reverse; predominant; hardiness; prolificacy; milking capacity; breeding purposes; sheep feeding; sheep rearing; mosses and grasses; supplementary feeding; thin layer of snow; healthy, vigorous rams; breeding time; fine wool, long wool, crossbred wool, medium wool, and coarse wool.

**Exercise 9. Choose the right translation.**

1. Mutton is likely to be much more valuable than wool in Great Britain.
- Баранина гораздо более ценится в Великобритании, чем шерсть.
  - По-видимому, баранина намного больше ценится в Великобритании, чем шерсть.
  - Баранина больше ценится в Великобритании, чем шерсть.
2. The former are kept for breeding purposes only.
- Горных овец держат только для разведения.
  - Горных овец держат для откорма.
  - Бывшие содержатся для разведения.
3. As to mountain sheep feeding it is considered to be the simplest method.
- Кормление овец в горах считается самым простым методом.
  - Что касается кормления овец в горах, оно считается простым методом.
  - Что касается кормления горных овец, то оно считается самым простым методом.
4. If only a thin layer of snow covers the ground, most sheep seem to be able to find the feed.
- Если только тонкий слой снега покрывает землю, большинство овец могут найти корм.
  - Если только тонкий слой снега покрывает землю, большинство овец, по-видимому, могут найти корм.
  - Если тонкий слой снега покрывает землю, овцы, по-видимому, не могут найти корм.

**Exercise 10. Answer the following questions.**

1. What purposes do farmers rear sheep for?
2. What is most important in sheep kept for mutton?
3. What is valued more in Great Britain: mutton or wool?
4. What are the qualities common for all breeds of sheep?
5. What are the main divisions of sheep in Great Britain?
6. What are mountain flocks kept for?
7. What are low ground flocks kept for?
8. What method of sheep rearing is the simplest?
9. What are the main feeds for sheep?
10. When does supplementary feeding take place?
11. Name some supplementary feeds.
12. How many breeds of sheep are there today?
13. What are five main groups of sheep?

**Exercise 11. Using the questions of ex. 10 make a short report about sheep rearing in Great Britain.**

**Exercise 12. Look through the text and answer the following questions.**

1. What have people tamed sheep for?
2. Where are sheep raised?
3. What country is the world's leading sheep-producing one? Prove it.
4. What do sheep yield?
5. What were the wild sheep tamed for?
6. When have breeders developed the animals for meat?

## **Text B**

### **Sheep**

1. Sheep are among the most important animals that people have tamed because they provide both food and clothing. Long before people began to write history, shepherd watched the flocks of sheep in the field to guard them against attack by wild animals.

2. Today, sheep are raised in all parts of the world. Australia is the world's leading sheep-producing country. In Australia there are about 10 sheep for every person. In New Zealand, there are about 20 sheep for every person. Sheep yield wool, meat and leather. They also furnish the raw materials for many by-products such as glue, tallow, suet, soap, fertilizer, cosmetics.

3. Domestic sheep have been slowly and carefully changed from their wild ancestors. Originally, the wild sheep were tamed for the sake of their hides and milk. They were also used to carry burdens. Very early they became important for their fleece. The coarse hair that covered the wild sheep was replaced by a soft coat of wool through breeding. Only in the last 200 years have breeders developed the animals primarily for their meat.

**Exercise 13. Translate the following text in written.**

### **Text C**

#### **Sheep Raising**

1. There are two different ways of raising sheep in the United States. The most important way is on the range. Here sheep are herded about in large bands containing from 1000 to 2000 or more sheep. The herds are moved about on large tracts of land that may be owned by the sheep owner or may be leased from another owner or from the government. The sheep eat grass in the pasture.

2. The other important way of raising sheep is on pasture. The farmer raises thirty to a few hundred sheep, keeping them in fenced pastures. In winter, they are fed grain and hay that have been grown on the farm.

3. Throughout history, sheep have generally been raised in places that are far from cities and other thickly populated areas. There are two main reasons for this. Compared to most products, wool is very valuable in proportion to its bulk.

4. Furthermore, it does not spoil. Therefore, wool can be stored and shipped over long distances. In the second place, sheep tend to herd together, and therefore they can be handled in large bands in open country with very little labor. Sheep like to eat woods and shrubs. They can live without water for long periods of time. Thus, farmers are able to raise sheep on dry plains.

5. In the United States, most sheep are raised west of the Mississippi. Wool sheep predominate in the west in Ohio and in a few other sections. Mutton sheep are raised in practically all parts of the country. The United States can produce nearly all the lamb and mutton it needs. But it imports much of the wool it uses, because of the demand for special types of wool.

## UNIT 5

### Artificial Insemination

**Exercise 1. Before reading the text practise the pronunciation of the following words and word combinations and learn them.**

artificial [ˌɑːtɪ'fiʃəl] – искусственный

insemination [ɪnˌsemɪ'neɪʃ(ə)n] – осеменение

technique [tek'ni:k] – метод, способ

to increase [tu ɪn'kri:s] – увеличивать

advantage [əd'vɑːntɪdʒ] – преимущество; выгода, польза

to serve [tə sɜːv] – зд. случать, спаривать (*животных*)

average ['ævərɪdʒ] – средний

inferior [ɪn'fɪəriə] – посредственный, худший (*по качеству*)

