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**А. И. Картунова, И. Е. Калишук**

**ENGLISH FOR ANIMAL HUSBANDRY.  
АНГЛИЙСКИЙ ЯЗЫК.  
СБОРНИК УЧЕБНЫХ ТЕКСТОВ**

Учебно-методическое пособие для студентов по специальности  
1-74 03 01 «Зоотехния»

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Авторы-составители:

старший преподаватель *А. И. Картунова*;  
старший преподаватель *И. Е. Калишук*

Рецензенты:

кандидат педагогических наук, доцент кафедры лингвистических  
дисциплин УО БГСХ *И. П. Макаренко*; кандидат сельскохозяйственных на-  
ук, заведующий кафедрой частного животноводства, доцент *Т.  
В. Петрукович*

**Картунова, А. И.**

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Учебно-методическое пособие может быть рекомендовано для работы  
в аудитории, а также для самостоятельной внеаудиторной работы студентов  
очной и заочной формы получения образования, магистрантов, аспирантов.

Учебный материал пособия также может быть полезен для обучаю-  
щихся на факультете ветеринарной медицины и всех желающих совершен-  
ствовать владение английским языком в области наук о животных.

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## Предисловие

Настоящее пособие является одним из компонентов учебно-методического комплекса по дисциплине «Иностранный язык (английский)» для студентов биотехнологического факультета специальности 1-74 03 01 «Зоотехния».

Целью пособия является формирование у обучающихся индивидуальной языковой компетенции, практических навыков активного употребления подъязыка данной специальности.

Структурно пособие состоит из учебных тематических разделов – юнитов, которые включают тематический словарь, учебный текст и комплекс упражнений для проработки и контроля усвоения учебного материала.

Учебно-методическое пособие дополнено сводным словарем, помогающим студентам снять языковые трудности при переводе.

Учебный материал тематически тесно связан со спецификой специальностей факультета. Тексты предназначены для обучения различным видам чтения, совершенствования навыков понимания, перевода и устной коммуникации. Упражнения расположены по принципу нарастания языковых трудностей и носят коммуникативно-направленный характер. Учебно-методическое пособие может быть рекомендовано для работы в аудитории, а также для автономной работы студентов очной и заочной формы получения образования, магистрантов, аспирантов, изучающих науки о животных.

# UNIT 1

## COW

### Topical vocabulary

1. selection – отбор, селекция
2. conformation – конституция (телосложение)
3. milk yield – удой
4. calving – отел
5. mature – зрелый, созревший
6. dry cow – сухостойная корова
7. fodder – корм для скота, фураж
8. dairy products – молочные продукты
9. ability – способность
10. butterfat – молочный жир
11. hereditary – наследственность
12. drying off – запуск (коровы)
13. mammary gland – молочная железа
14. secretory tissues – секреторные ткани
15. treatment – лечение
16. liver – печень
17. ketosis – кетоз, избыточное образование кетоновых тел, накопление в теле кетоновых тел
18. mastitis – мастит, воспаление молочных желез
19. retain – удерживать, сдерживать
20. placenta – плацента, детское место
21. metritis – метрит, воспаление матки
22. milk fever – послеродовой мастит
23. lactating cow – лактирующая корова

### *Cow*

The selection of a cow is a very important problem. A healthy cow of good conformation gives healthy calves. The age of a cow influences its milk yield per lactation. The yield after its first calving is about 70 per cent of that obtained when the cow is mature. The age at which the yield begins to decline varies greatly. It may occur as early as eight or as late as twelve years. The quality of milk of different cows may vary considerably. But the quality of the milk produced by any individual cow cannot be altered permanently by feeding.

It must be remembered that the ration must be within the appetite of the cow. In winter the foods used for maintenance include hay, roots, silage, and green fodder crops. A supply of good drinking water is essential. It is the common practice to have calves born in late winter or early spring.

**Dairy Cows.** The chief work of the dairy cow is to change field crops into milk and a calf. The ability of a cow to produce milk and butterfat is its hereditary characteristic.

The cow is an animal in which human food is manufactured from field crops. Milk is the main product from the dairy cow. The calf and manure are the by-products. When the dairy cow is young it possesses the highest dairy value.

The dairy value decreases with age, it is generally recognized that a dairy cow is at its best when it is about seven years old. The length of a dairy cow's usefulness varies with different cow. The average duration of a dairy cow's usefulness for dairy purposes is about eight years. After about 10 years the cow possesses only a beef value.

**Dry Cows.** Feeding and managing dry cows may influence their milk production level and health in the next lactation.

A common practice of drying off lactating cows is to abruptly stop milking the cow; with high producers, however, this may be traumatic and dry-off may need to be more gradual (intermittent milking). The buildup of pressure in the mammary gland causes the secretory tissues to stop producing milk. At the last milking, the cow should be infused with a treatment for preventing mastitis.

Dairy producers plan for a 50-60 days dry period. Short dry periods usually reduce future milk yield because the cow has not adequately improved body condition and the mammary tissue has not properly regenerated. Long dry periods can lower milk yield owing to the cow becoming overly fat, and profitability may be less because feed costs are increased.

Dry cows should be separated from the lactating cows so they can be fed and managed consistent with their needs. Dry cows need less concentrates than lactating cows. If dry cows overeat they will likely become fat. This excessive body fat may cause health problems and lower future milk yield.

These health problems include fatty liver, ketosis, mastitis, retained placenta, metritis, milk fever, and even death.

## Learning Activities

### **1. Give Russian equivalents.**

Cow selection, dairy producer, dairy value, milk yield, feed cost, health problems.

### **2. Write out from the text the nouns which are used only in singular.**

### **3. Supply antonyms for the following.**

Healthy, to decline, to increase, of importance, the highest, shorter, the last, to overeat, to lower, abruptly, the best, less important.

### **4. Fill in the proper prepositions.**

1. The age ... a cow influences her milk yield ... lactation.

2. The yield ... her first calving is about 70 per cent ... that obtained when the cow is mature.

3. The quality ... the milk produced ... any individual cow cannot be altered permanently ... feeding.
4. ... winter the foods used ... maintenance include hay, roots, silage and green fodder crops.
5. The cow is an animal ... which human food is manufactured ... field crops.
6. ... the last milking, the cow should be infused ... a treatment ... preventing mastitis.
7. Dry cows should be separated ... the lactating cows so they can be fed and managed consistent ... their needs.

**5. Make the sentences negative and interrogative.**

1. The selection of a cow is a very important problem.
2. The quality of milk of different cows may vary considerably.
3. The ration must be within the appetite of the cow.
4. In winter the foods used for maintenance include hay, roots, silage and green fodder crops.
5. Every cow has a main product and also by-products.
6. The calf and manure are the by-products.
7. After about 10 years the cow possesses only a beef value.
8. Health problems include ketosis, mastitis, metritis, milk fever, and even death.

**6. Translate into English.**

Здоровая корова; возраст быка; удой за лактацию; около 70%; удой начинает снижаться; качество молока; количество молока; следует помнить; рацион; корма включают; сено; силос; корнеплоды; сочные корма; дойная корова; запас воды; обычная практика; производить молоко; полевые культуры; сухостойная корова; излишний жир; отел; мясная ценность; молочная ценность.

**7. Answer the questions.**

1. What influences the milk yield per lactation?
2. When does the yield begin to decline?
3. What is cow's hereditary characteristic?
4. What are the by-products of cows?
5. What is the average duration of a dairy cow's usefulness for dairy purpose?
6. The buildup of pressure in the mammary gland causes the secretory tissues to stop producing milk, doesn't it?
7. Do short dry periods reduce or increase future milk yield?
8. Long dry periods can lower milk yield owing to the cow becoming overly fat, can't they?
9. What do the foods used for maintenance in winter include?

**8. True or false according to the text?**

1. A healthy cow of good conformation gives sick calves.
2. The yield after cow's first calving is about 10 per cent of that obtained when it is mature.

3. The quality of the milk produced by any individual cow cannot be altered permanently by feeding.
4. The foods used for maintenance include hay, roots, silage and green fodder crops.
5. A supply of good drinking water is not essential.
6. The ability of a cow to produce milk and butterfat is its hereditary characteristics.
7. Milk is by-product from the dairy cow, the calf and manure are the main products.
8. The dairy value increases with age.
9. After about 10 years the cow possesses only a milk value.

**9. Translate into Russian in writing.**

1. The yield after its first calving is about 70 per cent of that obtained when the cow is mature. 2. It must be remembered that the ration must be within the appetite of the cow. 3. It may occur as early as eight or as late as twelve years. 4. The dairy value decreases with age, it is generally recognized that a dairy cow is at its best when it is about seven years old. 5. The average duration of a dairy cow's usefulness for dairy purposes is about eight years. 6. The buildup of pressure in the mammary gland causes the secretory tissues to stop producing milk. 7. Short dry periods usually reduce future milk yield because the cow has not adequately improved body condition and the mammary tissue has not properly regenerated. 8. These health problems include fatty liver, ketosis, mastitis, retained placenta, metritis, milk fever, and even death.

**10. Translate into English.**

1. Выбор коровы – очень важная проблема. 2. Очень важно правильно кормить корову. 3. Возраст коровы влияет на её удой за лактацию. 4. Общепринятой практикой для запуска коровы является резкое прекращение доения. 5. Мясная ценность коровы снижается с возрастом, а молочная? 6. Короткий сухостойный период снижает удои в будущем. 7. Качество молока у разных коров может заметно варьироваться. 8. Сухостойных коров следует отделять от лактирующих. 9. Лактирующим коровам требуется больше концентратов. 10. Если корову перекормливать, она может стать тучной. 11. Избыток жира может вызвать проблемы со здоровьем.

**11. Write down 5 your own questions to the text "Cow". Let your group mates answer your question.**

**12. Express the general idea of the text in a few words.**

# UNIT 2

## BULL

### Topical vocabulary

1. dairyman – дояр, работник молочной фермы
2. capacity – 1. способность; 2. вместимость
3. herd – стадо
4. heifer – телка
5. bull – бык
6. sire – бык-производитель
7. record – 1. запись, протокол; 2. записывать, регистрировать
8. ancestor – предок
9. offspring – потомок
10. dam – матка
11. to transmit – передавать
12. bull-calf – бычок
13. management – управление
14. sterile – 1. стерильный, стерилизованный; 2. бесплодный, неспособный к оплодотворению
15. injury – рана, ушиб, травма, повреждение
16. firmness – крепость, плотность, твердость
17. vigorous – энергичный
18. fertile – плодородный, способный к плодоношению
19. well-bedded pen – хорошо устланный загон
20. pure-bred – чистокровный, породистый
21. female – самка, матка
22. male – самец
23. to service – случать
24. masculine – мужественный
25. artificial insemination – искусственное осеменение

### *Bull*

A dairyman cannot expect to improve the productive capacity of his herd unless the heifers he raises are sired by a good bull. The sire should be selected on the basis of actual records of production of its ancestors and their offspring.

Due attention must also be given to the conformation and type of the bull and its ancestors. As the average production of the cows in the herd increases, it becomes more and more difficult to select a bull whose daughters will be better than their dams. In such herds it is especially desirable to use a “proved sire” whose ability to transmit high production has been definitely proved by the actual records of its daughters in comparison with the records of their dams.

**Bull-Calf.** The bull-calf chosen as a sire for the future herd should be fed well. Poor feeding and management of young bulls result in many of them becoming sterile



at a very early age. Young bulls, if they are strong and healthy, may cause serious injury to those caring for them. For this reason, it is advisable to place a small ring in the bull-calf's nose and replace it by a large and heavier one when it is twelve months of age. Bull should be always handled with care and firmness by means of its ring.

Bull at breeding age, which is about twelve months, ought to be fed properly, to be kept healthy, vigorous and fertile. It is a bad practice to get a bull excessively fat. The bull should be housed in a clean and well-bedded pen and should have a special yard where it can get plenty of exercise.

**Sire.** It is well-known that the sire is half of the herd. Considering that the sire is pure-bred, of good type and that it comes from high-producing ancestors, it should have more than half of the effect on the offspring. It is now well-known that the milking quality of the female is hereditary. It is also well-known that the ability to produce milk and butterfat can be transmitted through the male as well as through the female.

The sire is even stronger than the dam to transmit the milk production to the female offspring. This is due to the fact that the male is usually more carefully selected as to the right blood or as to dairy inheritance. If a pure-bred sire has been properly selected it should increase the production of the heifer-offspring over that of the dam by not less than 20 percent. The bull in service must be kept in good conditions. It must not run with the herd. Care should be taken however, to exercise the bull and to give it good care.

**Herd Bull.** In selecting a bull, the chief aim is to secure a sire that will transmit desirable characteristics to its offspring. The desirable bull should be pure-bred. For improving herd with low production, a pure-bred bull should be used. Artificial insemination is sometimes used.

The bull should be fed enough to keep it in good condition but not fat. The bull can be kept on high-quality roughages, such as legume hay and small amounts of silage. Pasture provides grass as well as exercise. One should always provide the bull with water and salt.

## Learning Activities

### ***1. Give Russian equivalents.***

Bull, calf, bull-calf, sire bull, ancestor, offspring, dam, cow, heifer, daughter, proved sire, breed, breeding age, pure-bred animal, artificial insemination, herd.

### ***2. Give the degrees of comparison for the following adjectives.***

Good, high, early, young, strong, healthy, serious, small, clean, careful, difficult.

### ***3. Translate the sentences in writing.***

1. A dairyman cannot expect to improve the productive capacity of his herd unless the heifers he raises are sired by a good bull. 2. As the average production of the cows in the herd increases, it becomes more and more difficult to select a bull whose daughters will be better than their dams. 3. For this reason it is advisable to place a small ring in the bull-calf's nose and replace it by a large and heavier one when it is twelve months of age. 4. Considering that the sire is pure-bred, of good type and that it

comes from high-producing ancestors it should have more than half of the effect on the offspring. 5. If a pure-bred sire has been properly selected it should increase the production of the heifer-offspring over that of the dam by not less than 20 percent. 6. The bull should be housed in a clean and well-bedded pen and should have a special yard where it can get plenty of exercise.