tried sire [traɪd 'saɪə] – надежный (проверенный) производитель

outstanding sire [ˌaʊt'stændɪŋ'saɪə] – выдающийся бык-производитель

rigid ['rɪdʒɪd] – жёсткий

elimination [ɪˌlɪmɪ'neɪʃən] – удаление, отбраковка

infertility [ˌɪnfə'tɪləti] – бесплодие

semen ['si:mən] – сперма, семя

processing ['prəʊsesɪŋ] – стерилизация (*в герметически закупоренной посуде*)

contamination [kənˌtæmɪ'neɪʃən] – загрязнение

to dilute [tə daɪ'lu:t] – разбавлять

diluent ['dɪljʊənt] – растворитель, разбавитель

protection [prə'tekʃən] – защита

to freeze [tə friːz] – замораживать

chest [tʃest] – контейнер

liquid ['lɪkwɪd] – жидкий

nitrogen ['naɪtrədʒən] – азот

shipping ['ʃɪpɪŋ] – транспортировка, перевозка

thawing [θɔːɪŋ] – размораживание

thawed [θɔːd] – размороженный

fertility [fɜː'tɪləti] – плодovitость, способность к оплодотворению

offshoot ['ɔːfʃu:t] – потомство; помёт, приплод

**Exercise 2. Read and translate the following sentences paying attention to the translation of Absolute Participle Construction:**

1. Pastures being good, little grain is fed to the rams.

2. Pigs being kept on pasture, one of the main tasks of the hogbreeder is to prevent diseases.

3. Being kept on pasture in summer, pigs grow and develop well.
4. Being high in easily digestible nutrients and low in moisture, concentrates are very valuable in feeding all class of animals.
5. Being healthy, the calf will soon get to its feet and start nursing.
6. Calves being 3 weeks old, other feeds should be given.
7. Calves reaching this age, whole milk must be gradually decreased.
8. Having supplied the animals with the proper kind and amount of feed, the farmer will obtain good results.
9. Having been prepared in this way, silage is always of high feeding value.
10. Rams being in thin flesh, some linseed meal may be added.
11. Winter being very stormy, it becomes necessary to supply sheep with hay.
12. Being kept in this way, the bull may be fed and cared with the rest of the herd.

**Exercise 3. Read and translate the following text.**

**Text A**

1. The artificial insemination has received increasing attention in many countries. This technique has been used in all domestic animals and poultry, but it is most extensively used for cattle breeding. There are now few cattle-raising countries where artificial insemination is not practised.

2. The artificial insemination technique has many advantages over the ordinary service. By artificial insemination the number of cows served by one bull can be increased from the normal average number of between 30 and 50 per year by natural service, up to between 300 and 700 and in special cases up to 10.000 or more. By means of this method the improvement in breed type production and quality can be more rapidly effected, provided that tried and outstanding sires are used. A smaller amount of bulls is needed and consequently more rigid methods of selecting bulls can be practised. This results in the elimination of inferior bulls from breeding and in the improvement of the quality of the cattle. In certain cases artificial insemination may be a means of preventing infertility, since it is possible to examine a bull's semen, which cannot be done with ordinary service.

3. Artificial insemination includes semen collection, processing of semen, freezing and insemination technique. When collecting semen, special attention should be paid to preventing any possibility of contamination by dust, dirt or chemicals. Clean collecting equipment is essential.

Soon after collection the semen is diluted with a diluent at the same temperature as the semen. Diluents, as milk, for instance, offer protection of the sperm during temperature change. Diluted bull semen can be stored at 5 °C for 3 or 4 days. Ram or boar semen is ordinarily used within a day or two after collection. Stallion semen does not store well and is usually used during the first day after collection.

4. To be stored for a long period, the semen should be frozen. The results obtained by experienced breeders with frozen semen have proved to be as successful as those with liquid semen. Frozen semen can be transported over long distances when stored in chests containing dry ice or liquid nitrogen. Transporting frozen semen in liquid nitrogen is the safest method of shipping for sperm preservation.

5. The frozen semen may be warmed immediately to body temperature. It should be used soon after thawing because reduced fertility results from keeping thawed semen at 5 °C for several hours before insemination.

**Exercise 4. Find English equivalents to the following words and word combinations in the text.**

Искусственное осеменение; домашние животные; осеменять (случать); естественное спаривание; улучшение; выдающийся бык-производитель; практиковать; удаление (отбраковка) плохих быков; предупреждать бесплодие; стерилизация спермы; заморозка; загрязнение; растворитель; жидкий азот; размораживание.

**Exercise 5. Complete sentences using the words from the text.**

1. This ... has been used in all domestic animals.
2. Using artificial insemination more cows can be ... by one bull.
3. It effects the ... in breed type production.
4. Artificial insemination is a means of ... .
5. Artificial insemination includes ... .
6. After collection ... is diluted.
7. Diluents ... sperm during temperature changes.
8. Stallion ... doesn't ... well.
9. The semen should be ... .
10. Frozen semen is stored in chests containing ... .
11. Semen should be used soon after ... .
12. Keeping semen thawed reduces ... .

**Exercise 6. Open the brackets and translate the following words and word combinations into English.**

1. Many breeders use the process called (искусственное осеменение) to (улучшить) the quality of their stock.



2. The breeders (собирают сперму) from an (выдающихся) males.
3. The (сперма) can be (заморожена) and (хранится) for future use.
4. Breeders (транспортируют) semen to another location for use there.
5. Artificial insemination is widely (используется) in (скотоводстве) and (птицеводстве).
6. Artificial insemination permits the best males to have many more (потомство) than would be possible by (обычным осеменением).

**Exercise 7. Reading Comprehension. Choose the best answer. Consult the text if necessary.**

1. Artificial insemination is most extensively used in ... .

- a) poultry;
- b) sheep-breeding;
- c) cattle breeding.