#### **4. Put prepositions as required.**

1. The bull-calf chosen... a sire ... the future herd should be fed well.
2. Bull should be always handed ... care and firmness ... means ... its ring.
3. Bull ... breeding age, which is ...twelve months, ought to be fed properly.
4. The sire is even stronger than the dam to transmit the milk production ... the female offspring.
5. The bull ... service must be kept ... good conditions. It must not run ... the herd.
6. The legs should be medium ... length, straight and well-placed.
7. The bull can be kept ... high-quality roughages, such ... legume hay and small amounts of silage.

#### **5. Make the sentences negative and interrogative.**

1. The sire should be selected on the basis of actual records of production of its ancestors and their offspring.
2. Young bulls may cause serious injury to those caring for them.
3. The bull is housed in a clean and well-bedded pen.
4. The ability to produce milk and butterfat can be transmitted though the male as well as through the female.
5. A pure-bred sire has been properly selected.
6. A dairyman always provides the bull with water and salt.

#### **6. Answer the questions.**

1. When can a dairyman expect to improve the productive capacity of his herd?
2. How should a sire be selected?
3. Where is it especially desirable to use a “proved sire”?
4. Do poor feeding and management of young bulls result in their poor breeding characteristics?
5. Why is a small ring placed in the bull-calf’s nose?
6. What is the breeding age of a bull?
7. Where should a bull be housed?
8. The milking quality of the female is hereditary, isn’t it?
9. Is the sire or the dam stronger to transmit the milk production qualities to the female offspring?
10. What is the chief aim in selecting a bull?
11. What feeds are mentioned in the text?

#### **7. Explain the functions of the -ing forms.**

1. Poor feeding and management of young bulls result in many of them becoming sterile at a very early age.

2. Bull breeding age is about twelve months.
3. Considering that the sire is pure-bred, of good type and that it comes from high-producing ancestors.
4. The milking quality of the female is hereditary.
5. For improving higher producing herds, the selection of a suitable sire becomes very difficult.

### **8. True or false?**

1. The sire should be selected on the basis of actual records of production of its ancestors and their offspring.
2. Good feeding and management of young bulls result in many of them becoming sterile at a very early age.
3. Bull's breeding age is about five years.
4. The bull should be housed in a dirty and bad-bedded pen.
5. The milking quality of the female isn't hereditary.
6. The ability to produce milk and butterfat can be transmitted only through the female.
7. The dam is even stronger than the sire to transmit the milk production to the female offspring.
8. Artificial insemination is never used to improve higher producing herds.
9. Nobody provides the bull with water and salt.

### **9. Translate into English.**

1. Нельзя ожидать хорошей продуктивности стада, если не используется хороший бык-производитель.
2. Бык должен отбираться на основе продуктивности его предков и потомков.
3. Следует выбирать проверенного быка.
4. Бычка следует кормить хорошо.
4. Бык-производитель не должен быть излишне упитанным.
5. Животное должно быть чистопородным.
6. Должное внимание следует уделять конституции быка.
7. Если бык правильно подобран, он увеличит продуктивность стада.
8. По этой причине необходимо поместить небольшое кольцо в нос быка.
9. Иногда применяют искусственное осеменение.
10. Быка следует содержать в чистом загоне с хорошей подстилкой.

### **10. Какой перевод соответствует данному предложению:**

*Животное следует правильно кормить.*

1. An animal must be fed properly.
2. It is advisable to feed an animal properly.
3. An animal has to be fed properly.
4. You can feed an animal properly.
5. An animal should be fed properly.

### **11. Write down 5 your own questions to this text.**

### **12. Express the general idea of this text in a few words.**

# UNIT 3

## SWINE

### Topical vocabulary

1. nutritious – питательный
2. swine (hog) – свинья
3. maintenance – содержание
4. quarter – помещение для скота
5. gilt – молодая племенная свинья (до первого опороса); подсвинок
6. weight – вес, масса
7. pregnancy – супоросность, беременность
8. litter – помет, приплод; подстилка
9. to mate – спаривать(ся)
10. farrowing – опорос
11. boar – 1. хряк; 2. кабан, дикая свинья
12. heat – период половой охоты
13. gestation period – период супоросности
14. quarter – помещение для животных
15. to feed liberally – кормить вволю
16. pregnancy – (беременность) супоросность
17. breeding season – период спаривания, случной сезон
18. sow – свиноматка
19. pen – загон

### *Swine*

The pig is the greatest of meat animals. Give it food and no other animal will produce so much meat, no other animal grows so fast, no other animal will increase so fast. These qualities are very important when a rapid increase of animals is needed.

Feed is the main problem in hog-raising whereas breeding is the second and care and management the third.

The requirements for maintenance and feeding vary with the age of any animal. The growing pig must receive nutritious food.

A small amount of concentrates must be added to their feed in addition to mother's milk. Regularity of feeding is also very important. Little pigs will grow into hogs fast if given good feed and kept in clean sanitary quarters.

**Sow.** Gilts become mature when they are from six to eight months of age if they have been liberally fed. The average gestation period in sows is 114 days. The birth weight for pigs is about 25 pounds and the males slightly outweigh the females. Feeding during pregnancy affects the birth weight of the pigs.

Gilts commonly have their first litter when they are one year of age. Under normal conditions there is a great range in litter size. The age of the sow, the boar, nutrition type and individuality of the sow, time of mating are factors which affect the litter size. Older sows have larger litters than gilts. Liberal feeding and a balanced ration will produce larger litters than rations inadequate in quality or amounts.

About 40 per cent of the pigs raised are farrowed in February, March and April. Heavy farrowing also takes place in August and September.

**Herd Boar.** The boar should be selected with the idea of improving the herd as far as possible. The herd boar is usually maintained in a rather thin condition. This is the best accomplished by limited feeding of a good ration, by encouraging exercise as the breeding season approaches. The ration should contain much protein, and the amount of feed must also be increased. The age of breeding depends on the size and development of the boar but not younger than eight months of age.

In large sow herd a system of hand-mating is practiced. Sows in heat are separated from the herd, brought to the boar and bred. If two sows are in heat the same day, one may be bred in the morning and the other in the evening.

At the close of the breeding season the boar should be removed from the sow herd and put in a special pen.

## Learning Activities

### ***1. Give Russian equivalents.***

Meat animal, herd boar, maintenance requirements, farrowing time, sanitary quarters, concentrates amount, gestation period, breeding age, breeding season, birth weight.

### ***2. Fill in the proper prepositions.***

1. The pig is the greatest ... meat animals.
2. The requirements ... maintenance and feeding vary ... the age ... any animal.
3. A small amount ... concentrates must be added ... their feed ... mother's milk.
4. Gilts become mature when they are ... six ... eight months ... age.
5. ... normal conditions there is a great range ... litter size.
6. The boar should be selected ... the idea ... improving the herd.
7. The age ... breeding depends ... the size and development ... the boar but not younger than eight months ... age.
8. Sows ... heat are separated ... the herd, brought ... the boar and bred.

### ***3. Complete the sentences according to the text.***

1. The pig is ... .
2. Feed is ... .
3. Little pigs will grow into hogs fast if ... .
4. Gilts become mature when ... .
5. ... are factors which affect the litter size.
6. ... are the months of heaviest farrowing.
7. The age of breeding depends on ... .
8. If two sows are in heat the same day ... .
9. At the close of the breeding season the boar should be removed from ... .

#### **4. Translate the sentences into English.**

1. Свинья является самым продуктивным мясным животным. 2. Корм – главная проблема в свиноводстве, в то время как разведение и уход – вторая и третья. 3. В дополнение к молоку матери следует добавлять в корм пороссятам небольшое количество концентратов. 4. Молодые пороссята будут быстро расти, если им давать хороший корм и содержать в чистых свинарниках. 5. Обычно молодая свинка впервые поросится в возрасте одного года. 6. В обычных условиях размер приплода меняется значительно. 7. Ближе к случному сезону хряка отделяют от стада свиноматок и помещают в специальный загон. 8. Хряка отбирают с целью улучшения стада, насколько возможно. 9. Корм должен содержать значительное количество протеина. 10. Этот хряк довольно худой. 11. Давайте выберем того хряка.

#### **5. Explain the terms: a swine, a sow, a gilt, a boar.**

#### **6. Translate the following sentences. Put questions as required.**

1. The pig is the greatest of meat animals. (What ...?)
2. Feed is the main problem in hog-raising. (Where ...?)
3. The growing pig must receive nutritious food. (What ...?)
4. Little pigs will grow into hogs fast if given good feed and kept in clean sanitary quarters. (When ...?)
5. The average gestation period in sows is 114 days. (How many ...?)
6. The age of the sow, the boar, nutrition type and individuality of the sow, time of mating are factors which affect the litter size. (What ...?)
7. The age of breeding depends on the size and development of the boar but not younger than eight months of age. (What depends...?)
8. In large sow herd a system of hand-mating is practiced. (Where...?)
9. At the close of the breeding season, the boar should be removed from the sow herd and put in a special pen. (When ...?)

#### **7. Supply antonyms for the following adjectives.**

Fast, the greatest, poor, small, older, larger, heaviest, thin, the best, close.

#### **8. Change the verb forms into the past tense.**

1. The pig is the greatest of meat animals.
2. These qualities are very important when a rapid increase of animals is needed.
3. The requirements for maintenance and feeding vary with the age of any animal.
4. Gilts become mature when they are from six to eight months of age.
5. Feeding during pregnancy affects the birth weight of the pigs.
6. Older sows have larger litters than gilts.
7. Heavy farrowing also takes place in August and September.
8. The age of breeding depends on the size and development of the boar but not younger than eight months of age.
9. Sows in heat are separated from the herd.

### **9. True or false?**

1. The pig is the greatest of milk animals.
2. Care is the main problem in hog-raising whereas breeding is the second and food the third.
3. The growing pig must not receive nutritious food.
4. A large amount of concentrates must be added to the feed of growing pigs in addition to mother's milk.
5. Little pigs will grow into hogs slowly if given good feed and kept in clean sanitary quarters.
6. Gilts become mature when they are from one year to three year of age.
7. The average gestation period in sows is 214 days.
8. Feeding during pregnancy affects the birth weight of the pigs.
9. Gilts sows have larger litters than older sows.
10. The herd boar is usually kept in a rather thin condition.

### **10. Read the text once again and speak about:**

- a) swine raising;
- b) sows and gilts;
- c) herd boar.

## **UNIT 4**

### **SHEEP**

#### **Topical vocabulary**

1. flock – стадо, стая, отара
2. wool – шерсть
3. mutton – баранина
4. blocky – массивный
5. consumption – потребление, расход
6. herbage – 1. травы, травяной покров; 2. пастбищное угодье (луг)
7. handle – обходиться, обращаться, ухаживать (за скотом); возделывать, выращивать растения
8. ewe – овца, овцематка
9. lamb – ягненок в возрасте до отбивки (до отъема)
10. ram – баран
11. to wean – отлучать (от матки), отнимать, отсаживать
12. fall (амер.) – осень
13. legume – бобовые
14. clover – клевер
15. nurse – кормить, выкармливать; выращивать
16. grazing – 1. пастьба, выпас, кормление (скота) подножным кормом; 2. пастбище, выгон
17. vigour – энергичность, жизненная сила, мощь

## *Sheep*

**Sheep.** Sheep, like other domesticated farm animals, were used by man prior to the historic time. Sheep were easily domesticated, and one person could care for a large flock. They were a source of meat, wool and milk. Shepherding is one of man's oldest professions. Today sheep husbandry is practiced practically in all agricultural regions. On the basis of principal use sheep breeds are divided into two types – mutton and wool. Mutton sheep are often divided on the basis of the character of the wool into medium-wool and long-wool breeds. The mutton sheep were developed primarily for the production of meat, with wool secondary. In shape of body these breeds resemble the beef breeds of cattle, being blocky and compact. The wool sheep were bred for the production of wool and have bodies which are angular in form.

Sheep are less adapted for consumption of coarse roughage yet they can eat short herbage effectively. Sheep can be handled in comparatively large flocks. The farm flock in summer consists of the ewes, their lambs and the rams. Ewe flocks are generally quite heavily fed until the lambs are weaned. The ewes after weaning the lambs are fed mainly upon pasturage. During this dry period, they are not in need of any special care or feeding.

Ewes are commonly bred in autumn. As lambing time approaches, the ration should be increased, supplemental grain feeding is usually advisable.

**Ram for the Flock.** In selecting the ram for the flock, one should choose a pure-bred ram. The ram is fit for service at the age of one year.

The number of ewes a ram will serve in a season depends on its age and vigour. The method of handling the ram also has an influence on the number it will serve. If it is allowed to run with the flock a short time each day its energy will be conserved, and it will be sufficient for 50 to 75 ewes. But a vigorous ram is sufficient only for 35-50 ewes if it is allowed to run with them all the time.

After the breeding season the ram should be removed from the flock and placed in a separate pen.

**Feeding the Ewe.** The breeding season usually begins with the first cold weather that comes in autumn. The ewes carry their lambs about 147 days.

About ten days before the ram is to be turned with the ewes it is advisable to begin giving them extra feed. During the period of pregnancy ewes should not be given a fattening ration but they must be fed well to give birth to strong, vigorous lambs.

During the last days of pregnancy, the ewe's ration should consist mainly of clean, palatable roughage such as clover hay. A little grain and succulent feed may be added, but not too much.

The nursing ewe must have good feed in liberal quantities, because it is not only producing milk, but growing wool and maintaining its own body as well. Its ration should be rich in protein.

When taken from the lambs, the ewes should be placed upon rather dry pasture in order to reduce the secretion of milk. After the secretion of milk has been checked, the ewes should be given good grazing to get them in good condition before the breeding season.



## Learning Activities

### 1. *Pick out nouns and adjectives and group them.*

Sheep, like other domesticated farm animals, were used by man prior to the historic time. Sheep were easily domesticated, and one person could care for a large flock. They were a source of meat, wool and milk. Shepherding is one of man's oldest professions. Today sheep husbandry is practiced practically in all agricultural regions on the basis of principal use, sheep breeds are divided into two types – mutton and wool. Mutton sheep are often divided on the basis of the character of the wool into medium-wool and long-wool breeds. The mutton sheep were developed primarily for the production of meat, with wool secondary. In shape of body these breeds resemble the beef breeds of cattle, being blocky and compact. The wool sheep were bred for the production of wool and have bodies which are angular in form.

### 2. *Separate adjectives from adverbs.*

Adapted, coarse, effectively, comparatively, large, generally, quite, heavily, the ewes mainly, dry, special.

### 3. *Match the columns as appropriate.*

1. Ewe flocks are generally quite heavily fed until	a) man's oldest professions.
2. Mutton sheep are often divided on the basis of the character of the wool into	b) the ration should be increased, supplemental grain feeding is usually advisable.
3. The number of ewes a ram will serve in a season depends on	c) they can eat short herbage effectively.
4. After the breeding season the ram	d) good roughage such as legume hay and silage.
5. Sheep are less adapted for consumption of coarse roughage yet	e) should not be given a fattening ration but they must be fed well to give birth to strong, vigorous lambs.
6. The ram may be kept in thrifty condition on	f) its age and vigour.
7. Shepherding is one of	g) should be removed from the flock and placed in a separate pen.
8. During the period of pregnancy ewes	h) medium-wool and long-wool breeds.
9. As lambing time approaches,	i) it is allowed to run with them all the time.
10. A vigorous ram is sufficient only for 35-50 ewes if	j) the lambs are weaned.

**4. Answer the questions.**

1. Is sheepherding one of man's oldest professions?
2. Into what breeds are mutton sheep divided on the basis of the character of the wool?
3. Why were the wool sheep bred for?
4. What does the farm flock consist of in summer?
5. After weaning the lambs the ewes are fed mainly upon pasturage, aren't they?
6. What animal should one choose in selecting the ram for the flock?
7. Sheep can be handled in comparatively large flocks, can't they?
8. Were sheep easily domesticated or not?
9. What are the two principal types of sheep?
10. The farm flock in the summer consists of the ewes, their lambs and the rams, doesn't it?
11. How long do ewes carry their lambs?
12. When is the ram fit for service?

**5. Pick out from the text the words naming sheep feeds.**

**6. Write appropriate questions for the given answers.**

1. Yes. They were a source of meat, wool and milk.
2. The mutton sheep were first developed primarily for the production of meat.
3. Yes. Sheep can be handled in comparatively large flocks.
4. No, it doesn't. The farm flock in the summer consists of the ewes, their lambs and the rams.
5. Ewes are commonly bred in autumn.
6. No, it shouldn't. After the breeding season the ram should be removed.
7. Yes. The ram may be kept in thrifty condition on good roughage.
8. Ration of the nursing ewe should be rich in protein.
9. The ewes should be given good grazing to get them in good condition before the breeding season.

**7. True or false?**

1. Sheep were easily domesticated, and one person could care for a large flock.
2. The mutton sheep were developed primarily for the production of wool, with meat secondary.
3. Sheep are more adapted for consumption of coarse roughage yet they can eat short herbage effectively.
4. A vigorous ram is sufficient only for 15-20 ewes if it is allowed to run with them all the time.
5. The ewes after weaning the lambs are fed mainly upon pasturage.
6. In selecting the ram for the flock one should choose a pure-bred ram.
7. After the breeding season the ram should stay in the flock.
8. The breeding season usually begins with the first warm weather.
9. During the period of pregnancy ewes should be given a fattening ration.

10. After the secretion of milk has been checked, the ewes should be given good grazing to get them in good condition before the breeding season.

**8. Complete the sentences according to the text.**

1. Sheep were ... .
2. Today sheep husbandry is practiced practically ... .
3. Mutton sheep are often divided on the basis of the character of the wool ... .
4. Sheep can be handled ... .
5. The farm flock in the summer consists of ... .
6. In selecting the ram for the flock one should ... .
7. A vigorous ram is sufficient ... .
8. The breeding season usually begins... .
9. During the period of pregnancy ewes ... .
10. The nursing ewe must have ... .
11. When taken from the lambs, the ewes ... .

**9. Build up sentences.**

1. Man's, is, oldest, one, shepherding, of, professions.
2. Large, sheep, be handled, flock, comparatively, can, in.
3. In, a pure-bred, should, for, selecting, the flock, the ram, flock, one, choose.
4. The age, year, service, fit, at, the ram, for, of, is, one.
5. Separate, be removed, in, the flock, season, placed, after, the breeding, the ram, should, from, and, a pen.
6. Upon, be placed, in order to, the secretion, the ewes, dry, reduce, should, rather, pasture, of, milk.

**10. Translate the sentences into English.**

1. Овцы являются источником мяса, шерсти и молока. 2. Летом отара овец состоит из овцематок, ягнят и баранов. 3. При отборе производителя следует выбирать чистопородного барана. 4. Овцы вынашивают ягнят около 147 дней. 5. Во время суягности овец не следует перекармливать, но они должны питаться хорошо, чтобы родить сильных, физически крепких ягнят. 6. В последние дни суягности рацион овец должен состоять, главным образом, из чистых, хорошо перевариваемых грубых кормов.

**11. Write down 5 your own questions to this text and let your group mates answer them.**

**12. Having studied the text, what can you say about:**

- a) sheep raising;
- b) rams;
- c) feeding of ewes?

# UNIT 5

## HORSE

### Topical vocabulary

1. muscle – мышца
2. loin – поясница, поясничный отдел
3. chest – грудь, грудная клетка
4. rib – ребро
5. draft horse – упряжная лошадь, рабочая лошадь, тяжеловоз
6. light harness horse – легкоупряжная лошадь
7. mare – конематка, кобыла
8. stallion – жеребец-производитель (старше 4 лет)
9. generation – поколение
10. box-stall – денник
11. paddock – 1. загон, пастбищный загон, содержать животное в загоне; 2. выгон
12. hay – сено
13. digestion – переваривание, усвоение, пищеварение
14. carry off – уносить
15. waste – отходы, отбросы
16. bear – 1. рождать, производить на свет; 2. плодоносить
17. foal – жеребенок
18. fertile – плодovitый, плодородный (о почве)
19. brood mare – племенная кобыла, конематка
20. stall – стойло, ставить в стойло; конюшня; станок
21. foaling – выжеребка
22. straw – солома
23. bedding – подстилка (для скота)

### *Horse*

The following characteristics are desirable in all horses:

1. a strong, heavily muscled back;
2. a short, wide, strong, heavily muscled loin;
3. a deep chest;
4. a roomy middle, due to long, well-sprung ribs;
5. well-set legs and feet;
6. a good head, eyes, and temper.

There are two main types of horses: draft horses and light harness horses. The draft horse is a mover of heavy loads. The light harness horse has three principal uses: 1. riding, 2. driving and 3. racing. Light harness horses are mainly used for pleasure.

The amount of feed needed for a farm horse depends on its size and work. The pasture and field available affect the amount of other feed needed. With working

period of 6 months a farm horse needs about 1.5 tons of grain feed and 2.5 tons of roughage in addition to pasture and field feed.

A light horse with working period of 9 months will require 1 1/3 tons of grain and 2 1/2 tons of hay per year if pasture is not allowed.

Mares of draft breeding may mature at a younger age than light-horse mares and can be bred when they are 2 years old.

**Stallion.** In the selection of breeding animals constitution is considered to be the most important. It is necessary to study the breeding of the stallion on both sides to the third or fourth generation.

Each stallion must be studied as an individual. Every stallion should have at least two hours exercise in the course of each day. A roomy box-stall or a paddock is a good place for exercise in all kinds of weather.

The condition of the horse can also be regulated by the amount and kind of grain. At least two kinds of hay should be in every stable. Grain is the best. Corn is given twice a day. Salt is needed by horses of all ages.

**Mare.** Mares should be covered at the age of three years. It is considered that mares which bear their first foal when they are four years old have the following advantages:

- 1) the births are easier;
- 2) mares are more fertile and have more milk;
- 3) the foals are bigger and stronger.

Young, healthy, vigorous mares may breed regularly for several years and produce a healthy foal each year. The brood mare must be fed just as a work horse is fed, receiving the same kinds and the same amounts of grain.

On the average the period of pregnancy lasts about 334 days. Sometimes it may be some days longer or some days shorter. Mares are watched carefully and are placed in foaling stalls a few days before the date of expected foaling. Stalls are disinfected and a large quantity of clean, fresh straw is used for bedding.

A normal birth causes no difficulties and seldom lasts longer than 15 minutes.

## Learning Activities

### ***1. Find in the text the English equivalents.***

Мускулистая спина, хорошо омускуленная поясница, глубокая грудь, хорошо поставленные ноги и копыта, хороший нрав, объемистая средняя часть туловища.

### ***2. Translate the sentences paying attention to the prepositions.***

1. Light harness horses are mainly used for pleasure.
2. The amount of feed needed for a farm horse depends on its size and its work.
3. With working period of 6 months a farm horse needs about 1.5 tons of grain feed and 2.5 tons of roughage in addition to pasture and field feed.
4. The condition of the horse can also be regulated by the amount and kind of grain.
5. It helps in digestion, carries off waste products and cools the horse.
6. On the average, the period of pregnancy lasts about 334 days.

7. Sometimes it may be some days longer or some days shorter. Mares are watched carefully and are placed in foaling stalls a few days before the date of expected foaling.
8. Stalls are disinfected and a large quantity of clean, fresh straw is used for bedding.

**3. Make the sentences negative and interrogative.**

1. The draft horse is a mover of heavy loads.
2. The pasture and field available affects the amount of other feed needed.
3. The amount of feed for a farm horse depends on its size and its work.
4. Each stallion must be studied as an individual.
5. The foals are bigger and stronger.
6. Fresh straw is used for bedding.
7. It helps in digestion, carries off waste products and cools the horse.

**4. Pick out adjectives and adverbs from the paragraph below and complete the chart.**

e.g.

adjective	adverb	comparative degree	superlative degree
easy		easier	easiest
	late	later	latest

Mares should be covered at the age of three years. It is considered that mares which bear their first foal when four years old, have the following advantages when compared with mares which were covered later in life:

- 1) the births are easier;
- 2) mares are more fertile and have more milk;
- 3) the foals are bigger and stronger.

Young, healthy, vigorous mares may breed regularly for several years and produce a healthy foal each year. The brood mare must be fed just as a work horse is fed receiving the same kinds and the same amounts of grain.

On the average the period of pregnancy lasts about 334 days. Sometimes it may be some days longer or some days shorter. Mares are watched carefully and are placed in foaling stalls a few days before the date of expected foaling. Stalls are disinfected and a large quantity of clean, fresh straw is used for bedding.

A normal birth causes no difficulties and seldom lasts longer than 15 minutes.

**5. Answer the questions.**

1. What characteristics are desirable in all horses?
2. Name the two main types of horses?
3. What uses does the light harness horse have?
4. What is a good place for exercising horses in all kinds of weather?
5. When should mares be covered?
6. What are the advantages of mares to bear their first foal at the age of four years?
7. How long does the period of pregnancy last?
8. Where should mares be placed?

9. A normal birth in horses lasts for about 15 minutes, does not it?

**6. Supply antonyms for the following words.**

Strong, heavy, short, wide, good, important, cool, advantage, young, healthy, difficult.

**7. Fill in the proper prepositions.**

1. The amount ... feed needed ... a farm horse depends ... its size and its work.
2. ... working period ... 6 months a farm horse needs about 1.5 tons ... grain feed and 2.5 tons ... roughage ... pasture and field feed.
3. Mares ... draft breeding may mature ... a younger age than light-horse mares.
4. It is necessary to study the breeding ... the stallion ... both sides ... the third or fourth generation.
5. A roomy box-stall or a paddock is a good place ... exercise ... all kinds ... weather.
6. The condition ... the horse can also be regulated ... the amount and kind ... grain.
7. Salt is needed ... horses ... all ages.
8. It helps ... digestion, carries ... waste products and cools the horse.
9. Young, healthy, vigorous mares may breed regularly ... several years.
10. A large quantity ... clean, fresh straw is used ... bedding.

**8. Translate the following sentences. Put questions as required.**

1. There are two main types of horses: draft horses and light harness horses. (How many ...?)
2. The light harness horse has three principal uses: 1. riding, 2. driving, 3. racing. (What ...?)
3. Light harness horses are mainly used for pleasure. (What for...)
4. A roomy box-stall or a paddock is a good place for exercise in all kinds of weather. (What ...?)
5. Salt is needed by horses of all ages. (What...?)
6. Mares should be covered at the age of three years. (When ...?)
6. Young, healthy, vigorous mares may breed regularly for several years. (How long ...?)
7. Mares are watched carefully and are placed in foaling stalls a few days before the date of expected foaling. (How ...?, Where ...?, When ...?)
8. On the average the period of pregnancy lasts about 334 days. (How long ...?)

**9. True or false?**

1. There are five main types of horses.
2. The amount of feed needed for a farm horse depends on its size and its work.
3. A light horse with working period of 9 months will require 3 1/3 tons of grain and 5 1/2 tons of hay per year if pasture is not allowed.
4. In the selection of breeding animals constitution is considered to be most important.
5. A roomy box-stall or a paddock is a good place for exercise in all kinds of weather.
6. Autumn is important in the ration of horses. It helps in digestion, carries off waste products and cools the horse.

7. Mares should be covered at the age of one year.
8. Young, healthy, vigorous mares may breed only once.
9. On the average the period of pregnancy lasts about 334 days.
10. Stalls are disinfected and a large quantity of clean, fresh straw is used for bedding.

**10. Complete the sentences according to the text.**

1. The following characteristics are desirable in all horses... .
2. There are two main types of horses ... .
3. The light harness horse has three principal uses: ... .
4. The pasture and field available affects ... .
5. ... is a good place for exercise in all kinds of weather.
6. Mares should be covered ... .
7. Mares which bear their first foal when they are four years old have .... .
8. The brood mare must be fed just as ... .
9. On the average the period of pregnancy lasts ... .
10. ... is used for bedding.