2. Using artificial insemination farmers can ... .

- a) examine bull's semen;
- b) control diseases;
- c) practice ordinary service.

3. Artificial insemination includes ... .

- a) infertility, eliminating inferior bulls;
- b) insemination technique, contamination by dust;
- c) semen collection, freezing and insemination technique.

4. After collection the semen is ... .

- a) frozen;
- b) diluted;
- c) preserved.

5. The worst stored semen is ... .

- a) ram one;
- b) boar one;
- c) stallion one.

6. Semen is frozen with ... .

- a) dry ice or liquid nitrogen;
- b) dry ice or oxygen;
- c) liquid nitrogen or oxygen.

7. The frozen semen may be warmed immediately to ... .

- a) 5 °C;
- b) body temperature;
- c) the temperature of thawing.

**Exercise 8. Translate the English words and word combinations into Russian.**

Artificial insemination; domestic animals and poultry; few cattle-raising countries; advantage; ordinary service; normal average number; production and quality; rigid methods of selecting; elimination of inferior bulls from breeding; means of preventing infertility; processing of semen; freezing; possibility of contamination by dust, dirt or chemicals; diluted bull semen; experienced breeders; liquid semen; frozen semen; ice or liquid nitrogen.

**Exercise 9. Choose the right translation.**

1. By means of this method ...
  - a) Без этого метода ...
  - b) Благодаря этому методу ...
  - c) Этот метод значит ...
2. This results in the elimination of inferior bulls.
  - a) Этот результат в отбраковке низкоплеменных быков.
  - b) Это приводит к отбраковке низкоплеменных быков.
  - c) Это приводит к отбраковке племенных быков.
3. Diluted bull semen can be stored ...
  - a) Разбавьте сперму быка и можете хранить её ...
  - b) Разбавили сперму быка и хранили её ...
  - c) Разбавленную сперму быка можно хранить ...
4. Transporting frozen semen in liquid nitrogen ...
  - a) Транспортировка замороженной спермы в жидком азоте ...
  - b) Транспортируя замороженную сперму в жидком азоте ...
  - c) Транспортировать замороженную сперму в жидком азоте ...

**Exercise 10. Answer the following questions:**

1. What farm animals is artificial insemination used in?
2. Do all countries use artificial insemination?
3. What are the advantages of artificial insemination over the ordinary service?
4. Can artificial insemination be a means of preventing infertility?
5. What does artificial insemination include?
6. What should special attention be paid to when collecting semen?
7. What can be a diluent?
8. How long can diluted bull semen be stored?
9. Does the period of semen storing depend on types of farm animals?
10. What do farmers do to make the period of semen storing longer?
11. How can you transport frozen semen?
12. Why should frozen semen be used soon after thawing?

**Exercise 11. Using the questions of ex. 10 make a short report about artificial insemination.**

**Exercise 12. Look through the text and answer the following questions.**

1. What do cattle breeders do for producing large quantities of milk or high-quality beef. 2. What advantages do beef cattle gain after having been bred to mature earlier? 3. At what age are heifers usually mated? 4. How much may calves normally weigh at birth? 5. What is the name of a cow that does not give milk?

### **Text B**

#### **Breeding**

1. Cattle breeders select and mate the best types of cattle for a special purpose, such as producing large quantities of milk or high-quality beef. Then they mate the best of the offspring until, after several generations, the cattle possess the desired qualities. In this way, beef cattle have been bred to mature earlier. They thus can be sold at a greater profit than they could if they had to be fed over a longer time. Selective breeding has increased milk output and the percentage of butterfat. Heifers usually are mated when they are about 15 months old. A cow carries her calf in her body for nine months before she gives birth. Cows usually have one calf every year. At birth, calves may normally weigh from 50 to 100 pounds (23 to 45 kilograms). Sometimes twin calves are born. Bulls may start breeding at the age of 1 year. However, they are most active between 2 and 6 years of age. A cow cannot produce milk unless it has given birth to a calf. Such a cow is known as a "fresh" cow. After the birth of the calf, the cow usually gives milk for about 10 months. A cow that does not give milk is called a "dry cow."

**Exercise 13. Translate the following text in written.**

### **Text C**

#### **Artificial Insemination**

1. The method of artificial insemination is known to be a very progressive one in breeding different classes of farm animals as well as poultry and bees. In many countries of the world more than 50 per cent of cows are now bred artificially. The technique of artificial insemination is to obtain semen from tried and outstanding sires, to store it under proper conditions until it is needed to use it. There are two ways of storing the semen obtained. The first

way is to store the semen during the short period of time. In this case it is diluted with some diluents. The second way is to store the semen over long periods. Then it should be frozen. No decrease in the quality of semen takes place in freezing it. The freezing of semen for storage over long periods is a good means of preserving the semen. It is now practiced in many countries. By means of freezing the semen it is now possible to have the reserves of sperm of most outstanding sires and to use it in different parts of the world. The artificial insemination technique is of great importance for the improvement of farm animals, as only the best sires may be used in breeding.