**11. Read the text “Horse” again; make a plan of the text. Render the text according to your plan.**

## UNIT 6

### POULTRY

**Topical vocabulary**

1. poultry – с/х птица, домашняя птица
2. to cull – отбирать, сортировать; отбраковывать
3. to lay – откладывать яйца, нестись
4. trap-nest – помещать (птицу) в контрольное гнездо
5. carcass – туша, тушка; скелет, каркас
6. to dress – очищать
7. flesh – мясо, мякоть
8. mammal – млекопитающее
9. cheap – дешевый
10. convenience – удобство
11. opportunity – возможность
12. creature – создание
13. palatability – вкусовые качества, поедаемость (корма)
14. demand – требование
15. feather – перо



## *Poultry*

It is common to classify hens as high, medium and low producers according to the number of eggs laid during the period of the year. Sorting out hens of low production is called “culling” while the choosing of the best layers is referred to as “selection”.

The culling and selecting of hens is not difficult to master. The best time to cull hens is in the months of July, August and September. The best hens lay well during summer and early autumn after the average hen has stopped. The good layers stop soon after the spring rush.

Only those hens that lay proper size, shape, colour and quality of eggs should be selected. Trap-nesting is a great help in selecting hens for eggs quality. It is not necessary however to trap-nest the year round.

One should always use a male whose mother and family produced a desirable type of eggs. Old birds that still retain their vigour generally make the best breeders. This is true of both males and females. The hen that lives for three years produces well and has the appearance of a yearling is an exceptional individual.

The common birds of the poultry group are all small. Their size is such that at any season and in any climate an ordinary family can use a carcass while fresh. Their conformation is such that the killing and dressing of poultry are comparatively easy and clean processes.

The flesh of poultry, compared with that of mammals grown for food purposes in domestication, is finer grained and, when in proper condition, more tender. It is at the same time easily digested and highly nutritious.

For the grower, as a rule, poultry is actually cheap meat. The agricultural service of the birds and their feeding largely on stuffs that would otherwise go to waste make the cost of production on farms small. It is this cheapness and convenience, as already noted, that determine the use of enormous quantities of poultry by producers and bring about the almost universal desire to grow poultry wherever there is opportunity to do so.

The eggs are the most unique of food products. Eggs may be kept reasonably fresh and sweet in conditions and at temperatures in which meat could be kept for only a short time. Easily digested, highly nutritious, considered as a separate article of diet they have, in even greater degree than the creatures which supply them, the properties of palatability and convenience. The demand for eggs has a great deal of influence in determining the relative popularity of the different kinds of poultry, and also in increasing the production of poultry.

Feathers are a by-product in poultry culture. Production of feathers for commerce is never a direct object in poultry keeping. The feathers of the common kinds of poultry bring just about enough to pay for dressing the birds and for the preparation of the feathers for market.

## *Learning Activities*

### *1. Translate the words and word combinations.*

Sorting out hens, choosing of the best layers, the best time to cull hens, spring rush, to trap-nest the year round, use a carcass, killing and dressing of poultry, the flesh of poultry, easily digested, highly nutritious, a separate article of diet, creatures, properties of palatability.

**2. Fill in the proper prepositions.**

1. It is common to classify hens as high, medium and low producers ... the number ... eggs laid during the period ... the year.
2. The good layers stop soon ... the spring rush.
3. Trap-nesting is a great help ... selecting hens ... eggs quality.
4. The hen that lives ... three years produces well.
5. Poultry size is such that ... any season and ... any climate an ordinary family can use a carcass while fresh.
6. The flesh ... poultry, compared ... that ... mammals grown ... food purposes ... domestication, is finer grained and, when ... proper condition, more tender.
7. Eggs may be kept reasonably fresh and sweet ... conditions and ... temperatures ... which meat could be kept ... only a short time.
8. The demand ... eggs has a great deal ... influence ... determining the relative popularity ... the different kinds ... poultry, and also ... increasing the production ... poultry.

**3. Match the columns as appropriate.**

1. It is common to classify hens as	a) in selecting hens for eggs quality.
2. The killing and dressing of poultry are comparatively	b) finer grained and, when in proper condition, more tender.
3. The flesh of poultry compared with that of mammals grown for food purposes in domestication is	c) easy and clean processes, often performed by women.
4. The best hens lay well during	d) meat could be kept for only a short time.
5. The hen that lives for three years, produces well and has the appearance of a yearling is	e) high, medium and low producers according to the number of eggs laid during the period of the year.
6. Eggs may be kept reasonably fresh and sweet in conditions and at temperatures in which	f) an exceptional individual.
7. Trap-nesting is a great help	g) influence in determining the relative popularity of the different kinds of poultry.
8. The demand for eggs has a great deal of	h) the summer and early autumn after the average hen has stopped.

**4. Answer the questions.**

1. How are hens commonly classified?
2. What is “culling”?

3. What is the best time to cull hens?
4. What hens should be selected?
5. What is a great help in selecting hens for eggs quality?
6. Poultry flesh is of good quality, isn't it?
7. Why are the eggs the most unique of food products?
8. How long may eggs be kept?
9. What is a by-product in poultry culture?
10. How are feathers used?

**5. Write an appropriate question for these answers.**

1. Yes. It is common to classify hens as high, medium and low producers according to the number of eggs laid during the period of the year.
2. No, it isn't. The culling and selecting of hens are not difficult to master.
3. Yes. The best hens lay well during the summer and early autumn.
4. Only those hens that lay proper size, shape, colour and quality of eggs should be selected.
5. No, it isn't. Trap-nesting is a great help in selecting hens for eggs quality.
6. Yes. Their conformation is such that the killing and dressing of poultry are comparatively easy and clean processes.
7. The flesh of poultry is finer grained and more tender.
8. Yes. Eggs may be kept reasonably fresh and sweet in conditions and at temperatures in which meat could be kept for only a short time.
9. No. Feathers are a by-product in poultry culture.

**6. True or false?**

1. It is common to classify hens as high, medium and low producers according to the number of eggs laid during the period of the year.
2. Sorting out hens of low production is called "selection".
3. The best time to cull hens is in the months of December, January and February.
4. The good layers begin soon after the spring rush.
5. Trap-nesting is a great help in selecting hens for eggs quality.
6. Poultry conformation is such that the killing and dressing of poultry are comparatively difficult and dirty processes, performed by only man.
7. The flesh of poultry is finer grained and, when in proper condition, more tender.
8. The agricultural service of the birds and their feeding largely on stuffs that would otherwise go to waste make the cost of production on farms small. It is this cheapness and convenience.
9. Eggs can't be kept fresh and sweet in conditions and at temperatures in which meat could be kept for a long time.
10. Easily digested, highly nutritious they have the properties of palatability and convenience.

**7. Complete the sentences according to the text.**

1. It is common to classify hens ... .
2. The best time to cull hens is ... .

3. One should select those hens that ... .
4. Poultry conformation is such that ... .
5. The flesh of poultry ... .
6. Cheapness and convenience of poultry is that ... .
7. Eggs may be kept ... .
8. Egg properties are ... .
9. Feathers are ... .

**8. Build up sentences.**

1. Medium, can, hens, high, be classified, producers, as, low.
2. Of, hens, production, is called, low, “culling”, sorting out.
3. Soon, good, spring, stop, after, the, rush, the, layers.
4. Great, is, in, for, hens, a, trap-nesting, help, eggs, selecting, quality.
5. Poultry, easy, killing, and, dressing, of, processes, are, the, comparatively, clean, and.
6. Tender, flesh, fine, the, grained, of, poultry, is.
7. Nutritious, it, and, easily, highly, is, digested.
8. By-product, in, a, feathers, poultry, are, culture.

**9. Write down 5 your own questions to the text “Poultry”.**

**10. Express the general idea of this text in a few words.**

## UNIT 7

### FEEDING

**Topical vocabulary**

1. to contain – содержать
2. purpose – цель
3. carbohydrate – углевод
4. to suffer from – страдать
5. lack – недостаток, отсутствие
6. disease – болезнь
7. protein – белок, протеин
8. tissue – ткань
9. bone – кость
10. moisture – влага, влажность
11. vigorous – энергичный, бодрый
12. forage – фураж, грубый корм
13. fodder – корм
14. feed additive – кормовая добавка
15. digestibility – переваримость, усвояемость

16. well-being – благополучие
17. succulent feeds – сочные корма
18. graze – пастись
19. microingredients – микрокомпоненты
20. premix – добавка, премикс

### *Feeding*

All food contains water. Water is required by the animal for many purposes. It makes up over 50 per cent of its body. Carbohydrates are organic compounds and they are present in all feeds. They are produced in green plants. Even when farm animals receive well-balanced rations, it is still possible for them to suffer from deficiency diseases.

The amount of food the animal receives during 24 hours is called a ration. A properly balanced ration should supply the animal with necessary nutrients. A well-balanced ration of roughages and concentrates speeds up the growth of young and mature animals. Feeding is an important factor in raising and improving the herd.

Many farm animals are slow in development and low in production simply because they are improperly fed. Meat animals gain faster if they are fed the proper amount and kinds of feeds. Improper feeding may result in various diseases in animals. The important nutrients in feeds are carbohydrates, fats, proteins, minerals, vitamins and also water. All these nutrients are quite necessary for building fat, new tissues in the body of growing animals. They are also necessary for the development of muscles, bones, for the production of milk and for the growing of wool. Vitamins are necessary for keeping the animal in a healthy and vigorous condition. Water in proper amounts is very essential for all kinds of livestock. Although succulent feeds such as silage and grass contain a large amount of moisture, additional water is needed.

In agriculture today, the nutritional needs of farm animals are well understood and may be satisfied through natural forage and fodder alone, or augmented by direct supplementation of nutrients in concentrated, controlled form. The nutritional quality of feed is influenced not only by the nutrient content, but also by many other factors such as feed presentation, hygiene, digestibility, and effect on intestinal health.

“Fodder” refers particularly to foods or forages given to the animals rather than that which they forage for themselves. It includes hay, straw, silage, compressed and pelleted feeds, oils and mixed rations, and sprouted grains and legumes. Feed grains are the most important source of animal feed. The amount of grain used to produce the same unit of meat varies substantially. According cows and sheep need about 8kg of grain for every 1kg of meat they produce, pigs about 4kg. The most efficient poultry units need a mere 1.6kg of feed to produce 1kg of chicken. Farmed fish can also be fed on grain and use even less

than poultry. Compound feed may also include premixes, which may also be sold separately. Premixes are composed of microingredients such as vitamins, minerals, chemical preservatives, antibiotics, fermentation products, and other ingredients.

“Forage” is plant material (mainly plant leaves and stems) eaten by grazing livestock.

Feed additives provide a mechanism through which nutrient deficiencies can be resolved, affect the rate of growth of animals and also their health and well-being. Even with all the benefits of higher-quality feed, most of a farm animal’s diet still consists of grain-based ingredients.

Specific records for feed efficiency can only be obtained by feeding each animal individually and keeping records on the amount of feed consumed.

## Learning Activities

### ***1. Guess the meaning.***

Carbohydrates, ration, vitamin, concentrate, protein, organic, deficiency, efficiency, fermentation, antibiotic, mineral, premix, factor, hygiene, effect, control, form.

### ***2. Give Russian equivalents.***

Make up 100%, well-balanced ration, chemical compounds, deficiency diseases, growing animals, nutritional quality, healthy condition, rate of growth, farmed fish, nutrient content, feed efficiency, to keep records, grain-based ingredients.

### ***3. Translate the sentences in a written form.***

1. Carbohydrates are organic compounds, and they are present in all feeds. 2. Even when farm animals receive well-balanced rations, it is still possible for them to suffer from deficiency diseases. 3. A well-balanced ration of roughages and concentrates speeds up the growth of young and mature animals. 4. Many farm animals are slow in development and low in production simply because they are improperly fed. 5. In agriculture today, the nutritional needs of farm animals are well understood and may be satisfied through natural forage and fodder alone, or augmented by direct supplementation of nutrients in concentrated, controlled form. 6. The nutritional quality of feed is influenced not only by the nutrient content, but also by many other factors such as feed presentation, hygiene, digestibility, and effect on intestinal health. 7. Feed additives provide a mechanism through which nutrient deficiencies can be resolved, affect the rate of growth of animals and also their health and well-being. 8. Specific records for feed efficiency can only be obtained by feeding each animal individually and keeping records on the amount of feed consumed.

### ***4. Explain the terms “fodder”, “forage”.***

**5. Read the text again and complete the chart according to your knowledge.**

No	Fodder	Forage

**6. True or false?**

1. All food contains water.
2. Water makes up over 10 per cent of animal's body.
3. Carbohydrates are inorganic compounds.
4. The amount of food the animal receives during 24 hours is called a food intake.
5. A well-balanced ration of roughages and concentrates slows down the growth of young and mature animals.
6. Many farm animals are quick in development and high in production simply because they are improperly fed.
7. Proper feeding may result in various diseases in animals.
8. Water in proper amounts is very essential for all kinds of livestock.
9. Feed grains are the most important source of animal feed.
10. Feed additives provide a mechanism through which nutrient deficiencies can be resolved.
11. Specific records for feed efficiency can only be obtained by feeding each animal individually.

**7. Complete the sentences.**

1. All food contains ... .
2. Carbohydrates are ... .
3. The cause of deficiency disease is due to ... .
4. A ration is ... .
5. A well balanced ration of roughages and concentrates speeds up ... .
6. Meat animals gain faster if ... .
7. The important nutrients in feeds are ... .
8. All nutrients are quite necessary for ... .
9. Premixes are composed of microingredients such as ... .

**8. Put questions as required.**

1. All food contains water. (What ...?)
2. Carbohydrates are organic compounds and they are present in all feeds. (What ...? Where ...?)
3. The cause of deficiency disease is due to a lack of vitamins. (What ...?)
4. The amount of food the animal receives during 24 hours is called a ration. (How ...?)
5. Feeding is an important factor in improving the herd. (Where ...?)

6. Meat animals gain faster if they are fed the proper amount and kinds of feeds. (When ...?)
7. All nutrients are necessary for the development of muscles, bones, for the production of milk and for the growing of wool. (What ... for?)
8. The amount of grain used to produce the same unit of meat varies substantially. (Does...?)
9. Many farm animals are slow in development and low in production because they are improperly fed. (Why...?)