## UNIT 6

### Systems of Breeding and Improving Livestock (grading-up and pure-breeding)

**Exercise 1. Before reading the text practise the pronunciation of the following words and word combinations and learn them.**

conformation [ˌkɒnfəː'meɪʃən] – экстерьер (*животного*)

grading-up ['ɡreɪdɪŋ ʌp] – улучшение породы (*скрещиванием неплеменных женских особей соответствующего типа с племенными производителями*)

pure-breeding [ˈpjʊə 'briːdɪŋ] – чистопородное разведение

crossbreeding [ˌkrɒsbriːdɪŋ] – кроссбридинг (*скрещивание особей разных пород или разновидностей*)

inbreeding [ˌɪn'briːdɪŋ] – инбридинг (*близкородственное скрещивание животных или растений*)

linebreeding [ˌlaɪn'briːdɪŋ] – лайнбридинг (*линейное разведение скота*)

scrub female [skrʌb fiːmeɪl] – малорослая беспородная самка

butterfat ['bʌtə fæt] – молочный жир

purebred herd ['pjʊəbred hɜːd] – чистокровное стадо

inferior male [ɪn'fɪəriə meɪl] – неполноценный самец

sire ['saɪə] – производитель

grades [ɡreɪdz] – градация по стандартам

commercial livestock [kə'mɜːʃəl 'laɪvstɒk] – пользовательный скот

rate of gain [reɪt əv ɡeɪn] – интенсивность прироста/привеса

**Exercise 2. Read and translate the following sentences paying attention to the translation of “provided (that)”.**

1. The improvement in breed type production and quality can be more rapidly effected provided that tried and outstanding sires are used.

2. Cattle will be in fair flesh provided they are supplied with high nutritious and high quality feeds.

3. Provided that portable houses and temporary fences are used, the grazing should be large enough to provide forage for 2 or 3 weeks.

4. If only a thin layer of snow covers the ground most sheep seem to be able to find the feed, provided the surface is not frozen hard.

5. Children were permitted into the hall provided they sat at the back.

6. Provided they are physically fit, I see no reason why they shouldn't go on playing for another four or five years.

**Exercise 3. Read and translate the following text.**

### **Text A**

1. Much of the improvement of the conformation, type and production of domestic animals has been done through the use of carefully planned breeding systems. The most common systems of breeding are grading-up, pure-breeding, crossbreeding, inbreeding and linebreeding.

2. Artificial insemination technique is known to be an extremely valuable aid in carrying out various mating systems; particularly if semen can be frozen, transferred and kept for long periods.

3. *Grading-up and purebreeding.* These two systems of breeding involve the mating of animals of the same breed. Grading-up is the process of improving breeds by the continued generation-after-generation use of good purebred males on scrub females of the same breed. Grading-up is a common practice in the production of commercial livestock.

4. Many of the breeders of livestock who produce animals or animal products such as milk, butterfat and wool for the market do not maintain purebred herds and many of them still have scrub females that are mated to inferior males. For most of these breeders the road to improvement lies in the use of good purebred sires on the scrub females they have.

5. By means of careful selection of females in each succeeding generation and the continued use of purebred sires from the same breed, it is possible to fix the desirable qualities and to establish a herd of high grades. The value of this process of grading-up in swine has been shown by many experiments. Starting with scrub pigs, purebred were used for not less than three generations. This resulted in market improvement in type and quality as well as in the rate of gains and the feed required for 100 pounds of gain.

6. Purebreeding involves the mating of purebred sires and purebred females of the same breed. Under both systems of breeding animals to be mated are selected according to their body conformation, vigour growth rate and production records.

**Exercise 4. Find English equivalents to the following words and word combinations in the text.**

Улучшение экстерьера; крайне ценный; система спаривания; улучшение породы; пользовательный скот; стадо; чистопородный производитель; малорослая беспородная самка; тщательный отбор (селекция); последующее поколение; создать стадо высокой градации по стандартам; темпы привеса; чистопородное разведение; энергичные темпы роста; учёт продуктивности.

**Exercise 5. Complete the sentences using the words from the text.**

1. ... and ... involve the mating of animals of the same breed.
2. Grading-up is the process of ... .
3. Many of the breeders of livestock don't maintain ... .
4. Most breeders improve their herd by using good purebred sires ... .
5. By means of careful selection of females it is possible to establish a herd ... .
6. ... involves the mating of purebred ... and purebred ... of the same breed.
7. Animals are selected according to their body ... .

**Exercise 6. Comprehension. Choose the best answer.**

1. The most common systems of breeding are ...
  - a) artificial insemination and ordinary service
  - b) grading-up, purebreeding, crossbreeding, inbreeding, linebreeding
  - c) inbreeding, purebreeding, mating.
2. Semen can be ...
  - a) melted, transferred and mated
  - b) collected, processed and improved
  - c) frozen, transferred and kept for a long time.
3. In grading-up breeders use ...
  - a) purebred sires and scrub females of the same breed
  - b) purebred sires and purebred females of the same breed
  - c) purebred sires and purebred females of different breeds.
4. Many breeders of livestock mate scrub females to ...
  - a) inferior males
  - b) superior males
  - c) males of the same breed.
5. Purebreeding involves the mating of ...
  - a) purebred sires and purebred females of different breeds
  - b) purebred sires and scrub females of the same breed
  - c) purebred sires and purebred females of the same breed.

**Exercise 7. Choose the right translation.**

1. By means of careful selection of females ...

- a) Средствами тщательного отбора самок ...
- b) Тщательно отбирая самок ...
- c) За счёт тщательного отбора самок ...

2. This method resulted in market improvement as well as in type and quality.

- a) Этот результат рыночного улучшения типа и качества.
- b) Этот метод привел к регулированию типа и качества рынка.
- c) Этот метод привел к улучшению рынка, а также типа и качества.

3. Under both systems of breeding ...

- a) Согласно обеим системам разведения ...
- b) Под двумя системами разведения ...
- c) При двух системах разведения ...

**Exercise 8. Form a new word that fits.**

1. The artificial ... (to inseminate) technique has received increasing attention in many countries.

2. When grasses are scarce the cattle should be provided with hay and ... (to vary) green succulents.

3. High-producing cows ... (requirement) more protein than low-producing ones.

4. Some cattle are high ... (to produce) and some are not.

5. For all other kinds of livestock it is ... (to desire) that the females should produce the offspring a year.

6. Farm animals are bred by man for the ... (to produce) of highly nutritious ... (to produce).

**Exercise 9. Answer the following questions.**

1. What are the most common systems of breeding?

2. What technique is an extremely valuable aid in carrying out various mating systems?

3. What do grading-up and purebreeding involve?

4. What animals are mated under grading-up?

5. What animals are mated under purebreeding?

6. Are these systems used in Belarus?

**Exercise 10. Read and translate the following text. Get ready to answer the questions.**

1. What is breeding? 2. When did breeding become a science? 3. What types of breeding are there? 4. What does selection consist of? 5. What does crossing involve? 6. What are reasons for breeding? 7. What qualities can breeding increase?

## Text B

### Breeding

1. Breeding is the careful selection and pairing of plants, animals, and other organisms to improve the usefulness of their offspring. Although people have bred plants and animals for thousands of years, breeding became a science only after the early 1800's. This change occurred as scientists accumulated knowledge about how organisms inherit characteristics. There are two types of breeding: selection and crossing. Selection consists of identifying the most useful individuals of one kind of organism and letting only the best become parents of the next generation.

2. Crossing involves pairing selected individuals to produce the best offspring possible. Crossing is called hybridization if the individuals are from different species or varieties or are themselves hybrids, that is, offspring of different varieties or species.

3. **Reasons for breeding.** Breeding is normally done for a particular purpose, such as to produce plants and animals that grow faster or are better adapted to the climate in which they live. Each of the different kinds of wheat grown in Texas, Kansas, North Dakota, Canada, and India has been especially bred to grow in particular climate. Breeding can also increase the size, strength, or resistance to disease of an organism.

**Exercise 11. Translate the following text in written.**

## Text C

### Animal Breeding

1. Cattle, horses, sheep, hogs, and dogs are bred by selection to produce characteristics desired by the breeder. Breeders seek horses and dogs that are speedy or that have a particular hair color or physical shape. Most cattle, sheep, and hogs are bred to supply the largest amount of high quality products at the lowest cost to the breeder.

2. Producing changes through breeding takes longer in animals than in plants. This is so because animals are older than plants when they reproduce, and they have fewer offspring. Therefore, breeders usually try to improve only one quality of the animal at a time. For example, it is extremely difficult to breed a cow that is an excellent producer of both milk and beef. Thus, most breeders concentrate only on milk or only on beef.



3. The record of an animal's ancestors is called its pedigree (*генеалогия, родословная*). Breeders often pay high prices for animals with the best pedigrees, especially if the animal has the qualities that they seek. Breeders hope that animals with good pedigrees will be good parents.

## UNIT 7

### Systems of Breeding and Improving (crossbreeding, inbreeding, linebreeding)

**Exercise 1. Before reading the text practise the pronunciation of the following words and word combinations and learn them.**

- swine [swaɪn] – свинья
- convincingly [kən'vɪnsɪŋli] – убедительно
- hybrid vigour ['haɪbrɪd 'vɪgə] – гибридная мощь, сила
- heterosis [ˌhɛtə' rəʊsɪs] – гетерозис
- vitality [vaɪ'tæləti] – жизненность, жизнеспособность
- phenomenon [fɪ'nɒmɪnən] – явление, эффект
- crossbred ['krɒsbred] – гибридный
- expenses [ɪk'spensɪz] – затраты
- weaning [wi:nɪŋ] – отлучение от вскармливания молоком
- grade [greɪd] – улучшенная порода (*посредством скрещивания*)
- purebred ['pjʊəbred] – породистый, чистокровный
- cross [krɒs] – помесь, гибрид
- dam [dæm] – мать, матка, самка
- productivity [ˌprɒdʌk'tɪvəti] – продуктивность
- caution ['kɔːʃ(ə)n] – осторожность
- offspring ['ɒfsprɪŋ] – отпрыск, потомок
- breeder ['briːdə] – заводчик (*тот, кто занимается разведением породистых, племенных животных*)
- grandsire ['græn(d), saɪə] – прародитель, предок по мужской линии
- vigorous ['vɪg(ə)rəs] – сильный, мощный
- superior [s(j)u:'prɪəriə] – высшего качества
- mating ['meɪtɪŋ] – спаривание
- to grade animals [tə greɪd'æniməlz] – улучшать породу скрещиванием
- to trace [tə treɪs] – восходить к определённому источнику
- ancestor ['ænsəstə] – предок, прародитель
- crossing ['krɒsɪŋ] – скрещивание

**Exercise 2. Read and translate the following sentences paying attention to the translation of degrees of comparison:**

1. The main advantages of crossbreeding are the greater vitality and faster growth of the crossbred offspring.
2. Faster growth results in less feed and labour expenses and less risk.
3. The use of crossbred females means a larger number of the young.
4. In addition weaning weights are heavier.
5. A smaller amount of bulls is needed and consequently more rigid methods of selecting bulls can be practiced.
6. The best pastures are in spring and in early summer.
7. Hay made from grasses in the early flowering stage is better than the one made from mature grasses.
8. The better the cow is fed and cared for, the longer is the period of lactation.
9. The more nutritious is ration, the more milk the dairy cow will produce.
10. Mutton is much more valuable than wool in Great Britain.