**9. Translate the sentences into English.**

1. Вода необходима животным для многих целей. 2. Углеводы – это органические вещества, они присутствуют во всех видах пищи. 3. Вода составляет около 50% организма животного. 4. Количество пищи, которое животное получает в течение 24 часов, называется рационом. 5. Хорошо сбалансированный рацион из грубых кормов и концентратов ускоряет рост молодняка. 6. Неправильное кормление может привести к различным болезням у животных. 7. Питательные вещества необходимы для развития мышц, костей, для производства молока и роста шерсти. 8. Хотя сочные корма, такие как силос и трава, содержат большое количество влаги, вода необходима. 9. Питательные вещества нужны для построения новых тканей и костей. 10. Сегодня хорошо понимают необходимость правильного питания для сельскохозяйственных животных. 11. Ты осознаешь необходимость правильного питания для людей и животных?

**10. Build up sentences.**

1. Water, food, all, contains.
2. Required, animal, many, water, is, for, by, the, purposes.
3. Are, in, present, all, carbohydrates, feeds.
4. It, for, deficiency, is, from, still, diseases, possible, animals, to suffer.
5. Ration, properly, the, with, should, a, animal, necessary, balanced, supply, nutrients.

**11. Make a plan of the text. Render the text according to your plan.**

## UNIT 8

### COMPOSITION OF MILK

**Topical vocabulary**

1. milk composition – состав молока
2. water-soluble – водорастворимый
3. fat-soluble – жирорастворимый
4. essential – основной, необходимый
5. processing – переработка



6. colorless – бесцветный
7. to contribute to – способствовать
8. to prevent – предотвращать
9. approximately – приблизительно
10. sole source – единственный источник
11. cereals – зерновые, злаки
12. relatively – относительно
13. pale – светлый
14. milk fat – молочный жир
15. to split – расщеплять
16. precursor – предшественник
17. surplus – избыток, излишек

### *Composition of milk*

**Vitamins.** All vitamins essential in human nutrition are found in milk. Fat-soluble vitamins are in the milk fat portion of milk, and water-soluble vitamins are in the nonfat portion. Milk is usually fortified with vitamin D during processing.

Milk fat from Jersey<sup>1</sup> and Guernsey<sup>2</sup> cows has a rich, yellow color due to carotene (a precursor of vitamin A), which is yellow. Milk fat from Holstein<sup>3</sup> cows has a pale, yellow color, and goat milk fat is white. Carotene can be split into two molecules of vitamin A. Milk fat of Holstein cows is pale yellow, because most of the carotene has been split, and the milk fat of goats is white, because all of the carotene has been changed to colorless vitamin A.

Water-soluble vitamins (C and B) are relatively constant in milk and are not greatly influenced by vitamin content of the cow's ration. The B vitamins are produced by rumen microorganisms, and vitamin C is formed by healthy epithelial tissue in most animals (excluding man, primates, and guinea pigs).

**Minerals.** Milk is a rich source of calcium for the human diet and a reasonably good source of phosphorus and zinc. Calcium and vitamin D are needed in combination to contribute to bone growth in young humans and to prevent osteoporosis in adults, particularly women. Milk is not a good source of iron, and the iodine content milk varies with the iodine content of the animal's feed.

More than 80% of the milk produced is marketed as fluid milk, cream, cheese, and butter.

The amount of milk needed to produce each product depends primarily on the milk fat content.

**Carbohydrates.** Lactose, the predominant carbohydrate in milk, is synthesized in the mammary gland. Approximately 4.8% of cow's milk is lactose. It accounts for approximately 54% of the SNF<sup>3</sup> content in milk. Lactose is only about one-sixth as sweet as sucrose and it is less soluble in water than other sugars. It contributes about 30% of the total calories in milk. Milk is the sole source of lactose in nature.

**Proteins.** Milk contains approximately 3.3% protein. Protein accounts for about 38% of total SNF and about 22% of the calories of whole milk. The proteins of milk are of high quality. They contain varying amounts of all amino acids required by

humans. A surplus of the amino acid lysine offsets the low lysine content of vegetable proteins and particularly cereals.

Notes:

1. Jersey – джерсейская порода крупного рогатого скота молочного направления
2. Guernsey – гернзейская порода крупного рогатого скота молочного направления
3. Holstein – голштинская порода крупного рогатого скота молочного направления
4. SNF (Solids-non-fat) – сухой обезжиренный молочный остаток

## Learning Activities

### **1. Guess the meaning.**

Microorganisms, vegetable proteins, lysine, calorie, lactose, sucrose, osteoporosis, iodine, molecules, zinc, phosphorus, primates.

### **2. Give Russian Equivalents.**

Milk composition, milk fat, vitamin content, rumen microorganisms, whole milk, lysine content, vegetable protein, guinea pig.

### **3. Translate the sentences into Russian.**

1. Water-soluble vitamins (C and B) are relatively constant in milk and are not greatly influenced by vitamin content of the cow's ration.
2. Lactose is only about one-sixth as sweet as sucrose and it is less soluble in water than other sugars.
3. They contain varying amounts of all amino acids required by humans.
4. A surplus of the amino acid lysine offsets the low lysine content of vegetable proteins and particularly cereals.
5. Milk is usually fortified with vitamin D during processing.
6. Fat-soluble vitamins are in the milk fat portion of milk, and water-soluble vitamins are in the nonfat portion.
7. Milk fat of Holstein cows is pale yellow, because most of the carotene has been split, and the milk fat of goats is white, because all of the carotene has been changed to colorless vitamin A.

### **4. Continue the following sentences.**

1. Milk is usually fortified with ... .
2. Milk fat of Holstein cows has ... .
3. Carotene can be split into ... .
4. The B vitamins are produced by ... .
5. Calcium and vitamin D are needed in ... .
6. The amount of milk needed to produce each product depends primarily on ... .
7. Lactose is only about one-sixth as sweet as ... .
8. Protein accounts for ... .

### **5. Supply nouns to the following adjectives.**

Human, water-soluble, yellow, colorless, healthy, epithelial, good, fluid, mammary, sole, whole, vegetable.

**6. True or false?**

1. All vitamins essential in human nutrition are found in water.
2. Milk is usually fortified with vitamin C during processing.
3. Carotene can be split into five molecules of vitamin A.
4. Water-soluble vitamins (D and F) are relatively constant in milk.
5. Milk is not a good source of iron.
6. Approximately 5.8% of cow's milk is lactose.

**7. Look through the text again and complete the chart.**

<b>№</b>	<b>Minerals</b>	<b>Nutrients</b>
1.	zinc	carbohydrate
2.		

**8. Answer the questions.**

1. Is milk rich in vitamins essential for human nutrition?
2. What is the difference between the milk fat of Jersey cows and the milk fat of Holstein cows?
3. How do the water-soluble vitamins (C and B) influence the ration of cows?
4. What does the amount of milk needed to produce each product depend on?
5. What amount of protein does milk contain?
6. What is the sole source of lactose in nature?

**9. Put 5 your own questions to the text and let your group mates answer them.**

**10. Retell the text according to the plan.**

1. Vitamins in milk.
2. Minerals in milk.
3. Nutrients in milk.

## UNIT 9

### HOW TO KEEP ANIMALS HEALTHY AND PRODUCTIVE

**Topical vocabulary**

1. animal husbandry – животноводство, технология животноводства
2. breed – порода
3. breeding – разведение
4. maintenance – содержание, уход

5. husbandman – животновод
6. sick – больной
7. conductive – способствующий
8. pure – чистый
9. practitioner – практический работник, практический специалист
10. to nurse – выхаживать, выкармливать
11. to apply – применять
12. fundamentals – основы
13. yard – загон, скотный двор
14. dairy barn – коровник
15. scum – пена, налет
16. trough – кормушка
17. drinking cup – поилка
18. fire hose – пожарный брандспойт, пожарный шланг
19. lighting rod – молниеотвод
20. foul – загрязненный, имеющий плохой запах
21. refuse – отходы
22. to remove – удалять
23. whitewashing – побелка
24. injurious – вредный
25. filth – грязь
26. to pollute – загрязнять
27. crowding – скученность

### *How to Keep Animals Healthy and Productive*

**Animal Husbandry.** Livestock management is an art that has been developed from years of observation and experience in breeding and caring for farm animals. The practitioner or specialist dealing with livestock maintenance is called an animal husbandman. His duty is to keep the animals under his care in health and to nurse them when sick. He may be sure that he is doing everything within his power to maintain conditions most conducive to animal health if he will apply the fundamentals of livestock management.

**Pure Water.** Drinking water should be supplied plentifully and be fresh and kept reasonably clean. For the dairy barn, individual drinking cups to keep water before the cows constantly are highly recommended. It is reported that they increase milk production 10 per cent. A supply of water should be available in yards and pastures. Care should be taken to guard the water from filth of all kinds as polluted water is unfit for drinking purposes. The yellow-green scum that appears in troughs during the summer is not, in itself, harmful, but it may catch and hold dangerous microbes. The drinking cups become foul through decomposition of accumulated refuse and saliva, so need similar attention from time to time. Domestic water supplies are made safe by chlorination.

**Direct Sunlight.** Nature's means of controlling diseases and promoting growth of both plants and animals is through the ultraviolet rays of the sun. Accordingly, barns should be built with plenty of windows to admit an abundance of sunshine.

To be most effective the sunlight must be direct, as the passing of the light through window glass filters out its growth giving and germkilling properties.

**Clean Stables.** Stables should be designed in order to keep the animals clean. Manure should be removed daily and drawn to the field or store at some distance from the stable. Stables should be disinfected at least twice a year. Whitewashing the walls aids in maintaining sanitation. Attention should be paid to arrangement for making the barn work easy and to prevent crowding. Among the points, which must be considered in planning the stables are the following: the site, the building materials, the walls, ceiling and floors, the lighting, and the drainage. Protection against fire by such means as fire hose and lighting rods is good insurance.

**Balanced Ration.** A sufficient quantity of palatable and nutritious feed is needed by animals in order to maintain their condition and production. Such a ration is one balanced as to proteins, fats, carbohydrates, minerals and vitamins. The properties of these components should be varied with the purpose for which the animals are kept. For instance, the ration of a high-producing dairy cow should include a relatively large amount of minerals and carbohydrates and should be fed according to the milk produced. Too much feed of excellent quality may be as injurious as too little.

## Learning Activities

### **1. *Guess the meaning.***

Management, observation, per cent, microbe, sanitation, chlorination, drainage, materials, minerals, carbohydrates, components, ultraviolet rays, production, condition, filters, specialist, to disinfect, distance, balanced, sanitation, protection, planning.

### **2. *Give Russian equivalents.***

Livestock management, animal husbandman, farm animals, dairy barn, drinking cups, water supply, refuse decomposition, barn disinfection, building materials.

### **3. *Supply a noun to an adjective:***

direct, clean, excellent, dairy, yellow-green, pure, drinking, dangerous, similar, domestic.

### **4. *Continue the sentences according to the text.***

1. Livestock management is an art that ... .
2. Drinking water should be supplied plentifully and ... .
3. A supply of water should be available in ... .
4. The drinking cups become foul through ... .
5. Stables should be designed in ... .
6. Protection against fire by such means as ... .

### **5. *True or false?***

1. The practitioner dealing with livestock maintenance is called an animal doctor.
2. Drinking water should be supplied plentifully and be fresh and kept reasonably clean.

3. Domestic water supplies are made safe by freezing.
4. Stables should be designed in order to keep animals clean.
5. The ration of a high-producing dairy cow should include a relatively small amount of minerals and carbohydrates.
6. Too much feed of excellent quality may be in no case as injurious as too little.

**6. Give synonyms to the following words.**

Livestock, management, art, experience, duty, health, barn, pasture, microbes, similar, clean, distance, whitewashing, sanitation, feed, proteins, components, purpose, ration, amount, excellent, injurious, little.

**7. Form verbs from the following nouns.**

Management, observation, experience, breeding, care, keeping, water, recommendation, chlorination, aid, direction, washing, maintaining, disinfection, arrangement, planning, building, protection, drainage, lighting, insurance, milking, production.

**8. Find the predicate in each sentence, define the form of the verb. Translate the sentences into Russian in writing.**

*E.g. Livestock management is an art that has been developed from years of observation and experience.*

Is – Present Simple Active of the verb to be;

Has been developed – Present Perfect Passive of the verb to develop.

Управление скотом – это искусство, которое было развито в течение многих лет наблюдения и практики.

1. The practitioner or specialist is called an animal husbandman.
2. The yellow-green scum that appears in troughs during the summer is not harmful.
3. He is doing everything within his power to maintain conditions most conducive to animal health.

**9. Answer the following questions.**

1. What do we call the practitioner or specialist in animal husbandry?
2. What is the duty of an animal husbandman?
3. How can the quality of drinking water influence the milk production?
4. How often should manure be removed from the stable?
5. What are the points which must be considered in planning the stables?
6. What should the ration of a high-producing cow include?
7. Why should barns be built with plenty of windows?
8. Domestic water supplies are made safe by chlorination, aren't they?

**10. Write down 5 your own questions to this text and let your group mates answer them.**

**11. Express the general idea of this text in a few words.**

# UNIT 10

## GROWTH

### Topical vocabulary

1. growth – рост
2. to be in excess – превышать
3. share – доля
4. breakdown – распад
5. to accomplish – осуществлять
6. weight – вес
7. tissue – ткань
8. bone – кость
9. level – уровень
10. muscle – мышца
11. connective tissue – соединительная ткань
12. raw material – сырье
13. soybean meal – соевая мука
14. weaning – отъем от матки
15. slaughter weight – убойный вес
16. gain – прирост, привес
17. dry matter – сухое вещество
18. requirement – требование
19. monogastric animal – моногастричное животное, животное с простым, однокамерным желудком
20. quantity – количество
21. ruminant animal – жвачное животное
22. to do well – хорошо себя чувствовать, хорошо расти
23. to sustain – поддерживать
24. roughage – грубые корма
25. soybean meal – мука из соевых бобов
26. legume – бобовые
27. dam – матка, самка
28. hatching – вылупление
29. maintenance – содержание, поддержание

### *Growth*

Global meat production is increasing. Over the last 50 years it has reached 312 million tonnes, with beef having a 22% share. Both pork and chicken have shown slightly greater growth than beef in recent years, with sheep meat remaining relatively constant.