**Exercise 3. Open the brackets and put the adjectives into the necessary degree of comparison.**

1. Barley straw is ... (much) digestible than wheat straw.
2. Wheat is cultivated to a ... (little) extent.
3. The ... (good) veal is obtained by liberal feeding of whole milk.
4. The feeding value of grass is the ... (high) in spring and early summer.
5. The ... (much) milk is drawn off from the cow's udder, the ... (much) will be secreted.
6. Milk is one of the ... (good) sources of calcium.
7. Indoors it is ... (easy) to provide the necessary care.
8. As to the selection of the boar it is ... (little) important than that of the sow.
9. The humidity should not be ... (high) than 70 %.

**Exercise 4. Read and translate the following text.**

**Text A**

1. Crossbreeding is the mating of animals belonging to two different breeds. At present crossbreeding has been carried out most extensively with swine, although many sheep raisers and raisers of beef cattle are using this system of breeding. Most experiments convincingly prove that the crossing

of breeds usually results in offspring that show more vigour and faster growth than their purebred parents. This phenomenon is called hybrid vigour or heterosis.

2. The main advantages of crossbreeding are the greater vitality and faster growth of the crossbred offspring. Faster growth results in less feed and labour expenses and less risk because the animals reach the market in a shorter period of time. The use of crossbred females in the breeding herd also results in some increase in productivity, which means a larger number of the young is born alive and raised to weaning.

3. In addition weaning weights are usually heavier because of the higher milking capacity of crossbred females and the more efficient growth mechanism of the offspring. The animals used in crossbreeding may be either grade or purebred. Most of the value of crossbreeding is in the first cross. Inbreeding involves the mating of closely related animals such as sire and daughter, full brothers and sisters or dam and son. The success of inbreeding depends on the qualities of the parents. That is why careful selection of the most vigorous animals should be made. Inbreeding should be used with caution and only by breeders with superior stock. One should remember that the offspring may possess desirable qualities as well as undesirable ones.

4. Linebreeding is similar to inbreeding but involves the breeding of animals less closely related. The mating of cousins and of grandsire with granddaughters are examples of linebreeding. A considerable amount of linebreeding has been done by breeders of purebreds. This system involves the mating of two individuals that trace in pedigree to the same individual or line of breeding. This system makes it possible to concentrate on the qualities of a superior ancestor.

**Exercise 5. Find English equivalents to the following words and word combinations in the text.**

Овцеводы; убедительно доказывать; гибридная сила; преимущество; жизнеспособность; затраты труда; рыночная масса; продуктивность; удойность; скрещивание; полные братья; зависеть от; элитное (племенное) поголовье; линейное разведение.

**Exercise 6. Complete the sentences using the words from the text.**

1. This phenomenon is called ... .
2. The main advantages of crossbreeding are the greater vitality and faster growth of the ... .
3. Faster growth results in less feed and ... .
4. The use of crossbred females also results in some increase in ... .
5. The animals used in crossbreeding may be either ... or ... .

6. The success of inbreeding depends on the ... .
7. One should remember that the offspring may possess desirable qualities as well as ... .
8. Linebreeding involves the breeding of animals less ... .
9. The mating of cousins and of grandsire with granddaughters are examples of ... .
10. This system makes it possible to concentrate on the qualities of a ...

**Exercise 7. Comprehension. Choose the best answer.**

1. Crossbreeding is the mating of animals belonging to the ...
  - a) similar breeds
  - b) same breed
  - c) different breeds
2. Crossbreeding is extensively carried out with ...
  - a) sheep
  - b) beef cattle
  - c) swine.
3. The main advantages of crossbreeding are ...
  - a) greater vitality and faster growth
  - b) greater increase in productivity and more feed
  - c) more labour expense and less risk.
4. The most valuable cross is ...
  - a) the first one
  - b) the last one
  - c) the later one.
5. Inbreeding involves the mating of ...
  - a) animals of the same breed
  - b) closely related animals
  - c) animals of different breeds.
6. Under inbreeding the offspring may possess ...
  - a) neither desirable nor undesirable qualities
  - b) only desirable qualities
  - c) both desirable and undesirable qualities.
7. The mating of grandsire with their granddaughters are examples of ...
  - a) grading-up
  - b) purebreeding
  - c) linebreeding.
8. Linebreeding makes it possible to concentrate on the qualities of ...
  - a) superior stock
  - b) a superior ancestor
  - c) sires.

### **Exercise 8. Choose the correct translation.**

1. Most experiments prove that the crossing of breeds usually results in offspring that show more vigour and faster growth than their purebred parents.

a) Многие эксперименты показывают, что скрещивание пород обычно приводит к получению потомства, которое показывает большую силу и более быстрый рост, чем их чистопородные родители.

b) Большинство экспериментов показывают, что скрещивание пород обычно приводит к получению потомства, которое показывает большую силу и более быстрый рост, чем их чистопородные родители.

c) Большинство экспериментов показывают, что скрещивание коров – это потомства более сильное и растет быстрее, чем их чистопородные родители.

2. In addition weaning weights are usually heavier because of the higher milking capacity of crossbred females.

a) Кроме того, вес при отъеме является большим из-за более высокой удойности кроссбредных пород.

b) Кроме того, вес при отъеме обычно больше, потому что у кроссбредных коров более высокая удойность.

c) Кроме того, вес при отъеме обычно больше из-за более высокой удойности кроссбредных самок.