Growth is an increase in weight and size of an individual caused by cell division and synthesis of new protein. Growth occurs when protein synthesis is in excess of its breakdown. Growth at the tissue level is accomplished primarily through the

building of muscle, bone, and connective tissue. Growth is quantitative change and can be measured in cm. or kg.

There are several important nutrient requirements for growth, including protein, minerals, vitamins, and energy. The dry matter of muscle and connective tissue is composed largely of protein; therefore, young, growing animals, which need feed to sustain growth in addition to maintenance, have greater protein requirements. A young, growing animal is a muscle-building factory, and protein in the feed is the raw material for the manufacturing process.

Monogastric animals need not only a certain quantity of protein, but they must also have certain amino acids for proper growth. The protein needs of hogs, for example, are usually supplied by feeding them soybean meal as a supplemental source of amino acids. If young ruminant animals are being nursed by dams, the young will do well on good pastures, good quality hay, or both together.

The mineral needs of a young, growing animal include calcium and phosphorus for proper bone growth, salt, for a normal sodium level in the body, and any mineral that may be deficient in the area in which the animal lives. Calcium is usually plentiful in legume forages, and phosphorus is usually plentiful in grains, so a combination of hay.

Normally, the growth period of cattle and sheep is 365 days, whereas that of a pig is 150 days.

The maximum size of an animal is determined by its genetics, but nutrition and disease influence whether the animal reaches its genetic potential for size.

Animal growth and development can be separated into processes occurring before birth or hatching (pre-natal) and those occurring after birth or hatching (post-natal). Pre-natal growth and development are subdivided into two stages: embryogenesis, and organogenesis. The period of post-natal growth extends from birth or hatching until death. The length of this period depends greatly on the species.

Because growth and development are continuous and dynamic processes requiring integration of numerous physiological functions, they are influenced by: nutrition, efficiency of metabolism and respiration, hormonal regulation, immune response, physiological status of the animal, diseases and parasites, and maintenance of homeostasis.

## Learning Activities

### ***1. Guess the meaning.***

Synthesis, protein, mineral, energy, vitamin, manufacturing process, amino acid, period, calcium, phosphorus, salt, genetics, selection, sodium, combination, potential, efficiency, metabolism, selection, constant, growth period.

### ***2. Form verbs from the following nouns.***

Growth, synthesis, breakdown, increase, building, combination, measures, weight, improvement, selection, feeding, production, maintenance, addition, slaughter, cost, supplement.



**3. Translate the following word combinations.**

Meat production, cell numbers, cell size, muscle growth, cell division, protein synthesis, tissue level, quantitative change, protein requirements, sodium level, animal nutrition, body development, feed manufacture.

**4. True or false?**

1. Growth occurs when amino acid synthesis is in excess of its breakdown.
2. Growth at the tissue level is accomplished through the building of muscle, bone and cells.
3. The dry matter of muscle and connective tissue is composed largely of fats.
4. Monogastric animals need only a certain quantity of protein.
5. Calcium is usually plentiful in legume forages.
6. There are several important nutrient requirements for growth, including protein, minerals, vitamins, and energy.
7. Growth is a decrease in size and weight of an individual.

**5. Complete the chart.**

animal	meat produced
pig	
cattle	
chicken	
sheep	

**6. Give antonyms to the following words.**

Excess, breakdown, increase, dry, connective, raw, extended, young, maximum, adequate, good, together, include, deficient, plentiful, efficient, weaning, single, high.

**7. Supply a noun to an adjective:**

connective, important, young, raw, supplemental, ruminant, adequate, good, plentiful.

**8. Complete the sentences according to the text.**

1. Growth occurs when ... .
2. Growth is accomplished by ... .
3. Global meat production ... .
4. Calcium is usually plentiful in ... .
5. If young ruminant animals are being nursed by ... .
6. Young ruminant animals cannot consume enough ... .
7. There are several important nutrient requirements for growth, including ... .
8. Postweaning gain in cattle is usually measured in ... .

**9. Answer the questions.**

1. Does growth mean an increase or a decrease in size and weight?

2. What types of meat have recently grown more?
3. Are cattle monogastric or ruminant animals?
4. Name important nutrients that animals require for growth?
5. Why is a young growing animal called a muscle-building factory?
6. Do monogastric animals need amino acids for their growth?
7. What are the mineral needs of a young growing animal?
8. In what feeds is calcium plentiful? And what about phosphorus?
9. What comes first, pre-natal or post-natal period?

**10. Make a list of factors influencing growth and development of animals. Compare your lists with your class mates ones.**

**11. Make a plan of the text "Growth". Render the text briefly according to your plan.**

## UNIT 11

### LIVESTOCK FEEDS

#### Topical vocabulary

1. livestock – скот, крупный рогатый скот
2. standpoint – точка зрения
3. roughage – грубый корм
4. hay – сено
5. silage – силос
6. legumes – бобовые
7. sorghum – сорго
8. silo – силосная яма
9. ewe – овцематка
10. palatable – удобоваримый, хорошо поедаемый
11. corn – кукуруза
12. pasture – пастбище
13. alfalfa – люцерна
14. farrowing of premature – преждевременный опорос
15. drought – засуха
16. scarce – скудный
17. supplemental – дополнительный
18. fertile – плодородный
19. to be satisfactory – быть удовлетворительным
20. safety – безопасность
21. thrifty – быстро растущий
22. to lack – испытывать недостаток
23. to cut – резать
24. fine – мелкий

## *Livestock Feeds*

### **Feeds for Cattle**

**Roughages.** Roughage should make up a large part of the cattle ration. High-quality legume hay is considered to be the best roughage from a nutritional standpoint. It is high in proteins, minerals and vitamins.

Grass hays are excellent roughages but low in protein and minerals compared to legume hay. If grass is fed as the only roughage, one-half to one pound of protein supplement will be required to balance the ration.

Silage may be made from both legumes and grasses. Silage made from legumes will contain more protein than that made from grasses. Corn and sorghum make excellent silage. Corn is good silage for cattle if it is well made. It should be made when the grains of corn are beginning to harden. In the process of making it the corn plant should be cut very fine and distributed evenly in the silo. In the silo the green feed goes through the process of fermentation. Silage should be fed with care. For ewes one and a half to three pounds per head daily is enough, although it may be possible to feed more with safety. Along with the silage cattle should get some palatable dry roughage and also some grain, for silage is essentially roughage and should not be considered as a substitute for grain.

Because of its succulent nature the use of silage should make cattle more healthy and thrifty, especially if no green feed is available in the fields. And in the north there are always periods in winter when the fields cannot be pastured.

### **Feeds for Hogs**

**Dry Roughages.** During the winter months or at other seasons of the year when green, succulent pastures cannot be provided, it is very necessary that swine rations contain high-quality ground forage, preferably alfalfa. Well cured, green, leafy alfalfa will supply the needed minerals, vitamins, and quality proteins that are lacking in most grains.

Alfalfa is important in animal nutrition. It contains proteins of high quality, is a rich source of all the vitamins needed by the pig. If leafy and green, and not over a year old, it is high in carotene, a lack of which results in poor growth and the farrowing of premature, dead, or weak pigs. Alfalfa is also an excellent source of the long list of B vitamins.

### **Feeds for Sheep**

**Hays and other Forages.** Inclement weather, extreme droughts, over-stocked pastures and ranges, and scarce pastures make it necessary that dry roughages be provided for sheep.

Hays are the standard winter feed for sheep when they cannot be out on pasture or range or when the condition of the pastures is such as to require supplemental feeding. The best hay for sheep is legume hay which has been produced on fertile soil, cut at the proper stage, and well cured. Such hay is palatable and rich in protein, calcium and vitamins A and D. If legume hay cannot be secured, high-quality grass-legume mixed hay will be satisfactory and much better than grass hay. Sheep may do very well for a considerable period of time when fed no feed other than a good-quality legume hay, salt and water.

## Learning Activities

### 1. *Guess the meaning.*

Protein, mineral, ration, to balance, vitamin, fermentation, substitute, period, nature, carotene, calcium, mixed, salt, standard, results.

### 2. *Find in the text as many nouns as you can. Complete the chart.*

NOUN	
singular	plural
1.	
2.	
3.	

### 3. *Translate into Russian paying attention to the prepositions.*

Part of the ration, low in protein, made from legumes, in the process of making, feed with care, along with the silage, as a substitute for grain, source for vitamins, be out on pasture.

### 4. *Make the sentences negative and interrogative.*

1. Roughage should make up a large part of the cattle ration.
2. It is high in protein, minerals and vitamins.
3. Silage should be fed with care.
4. Alfalfa is important in animal nutrition.
5. Hays are the standard winter feed for sheep.
6. The best hay for sheep is legume hay.
7. Sheep may be very well for a considerable period of time when fed no feed other than a good-quality legume hay, salt and water.

### 5. *Match nouns with the corresponding adjectives.*

<i>noun</i>	<i>adjective</i>
1. cattle	1. hays
2. grass	2. plant
3. corn	3. ration
4. dry	4. pastures
5. succulent	5. feed
6. extreme	6. roughage
7. winter	7. forage
8. poor	8. soil
9. fertile	9. droughts

**6. Supply synonyms to the following words.**

Ration, high-quality, excellent, to harden, green feed, fermentation, cattle, palatable, green, substitute, healthy, necessary, animal nutrition, rich, poor, result in, favourable weather, extreme draughts, overstocked pastures, standard, supplemental feeding, considerable.

**7. True or false?**

1. Roughage should make up a large part of the human ration.
2. High-quality legume hay is high in iron, calcium, phosphorus.
3. Silage may be made only from legumes.
4. Corn and sorghum make poor silage.
5. Silage makes cattle healthy because of its succulent nature.
6. Alfalfa is not important in animal ration.
7. Alfalfa is also an excellent source of the long list of D vitamins.

**8. Answer the following questions.**

1. Why is high-quality legume considered to be the best roughage for livestock?
2. What is silage made from?
3. Corn is good silage for cattle if it is well made, is not it?
4. Why is alfalfa important in animal nutrition?
5. Do you know any winter feeds?
6. What is the best hay for sheep?

**9. Write down 5 your own questions to this text.**

**10. Render the text briefly.**

## UNIT 12

### LACTATION

**Topical vocabulary**

1. lactation – лактация
2. udder – вымя
3. calving – отел
4. to be dried off – быть в запуске
5. gland – железа
6. duct – проток
7. milk cistern – молочная цистерна
8. fore quarter – передняя четверть (вымени)
9. hind quarter – задняя четверть (вымени)
10. half – половинка
11. teat – сосок

12. teat opening – просвет соска
13. drain down – отвод молока
14. to collapse – спадаться
15. tension – напряженное состояние
16. sphincter muscle – мышечное кольцо
17. leakage – просачивание
18. yield – надой молока
19. to meet deficiency – удовлетворить дефицит, недостаток
20. to shift – переходить, сдвигаться
21. nutrient output – расход питательных веществ
22. gestation – стельность, супоросность (беременность)
23. gestational – относящийся к стельности (беременности)
24. unit – отдельная часть
25. milk fever – молочная лихорадка, послеродовой лактационный мастит
26. drain of – отток, выведение
27. poor feeding management – ненадлежащее управление кормлением
28. mobilize – активировать, перебрасывать, мобилизовать

### *Lactation*

In most mammals females are expected to produce milk for their young. The period when a female produces milk is called lactation period.

As to cows, it is the time from when a cow calves to the time when it is dried off to calve again (approximately 305 days).

In cows milk is produced by a system of glands grouped together in an organ known as the udder. The udder consists of many tiny glands, ducts, and milk cisterns. It is divided into halves by a membrane, with a fore and hind quarter making up each half. Quarters are the separate units independent of one another. Each quarter is a gland with a teat for drainage of the milk. The milk cistern serves as a collecting place for the milk, which drains down from the secreting tissue. When the cow is milked, the alveoli in the udder are collapsed. The teat is connected to the milk cistern. The opening at the end of the teat, is surrounded by a star-shaped muscle called the sphincter muscle. Its chief function is to keep the teat opening closed as a guard against infectious organisms entering the udder and as prevention against the leakage of milk.

Major physiological, nutritional, metabolic and immunological changes occur when the production cycle of a cow shifts from a gestational non-lactating state to the milk synthesis and secretion. If a cow is not milked secretion of milk stops about 36 hours after the last milking.

The balance of energy, protein, vitamins and minerals is to be achieved with the use of feedstuffs and feed premixes. Poor feeding management of cows can lead to shorter, lower yielding lactations and increase calving interval.

Milk production requires considerable protein, minerals, vitamins, and energy. Generally during peak milk production, feed consumption cannot compensate for nutrient output and the cow mobilizes some body protein. Actually, more body energy is mobilized than body protein to meet the nutrient deficiency.

Calcium and phosphorus are the two most important minerals needed for lactation. Milk is rich in these minerals, and their absence or imbalance may result in decreased lactation or even cause death. The dairy cow may develop milk fever shortly after calving if there is an exceptionally heavy drain of calcium from her system.

## Learning Activities

### **1. Guess the meaning.**

Lactation, period, to compensate, peak, cistern, function, to produce, system, interval, mineral, to mobilize, energy, calcium, muscle, sphincter, production, result, imbalance.

### **2. Translate into Russian.**

Farm animals, mammal female, lactation period, milk cistern, feed consumption, milk production, body protein, production cycle, milk secretion, energy balance, nutrient deficiency, milk fever, body energy, milk synthesis.

### **3. Form the verbs from the following nouns.**

Lactation, milk, production, absence, result, death, development, calf, consumption, compensation, group, need, function, secretion, prevention, drainage, decrease, mobilization, feeding, function, increase, prevention.

### **4. Translate the sentences in writing.**

1. In most mammals females are expected to produce milk for their young. 2. It is the time from when a cow calves to the time when it is dried off to calve again (approximately 305 days). 3. Major physiological, nutritional, metabolic and immunological changes occur when the production cycle of a cow shifts from a gestational non-lactating state to the milk synthesis and secretion. 4. If a cow is not milked, secretion of milk stops about 36 hours after the last milking. 5. Its chief function is to keep the teat opening closed as a guard against infectious organisms entering the udder and as prevention against the leakage of milk. 6. Actually, more body energy is mobilized than body protein to meet the nutrient deficiency.

### **5. Translate into English.**

1. Ожидается, что самки млекопитающих будут производить молоко. 2. У коров молоко образуется в особом органе – вымени. 3. Вымя – это система специализированных желез. 4. Если корову не доить, выработка молока прекращается. 5. Четверти – это отдельные части вымени. 6. Ненадлежащее кормление коровы может привести к уменьшению периода лактации. 7. Усиленное выведение кальция из организма коровы может привести к молочной лихорадке. 8. Молоко богато кальцием и фосфором. 9. Молоко – это ценный пищевой продукт. 10. На пике лактации организм коровы не компенсирует затраты питательных веществ. 11. Если корову не доить, секреция молока прекращается. 12. Молочная цистерна – это место, где накапливается молоко.

**6. Translate the sentences paying attention to the modal verbs. Convert the sentences into Past tense form.**

1. The balance of energy, protein, vitamins and minerals is to be achieved with the use of feedstuffs and feed premixes.
2. Poor feeding management of cows can lead to shorter, lower yielding lactations and increase calving interval.
3. The dairy cow may develop milk fever shortly after calving if there is an exceptionally heavy drain of calcium from her system.
4. Generally during peak milk production, feed consumption cannot compensate for nutrient output and the cow mobilizes some body protein.
5. Milk is rich in these minerals, and their absence or imbalance may result in decreased lactation or even cause death.

**7. Find in the text the sentences describing the udder. Speak about anatomy and physiology of this organ.**

**8. Answer the questions.**

1. What do females produce milk for?
2. What period is called lactation period?
3. How long does lactation period in a cow last?
4. How many halves are there in the cow's udder?
5. Are quarters separate organs?
6. What happens if a cow is not milked?
7. How can the balance of energy, proteins, vitamins and minerals in the cow's body be achieved?
8. What are the most important minerals needed for lactation?
9. Major physiological, nutritional, metabolic and immunological changes occur in a cow at the state of the milk synthesis and secretion, do not they?
10. When may dairy cows develop milk fever?

**9. Explain your understanding the following: "Cow's milk is at the tip of her tongue".**

**10. Put 5 your own questions to this text in writing. Let your group mates answer them.**

**11. Say what you have learnt about lactation of a cow.**



# UNIT 13

## REPRODUCTION

### Topical vocabulary

1. reproduction – размножение, воспроизводство
2. fetal – зародышевый
3. uterus – матка
4. males – самцы
5. females – самки
6. germ cell – половая клетка, зародышевая клетка
7. ruminant animal – жвачное животное
8. weight – вес, масса
9. fertility – плодородие
10. to attain – достигать
11. pregnancy – беременность, стельность
12. to withdraw – удалять
13. selection – отбор, селекция
14. mature – зрелый
15. herd – стадо
16. herd bull – племенной бык
17. legume hay – бобовое сено
18. thrifty – быстрорастущий, благополучный
19. breeding season – случной сезон, период спаривания
20. yearling bull – бычок в возрасте от одного до двух лет
21. impaired breeding – ослабленная способность к размножению
22. to withdraw – извлекать
23. service – случка
24. to breed a cow – покрывать корову
25. paunchy – толстый
26. extensive pasture – экстенсивно используемое, низкопродуктивное пастбище

### *Reproduction*

The requirements for reproduction fall into two categories – requirements for gamete production and requirements for fetal growth in the uterus. In general, healthy males and females are capable of producing gametes. The energy needs for germ cell production are no greater than those needed to keep animals in a normal, healthy condition. For example, ruminant animals grazing on pastures of mixed grass and legumes are generally neither deficient in phosphorus nor lacking in fertility. A lack of phosphorus may cause irregular estrous cycles and impaired breeding in females.

Animals that are losing weight rapidly because of poor feed conditions and animals that are overly fat may be low in fertility. To attain optimum fertility from female animals, they should be in moderately low to moderate condition as breeding

season approaches, but should, ideally, be increasing in condition (i.e. gaining weight) for 2-4 weeks before and during the breeding season.

The nutrients required by the growing fetus are much greater in the last trimester of pregnancy than earlier as little fetal growth occurs during the first two trimesters of pregnancy. Because the fetus is growing, its requirements are the same as those for growth of a young animal after it is born. Healthy females can withdraw nutrients from their bodies to support the growing fetus temporarily, while the amount or quality of their feed is low. But reproductive performance will be lower if nutrition is inadequate for a lengthy time of 2-3 months in cattle and a few weeks in swine and sheep.

**Selection of a Bull.** The selection of a bull is a very important problem. The bull has to transmit his characteristics to the calves.

A yearling bull may be used for service, but should not run with the cow herd. A yearling may be used for 12 cows during a breeding season and two-year-old for 25 to 30 cows. A mature bull can be used to breed 40 to 50 cows in a season. With pasture breeding the number is reduced about 50 per cent. On extensive pastures one active mature bull is kept for each 20 to 30 cows. The herd bull must be kept in good breeding conditions. During the breeding season the bull must have some extra feed to be in thrifty conditions. It is better to give him legume hay or mixed hay with concentrates, but not much silage, for silage makes the bull too paunchy. Exercise is very important for the bull.

## Learning Activities

### 1. *Guess the meaning.*

Categories, gamete, energy, condition, phosphorus, season, trimester, problem, mixed, characteristics, concentrate, mature,

### 2. *Supply a noun to an adjective:*

healthy, ruminant, important, thrifty, moderate, last, fetal, young, lengthy, irregular.

### 3. *Translate the following words and word combinations.*

Gamete production, fetal growth, cell production, healthy condition, deficient in phosphorus, lacking in fertility, irregular estrous cycles, impaired breeding, poor feed condition, to be low in fertility, optimum fertility, female animals, breeding season, gaining weight, fetal growth.

### 4. *Form verbs from the following nouns.*

Requirements, reproduction, growth, production, grazing, breeding, weight, feed, approaches, quality, performance, selection, characteristics, service, pasture, maturity.

### 5. *True or false?*

1. In general, healthy males and females are capable of producing gametes.
2. A lack of phosphorus may cause death in farm animals.
3. Animals that are overly fat may be low in fertility.

4. The bull has to transmit his characteristics to the cows.
5. A yearling bull may not be used for service.
6. A mature bull can be used to breed 100 to 150 cows in a season.

**6. Give synonyms to the following words and word combinations.**

Category, gamete production, thrifty, condition, deficient in, fertility, irregular, poor feed, to attain optimum, to gain weight, trimester, to withdraw nutrients, temporarily, extensive pastures, extra feed, paunchy.

**7. Find the verbs in the following passage. Define if the active or passive voice is used. Translate the sentences.**

*E.g.: A yearling bull is used for service, but he should not run with the cow herd. Бычок от года до двух лет используется для размножения, но он не должен бегать со стадом коров. (Is used – passive; should not run – active).*

1. A yearling may be used for 12 cows during a breeding season and two-year-old for 25 to 30 cows. 2. A mature bull can be used to breed 40 to 50 cows in a season. 3. With pasture breeding the number is reduced about 50 per cent. 4. On extensive pastures one active mature bull is kept for each 20 to 30 cows. 5. The herd bull must be kept in good breeding conditions. 5. During the breeding season the bull must have some extra feed to be in thrifty conditions. 6. It is better to give him legume hay or mixed hay with concentrates, but not much silage, for silage makes the bull too paunchy. 7. Exercise is very important for the bull.

**8. Make the following sentences negative and interrogative.**

1. The requirements for reproduction fall into two categories.
2. A lack of phosphorus may cause irregular estrous cycles.
3. Healthy females can withdraw nutrients from their bodies.
4. The selection of a bull is a very important problem.
5. A yearling bull may be used for service.
6. A mature bull can be used to breed 40 to 50 cows in a season.
7. The herd bull must be kept in good breeding condition.

**9. Translate into English.**

1. Требования к размножению включают две категории. 2. В целом, здоровые самцы и самки могут размножаться. 3. Потребность в энергии для производства половых клеток не превышает потребности для поддержания животного в здоровом состоянии. 4. Способность к размножению может быть низкой. 5. Корова может использовать питательные вещества своего организма для поддержки плода. 6. Выбор быка – очень важная проблема. 7. Зрелый бык может использоваться для покрытия 40-50 коров за сезон. 8. Количество коров уменьшается на 50%. 9. Быка следует содержать в хорошем состоянии. 10. Бык должен получать давать немного дополнительного корма. 11. Физическая активность очень важна для быка.

**10. Express the general idea of this text in a few words.**

# UNIT 14

## CATTLE MANAGEMENT

### Topical vocabulary

1. herd bull – племенной бык
2. roots – корнеплоды
3. green fodder crops – зеленые кормовые культуры
4. to milk – доить
5. milking – доение
6. dirty – грязный
7. box-stall – стойло
8. barn – сарай, хлев
9. freezing – замерзание, замораживание
10. fat – жир, жирный
11. daily – ежедневно
12. staff – палка-водило
13. paddock – загон, выгон
14. to house – содержать в помещении
15. shed – сарай, навес
16. to handle – содержать, ухаживать
17. ring – кольцо
18. advisable – желательный
19. pen – загон
20. separate – отдельный

### *Cattle Management*

**Management of the Cow.** It must be remembered that the ration must be within the appetite of the cow. In winter the foods used for maintenance include hay, roots, silage and green fodder crops. A supply of good drinking water is essential. Cows kept on a heavy grain ration and milked three times a day will produce more milk than those milked twice a day.

The cow must be clean at time of milking. Clean milk cannot be produced from cows that are dirty. If a cow's udder is soiled and the cow is covered with manure it must be cleaned before milking. If a cow is healthy and clean the milk production will be of a high quality.

The cow must be kept in a good box-stall. Clean bedding must be always provided in the stall. The box-stall must be disinfected and well ventilated. The open type of a barn or shed is also used. Two types of barns are used to house the cows: the open type and the closed type of the dairy barns. The temperature of the dairy barn of a closed type must not fall below freezing.

**Herd Bull.** The mature bull should be kept in good flesh but he must not be allowed to get fat. A mature bull eats from 10 to 15 pounds of roughage, from 4 to 8 pounds of grain daily. Whenever practicable the bull lives by grazing for a period each year. The bull should not be allowed to run loose in the pasture with the herd. He is kept either in a box stall or in a strong paddock. His stall or paddock is so built that he can see other cattle. Sometimes the bull is housed in a shed built in the paddock. When more than one bull is used, the bulls may be kept together.

The bull must have plenty of exercise to retain his breeding power. He should be treated kindly the bull must be handled in a firm manner and must be trained to being tied. In leading the bull a staff should always be used. When the bull is one year of age, a ring should be put in his nose.

**Management of the Herd Bull.** It is important that the herd bull be kept in a good condition. It is not advisable to permit the bull to run with the herd. The safest and the best way is to keep the bull in an enclosure and under control.

There are various forms of bull pens. One of them is a small open yard in connection with the box-stall. The door between the open yard and the box-stall may be closed and opened at will. This is a good way of keeping the herd bull.

It is convenient to keep the bulls in separate box-stalls. Every box-stall should have a door leading into the pasture. A high fence should enclose this pasture.

Two or more bulls are usually let out together. Such a pasture provides good exercise and also a good pasturage during the pasture season. In winter it gives them plenty of exercise.

## Learning Activities

### 1. *Guess the meaning.*

Ration, appetite, production, to disinfect, to ventilate, temperature, period, management, control, pasture, season, pasturage.

### 2. *Translate the following into Russian.*

Drinking water, heavy grain ration, time of milking, clean bedding, open type of a barn, dairy barn, mature bull, strong paddock, plenty of exercise, breeding power, firm manner, to run with the herd, to keep in an enclosure, bull pen, pasture season.

### 3. *Form verbs from the following nouns.*

Management, foods, maintenance, supply, milking, soil, breeding, disinfection, ventilation, usage, house, maturity, building, breeding, treatment, handling, permission, enclosure, control, form, connection, keeping, separation, provision.

### 4. *Supply antonyms for the following words.*

Good, essential, heavy grain, clean, healthy, high quality, open type, mature, to allow, strong, to be kept together, plenty of exercise, firm, kindly, to be tied, safe, under control, small, separate.

**5. Fill in the proper preposition.**

1. The ration must be ... the appetite ... the cow.
2. The cow must be clean ... time ... milking.
3. The temperature ... the dairy barn ... a closed type must not fall ... freezing.
4. A mature bull eats ... 10 ... 15 pounds ... roughage.
5. The bull must have plenty ... exercise ... retain his feeding power.
6. When the bull is one year ... age, a ring should be put ... his nose.

**6. Translate the sentences into English.**

1. Корова должна быть чистой во время доения.
2. Если вымя коровы грязное, его следует вымыть перед доением.
3. Стойло следует дезинфицировать и хорошо проветривать.
4. Существует 2 типа коровников: открытого типа и закрытого типа.
5. Бык должен быть упитанным, но не жирным.
6. Нельзя разрешать быку выгуливаться в стаде.
7. Существуют различные виды загонов для быков.
8. Двери между открытым двориком и загонем можно открывать по желанию.
10. Высокий забор должен огораживать пастбище.
11. Пастбище должно быть огорожено высоким забором.
12. Рацион должен быть в соответствии с аппетитом коровы.

**7. Answer the questions.**

1. Must the ration be within the appetite of a cow?
2. What are the foods used in winter?
3. What does the quality of milk depend upon?
4. What are the types of barns to house the cows?
5. How many pounds of roughage and grain does a mature bull eat daily?
6. What is the safest and the best way to keep the bull?
7. Should the heard bull always run with the herd?
8. Clean bedding must be always provided in the stall, must not it?
9. Why is a supply of good drinking water essential?