3. One should remember that the offspring may possess desirable qualities as well as undesirable ones.

a) Каждому следует помнить, что потомство, возможно, обладает желательными и нежелательными качествами.

b) Всем следует помнить, потомство обладает желательными, а также нежелательными свойствами.

c) Следует помнить, что потомство, вероятно, имеет желательные, а также нежелательные качества.

4. A considerable amount of linebreeding has been done by breeders of purebreds.

a) Селекционеры чистопородных животных осуществляют значительную часть линейного разведения.

b) Селекционеры осуществляют большую часть линейного разведения, используя чистопородных животных.

c) Большую часть чистопородных животных разводят селекционеры.

### **Exercise 9. Answer the following questions.**

1. What is crossbreeding?

2. What farm animals has crossbreeding been carried out with at present?
3. What are the main advantages of crossbreeding?
4. What does the use of crossbred females in the breeding herd result in?
5. What cross is most of the value of crossbreeding?
6. What animals does inbreeding involve?
7. What does the success of inbreeding depend on?
8. What animals are mated under linebreeding system?

**Exercise 10. Using questions of Unit 6 ex. 9 and Unit 7 ex. 8 make a report about systems of breeding and improving livestock.**

**Exercise 11. Read and translate the following text. Get ready to answer the questions.**

1. What is a breed of livestock?
2. How have modern breeds been established?
3. What animals have been obtained by using selection and mating the original stock?
4. In what way was the Corriedale breed of sheep developed?

## **Text B**

### **Breeds of Livestock**

1. Breed of livestock is a group of animals within a species that has the characteristics not found in other animals of the same species. Generations of selective breeding have so fixed characteristics that they are transmitted from generation to generation.

Modern breeds have been established in three ways:

2. By mating imported males with unimproved native females. For instance, the Thoroughbred breed of horses was developed in the 18<sup>th</sup> century by crossing imported Arabian and Turkish stallions with the native mares of England.

3. By systematically selecting and mating the original stock. Belgian horses, for instance, have been obtained in a pure line from the old Flemish horse.

4. By crossing two or more different breeds and then by making selection. The Corriedale breed of sheep was developed in New Zealand by crossing Lincoln and Leicester rams with Merino ewes.

**Exercise 12. Translate the following text in written.**

## Text C

### Crossbreeding of Swine

1. The experiments with swine have shown that crossbreeding is an effective means of increasing not only vigour and size of the offspring but also the prolificacy of the sows. The increased litter size is of great economic importance. It has been shown that a crossbred sow is a highly prolific one if mated to a purebred boar.

2. The crossbred sows produce litters with more pigs per sow at farrowing and at weaning time and each pig weighs 5 to 7 pounds more than purebred pigs. The crossbred pigs reach the weight of 225 pounds 17 to 22 days earlier than comparable purebreds and require less feed to do so. The increased vigour does not usually raise the level of production above that already existing in the herd or flock.

3. The method of artificial insemination is an extremely valuable practical aid to crossbreeding in swine as well as in other classes of farm animals. The possibility of freezing semen without decreasing its quality is of great importance in the practice of improving the farm livestock.

## UNIT 8

### Keeping Livestock Records

**Exercise 1. Before reading the text practise the pronunciation of the following words and word combinations and learn them.**

flock [flɒk] – стадо, стая

herd [hɜ:d] – стадо

records ['rekɔ:dz] – данные, показатели

breeding records ['bri:diŋ 'rekɔ:dz] – племенные показатели; племенной учёт

production records [prə'dʌkʃ(ə)n 'rekɔ:dz] – производственный учёт; учёт продуктивности

feed records [fi:d 'rekɔ:dz] – учёт расхода кормов

sow [sau] – свинья, свиноматка

financial records [faɪ'næŋʃəl 'rekɔ:dz] – финансовая отчетность

yearly milk yield ['jɪəli milk ji:ld] – средний ежегодный надой молока

careful ['keəf(ə)l] – тщательный

rate of gain [reit əv geɪn] – интенсивность привеса

to take care [tə teɪk keə] – заботиться  
index of productivity ['ɪndeks əv ,prɒdʌk'tɪvəti] – индекс производи-  
тельности  
to farrow [tə 'færəu] – пороситься  
weight [weɪt] – вес  
lamb [læm] – ягнёнок  
transmitting ability [trænz'mɪtɪŋ ə'bɪləti] – передающая (репродуктив-  
ная) способность  
to consume [tə kən'sju:m] – потреблять, расходовать  
cost account [kɒst ə'kaunt] – счет издержек

**Exercise 2. Translate chains of nouns.**

Breeding records, production records, feed records, financial records, butterfat records, animal products.

**Exercise 3. Read and translate the following text.**

**Text A**

1. For the livestock farmer whose aim is to improve his herds and flocks records are essential. A system of records should give the necessary information about the animals kept on his farm. There are four main types of records. They are breeding records, production records, feed records and financial records.

2. Breeding records should include information about each breeding animal in the herd or flock, dates when females are bred, sires used, dates when offspring are to be born, the dates when offspring were born, the number and the characteristics of the offspring.

3. Careful records of dates of breeding make it possible to know when offspring will be born. Such information makes it possible to control feeding and to take proper care of the pregnant female.

4. Records of production provide data of the productivity of each animal on the farm. Production records for sows include a number of pigs farrowed and raised and weights of pigs and litters at fifty-six days and perhaps at some later age. Production records for dairy cows include yearly milk yield and butterfat records for each cow. Concerning the beef cattle, rate of gain is an important index of productivity. As far as the sheep is concerned, the weight of wool and the number and weight of lambs are important in determining which females are to be kept and which are not. Such records are valuable for selecting animals in herds or flocks.

5. By proper use of records it is also possible to know the transmitting ability of sires and dams.



6. Feed records are very important in raising livestock and in fattening animals. By using the information on the feed consumed by different animals at different periods of the year and the results obtained the farmer may improve the feeding programme on his farm.

7. Financial records may include cost accounts for the entire farm or accounts for each kind of livestock.

**Exercise 4. Find English equivalents to the following words and word combinations in the text.**

Племенной учёт (племенные показатели); учёт расхода кормов; учёт продуктивности; учёт финансовых расходов; производитель, используемый для покрытия (осеменения); заботиться; пороситься; помёт; ягнёнок; потреблять; учёт надоев молока; учёт содержания молочного жира.

**Exercise 5. Complete the sentences using the words from the text.**

1. Types of records are as follows ... .
2. Breeding records should include information about ... .
3. Careful records of dates make it possible to take proper care of ... .
4. Records of production provide data of the ... .
5. Production records for dairy cows include ... .
6. With beef cattle, rate of gain is an ... .
7. By using records it is possible to know ... .
8. Feed records are very important in ... .
9. Financial records include ... .

**Exercise 6. Comprehension. Choose the best answer.**

1. A system of records should give the necessary information about ...
  - a) breeding conditions
  - b) animals kept on farmer's farm
  - c) raising livestock.
2. Breeding records should include information about ...
  - a) productivity of each animal, yearly milk and litters
  - b) transmitting ability
  - c) dates when females are bred, service sires used etc.
3. Production records for sows include ...
  - a) the number of offspring and characteristics of the offspring
  - b) dates of breeding
  - c) the number of pigs farrowed and raised and weights of pigs.
4. ... are very important in raising livestock and fattening animals.
  - a) feed records
  - b) records of dates
  - c) feeding control.
5. By using the information on the feed consumed by animals and obtained results the farmer may improve ... .

- a) the feeding conditions on his farm
- b) the feeding programme on his farm
- c) the selecting animals in herds.

**Exercise 7. Choose the right translation.**

1. A system of records should give the necessary information about the animals kept on his farm.

a) Система учёта должна давать необходимую информацию о животных и их содержании на ферме.

b) Система учёта будет давать необходимую информацию о животных и их содержании на ферме.

c) Система учёта должна давать информацию о животных, которые содержатся на его ферме.

2. Careful records of dates of breeding make it possible to know when offspring will be born.

a) Тщательный учёт данных о разведении позволяет знать, когда появится потомство.

b) Ведя тщательный учёт данных о разведении, даёт возможность знать, когда появится потомство.

c) Благодаря тщательному учёту данных о разведении можно узнать, когда появится потомство.

3. Concerning the beef cattle, rate of gain is an important index of productivity.

a) С мясным скотом, скорость прироста – это важный показатель производства.

b) Что касается мясного скота, темпы роста являются важным показателем производства.

c) Что касается мясного скота, темпы прироста являются важным показателем продуктивности.

4. Financial records may include cost accounts for the entire farm or accounts for each kind of livestock.

a) Учет финансовых расходов включает счета издержек для всей фермы или для каждого вида скота.

b) Учет финансовых расходов может включать счета издержек для всей фермы или для каждого вида скота.

c) Учет финансовой деятельности может включать себестоимость всей фермы или любого вида скота.

**Exercise 8. Answer the following questions.**

1. What information should a system of records give?

2. Name the types of records.

3. What information should breeding records include?

4. Why are careful records very important?

5. What data do records of production provide?

6. What data do records for sows / dairy cows include?
7. Why are feed records very important in raising livestock?
8. What may financial records include?
9. Do Belarusian farmers use a system of records?
10. What types of records do they use?

**Exercise 9. Look through the text and answer the following questions.**

1. What is a gestation period? 2. What is parturition [ˌpɑːtʃuəˈrɪʃ(ə)n] роды? 3. How many litters a year may brood sows (супоросные свиноматки) give? 4. What conditions should females be kept before breeding? 5. What feeding conditions should be provided? 6. What is done now in order to obtain the maximum results from superior sires? 7. Why is this method very important?

## **Text B**

### **Reproduction**

1. When animals become sufficiently mature to be capable of reproduction they are bred. The period after breeding, if a female becomes pregnant, is known as the gestation period, and the act of giving birth is called parturition. In the case of the male it is desirable to restrict carefully the number of services when he is young.

2. Brood sows can be bred for two litters a year. For all other kinds of livestock it is desirable that the females should produce the offspring a year. Before breeding the females should be kept in a thrifty condition. Special feeding conditions are recommended during a period of two to three weeks before breeding such animals as ewes and sows. In the case of ewes do this by providing a good pasture or by feeding 1/4 to 1/2 pound of grain per ewe per day. For sows increase the grain ration before breeding.

3. Keep males in good breeding conditions but not fat. Provide exercise, together with proper amounts of feeds of various kinds for an animal to be a good sire. In order to obtain the maximum results from superior sires, artificial breeding is now being used especially with dairy cattle. This process known as artificial insemination makes it possible to obtain more offspring from a given sire by mating him in the usual way.

4. The semen of the tried sire is collected and divided into some parts. Several females may be mated by using this semen while under natural breeding conditions only one female is bred. By artificial insemination method it is possible to obtain several times many offspring from one sire.

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