**8. Discuss with your group mates the differences in the management of the cow and the herd bull.**

**9. Write down 5 your own questions to the text "Cattle Management".**

# UNIT 15

## CHOOSING BREEDS AND INDIVIDUAL ANIMALS

### Topical vocabulary

1. consider – рассматривать
2. purpose – цель
3. to raise – разводить, выращивать
4. beef breed – мясная порода
5. butterfat – молочный жир
6. dairy cattle – молочный скот
7. appearance – внешний вид
8. pedigree – родословная
9. performance – продуктивность
10. average – среднее значение
11. to pay attention to... – уделять внимание
12. record – запись, учет, регистрация
13. to provide – обеспечивать
14. evidence – доказательство
15. offspring – потомство
16. ancestor – предок
17. purebred – чистопородный
18. prepotency – способность передавать наследственные признаки
19. rate of gain – интенсивность привеса
20. sire – самец-производитель

### *Choosing Breeds and Individual Animals*

Before considering the question of what breed to select one should decide on the purpose for which the animals are to be raised. If one wishes to raise cattle to market as beef, beef breeds are to be studied. If the purpose is to produce milk and butterfat, the dairy type of cattle is logically the group to pay attention to.

In raising livestock keep in mind that there is no best breed for all conditions. There are far greater differences in production between animals within each breed than in the averages between breeds. That is why regardless of the breed chosen give careful consideration to the selection of individual animals within that breed.

In selecting individual animals several factors are to be paid special attention to. These are appearance or type, pedigree, performance and prepotency.

**Appearance and Type.** The method of selecting animals on the basis of type or outward appearance is of value in noting characteristic that are approved for a particular breed. From outward appearance alone one cannot decide which cows are high producers. It doesn't indicate accurately the quality of offspring that will be produced.

**Pedigree.** A pedigree is a record of the names and registration number of the ancestors of a given animal. The main value of a pedigree is that it provides evidence that the animal under consideration is a purebred.

**Performance.** By performance in farm animals is meant their ability to produce, or “perform” in accordance with the purpose for which they are kept. For dairy cattle performance of each cow is measured in terms of milk and butterfat produced by her in a given period of time. Performance for beef cattle is measured by rate of gain.

**Prepotency or Transmitting Ability.** Prepotency is the ability of an animal to transmit desired characteristics to its offspring.

In selecting farm animals, consider certain factors in addition to those already mentioned.

They are reproductive ability, health, age, time of breeding and sire used (in case of a bred females).

## Learning Activities

### 1. Translate the following.

Beef, beef breed, to breed; dairy, dairy farm; milk, to milk, milker; to produce, high producer; to market, local market; to study, studies; to value, main value; to measure, effective measures; to select, selection of animals; to record, record.

### 2. Give synonyms to the following words.

Purpose, to select, to decide, to raise animals, beef breed, regardless, careful, individual animal, factors, performance, basis, value, offspring, farm animals, sire.

### 3. Explain the following notions in English.

Selection, butterfat, pedigree, performance, prepotency, offspring, time of breeding.

### 4. Translate the following matching the columns:

A	B
1. to pay attention to	1. в соответствии с целью
2. to consider the question	2. упомянутый ранее
3. the purpose is	3. под продуктивностью понимается
4. keep in mind	4. в пересчете на молоко
5. on the basis of	5. измеряется интенсивностью привеса
6. one can decide	6. рассматриваемое животное
7. to provide evidence	7. можно решить
8. the animal under consideration	8. целью является
9. by performance is meant	9. помните
10. in accordance with the purpose	10. уделять внимание
11. in terms of milk	11. обеспечить доказательство
12. is measured by rate of gain	12. рассмотреть вопрос
13. already mentioned	13. на основании



**5. Make the following sentences negative and interrogative.**

1. Prepotency is the ability of an animal to transmit desired characteristics to its offspring.
2. In selecting farm animals, consider the following factors: reproductive ability, health, age, time of breeding.
3. A pedigree is a record of the names and registration number of the ancestors of a given animal.
4. Performance of farm animals is their ability to produce in accordance with the purpose for which they are kept.

**6. Agree or disagree with the following statements. Make a list of your arguments. Discuss it with your group mates.**

1. In raising livestock there is no best breed for all conditions.
2. From outward appearance alone one decide which cows are high producers.
3. If one wishes to raise cattle to market as beef, dairy breeds are to be studied.

**7. Express the general idea of the text “Choosing Breeds and Individual Animals” in a few words.**

## VOCABULARY

### A

ability – способность  
absence – отсутствие  
acid – кислота  
act – воздействовать, действовать  
accomplish – осуществлять  
adipose – 1. животный жир; 2. жировой, жирный, сальный  
administration – применение  
advisable – желательный, рекомендуемый  
affect – воздействовать, влиять, оказывать влияние  
alfalfa – люцерна  
allow – позволять  
amino acid – аминокислота  
ample – достаточный, обильный (о корме)  
ancestor – предок  
angular – худой, угловой  
anhydrase – ангидраза  
animal husbandry – животноводство  
approach – 1. приближение 2. приближаться, подходить  
approximately – приблизительно  
artificial – искусственный  
assure – гарантировать, обеспечивать  
available – доступный

### B

barley – ячмень  
barn – сарай, хлев  
bear – 1. рожать, производить на свет; 2. плодоносить

bedding – подстилка (для скота)  
biconcave – двояковогнутый  
blocky – массивный  
blood – кровь  
boar – 1. хряк; 2. кабан, дикая свинья  
bone – кость  
box-stall – денник, стойло  
breeding – разведение  
briefly – кратко  
brood mare – племенная кобыла, конематка  
browse – молодой побег, отпрыск  
brushing – расчесывание  
buck – самец  
bull – бык  
bull-calf – бычок  
bush-sickness – акобальтоз  
butterfat – молочный жир

### C

calf – теленок  
calving – отел  
capacity – 1. способность; 2. вместимость  
carbohydrate – углевод  
carcass – туша, тушка; скелет  
care – уход  
carry off – уносить  
cattle – скот, КРС  
cause – вызывать, быть причиной  
cell – клетка  
cereal – зерновые, злак  
chest – грудь, грудная клетка  
chewing – жевание  
circulatory system – кровеносная система

clover – клевер  
coarse – грубый, низкого сорта  
coenzyme – кофермент  
colostrum – молозиво  
colourless – бесцветный  
compact – плотный, сжатый  
condition – состояние, условие  
conduct – вести себя  
conformation – экстерьер, форма, структура  
connective – соединительная  
considerable – значительный  
constitute – составлять  
consume – потреблять  
consumption – 1. потребление, расход; 2. затрата  
contain – содержать  
contribute to – способствовать  
convenience – удобство  
convert – превращать  
copper – медь  
corpuscle – кровяной шарик, корпускул  
corn – зерно, хлебное зерно  
cow – корова  
crack – колоть; трещина, щель  
creature – создание  
crenate(d) – зубчатый, зазубренный  
crop – сельскохозяйственная культура  
cull – отбирать, сортировать; отбраковывать  
cure – лечить

## D

daily – ежедневно  
dairy – молочный  
dairyman – дояр, работник молочной фермы  
dam – матка

dangerous – опасный  
decrease – уменьшать(ся)  
deficiency disease – авитаминоз  
deficient – недостаточный  
demand – требование  
deposition – отложение, осадок  
deprive – лишать  
desirable – подходящий  
determine – определять  
diarrhea – диарея  
diffusion – диффузия  
digest – переваривать  
digestion – переваривание, пищеварение  
dip – 1. обмакивать, окунать; 2. дезинфицирующий раствор  
disease – болезнь  
disturb – беспокоить  
doe – крольчиха  
draft horse – упряжная лошадь, рабочая лошадь, тяжеловоз  
dress – очищать  
drinking cup – поилка  
drought – засуха  
dry – сухостойный  
dry matter – сухое вещество  
due – отдать должное

## E

efficiency – эффективность  
enzyme – фермент  
essential – основной, необходимый  
excess – избыток  
exhaustion – истощение  
experience – опыт  
ewe – овца, овцематка

## F

fall (амер.) – осень

farrowing – опорос  
farrowing of premature – преждевременный опорос  
fat – жир, жирный  
fatten – 1. откармливать; нагуливать (скот); 2. жиреть  
feather – перо  
feces (faeces) – фекалии  
feed – кормить  
feedlot – кормовая площадка, загон для кормления или откорма скота  
ferric – железистый  
female – самка, матка  
fertile – плодородный (о почве), плодovitый, способный к плодonoшению  
fertility – плодородие  
fetal – зародышевый  
fibre – волокно  
filth – грязь  
firmness – крепость, плотность, твердость  
fit – годный, подходящий  
flesh – мясо, мякоть  
flock – стадо, стая, отара (овец)  
fluid – жидкость; жидкий  
fluoresce – светиться  
foal – жеребенок  
foaling – выжеребка  
fodder – корм для скота, фураж  
fowl – домашняя птица  
freezing – замерзание

## G

gain – прирост  
generation – поколение  
germ – микроб  
goat – коза  
gil- – молодая племенная свинья (до первого опороса); под-

свинок  
gland – железа  
grain – зерно  
grazing – 1. пастьба, выпас, кормление (скота) подножным кормом 2. пастбище, выгон  
green fodder crops – зеленые кормовые культуры  
groom – конюх, грум  
grooming – чистка лошади  
growth – рост  
guard – охранять

## H

ham – 1. бедро, ляжка 2. окорок  
handle – обходиться, обращаться, ухаживать (за скотом); возделывать, выращивать растения  
harmful – вредный  
hay – сено  
headache – головная боль  
heart – сердце  
heat – период течки (у животных)  
heifer – телка  
herbage – 1. травы, травяной покров; 2. (луго) пастбищное угодье  
hereditary – наследственность  
herd – стадо  
herd bull – племенной бык  
high-producing – высокопродуктивный  
hog – боров  
hopper – кормораздатчик; амбар  
house – содержать в помещении, вмещать

## I

improve – улучшать  
injury – рана, ушиб, травма, повреждение  
insemination – осеменение  
inspect – проверять, проводить осмотр  
insulator – изолятор  
intake – всасывание, поглощение, прием внутрь  
interfere – вмешиваться  
interstice – промежуток, узкий проход; щель  
intestine – кишечник  
invade – вторгаться  
iron – железо

## J

jab – укол  
jocklet – маленькая ферма, мыза  
joeу – детеныш  
jump – прыжок  
junket – сычужный сгусток молока, створаживаться

## K

keep – содержать, хранить  
ketosis – кетоз, избыточное образование кетоновых тел, накопление в теле кетоновых тел  
kid – козленок  
kidney – почка

## L

lack – недостаток, отсутствие  
lactating cow – лактирующая корова

lactation – лактация  
lamb – ягненок в возрасте до отбивки (до отъема)  
lay – откладывать яйца, нестись  
layer – 1. слой, пласт; 2. лейер (рацион для несушек)  
lb (libra) – pounds – фунты  
legume – бобовые  
lesion – повреждение, рана  
light harness horse – легкоупряжная лошадь  
litter – помет, приплод, подстилка  
liver – печень  
livestock – скот, поголовье скота  
live weight – живая масса  
loin – поясница, поясничный отдел

## M

male – самец  
mammal – млекопитающее  
mammary gland – молочная железа  
management – содержание  
manure – навоз  
mare – кобыла  
marrow – костный мозг  
masculine – мужественный  
mastitis – мастит, воспаление молочных желез, грудница  
mate – 1. спаривать(ся), скрещивать(ся); 2. самец  
mature – зрелый, созревший  
mash – смесь  
metritis – метрит, воспаление матки  
middling – среднего качества  
milk – молоко; доить

milk composition – состав молока  
milk fat – молочный жир  
milk fever – 1. лихорадка от задержки молока, молочная лихорадка; 2. безлихорадочное заболевание недавно отелившихся коров  
milking – доение  
milk yield – удой молока  
milo – просо  
minute – мельчайший  
mixture – смесь, микстура  
moisture – влага, влажность  
mucosa – слизистая  
muscle – мышца  
mutton – баранина

## N

navel – пуповина  
need – потребность  
nuclear – ядерный  
nucleus – ядро  
nurse – кормить, выкармливать; выращивать  
nutrient – питательное вещество  
nutritious – питательный

## O

oat – овес  
obesity – ожирение  
offspring – потомок  
opportunity – возможность

## P

paddock – 1. загон, пастбищный загон, содержать животное в загоне; 2. выгон

pail – ведро  
palatability – вкусовые качества, поедаемость (корма)  
palatable – вкусный, приятный, удобоваримый  
pale – бледный  
participate – участвовать  
pasture – пастбище  
pellet – гранулировать  
pen – загон  
peritoneal cavity – брюшная полость  
permanent – постоянный  
phloem – флоэма, луб  
placenta – плацента, детское место  
plant – растение  
plentiful – достаточный  
pollute – загрязнять  
pork – свинина  
postweaning growth – рост после отъема  
pregnancy – беременность  
prevent – предотвращать, предупреждать  
prior – прежний, прежде  
primarily – сначала  
processing – переработка  
proper – правильный, собственный  
protein – белок, протеин  
provide – обеспечивать  
pure – чистый  
purebred – чистокровный, породистый  
purpose – цель  
pyruvic acid – пировиноградная кислота

## Q

quality – качество  
quantity – количество  
quarantine – карантин, подвер-  
гать карантину  
quarter – помещение для скота

## R

ram – баран  
ration – рацион  
raw material – сырье  
reach – достигать  
record – 1. запись, протокол; 2.  
записывать, регистрировать  
relatively – относительно  
release – высвобождать  
render – оказывать, отдавать  
reproduction – воспроизводство  
require – требовать  
requirement – потребность  
resemble - иметь сходство,  
походить  
response – ответная реакция  
result in – вести к ч.-л., вызы-  
вать  
retain – 1. удерживать, задер-  
живать; 2. сдерживать (ло-  
шадь)  
rib – ребро  
ring – кольцо  
root – корнеплод  
roll – плющить (зерно)  
roughage – грубый корм  
ruminant animal – жвачное  
живот-ное  
rush – спешка, мчаться  
rye – рожь

## S

saliva – слюна

sanitation – оздоровление  
satisfactory (to be satisfactory) –  
удовлетворительный (быть  
удовлетворительным)  
scarce – скудный  
sclera – склера, белочная обо-  
лочка (глаза)  
scouring – диарея, понос  
secretory tissue – секреторная  
ткань  
secure – обеспечивать безопас-  
ность, овладевать  
selection – отбор, селекция  
separate – отдельный  
serve – служить  
service – случать  
settle – осеменять(ся), оплодо-  
творять(ся); поселять  
sharp – острый  
shed – сарай, навес  
shrunken – сжатый  
sick – больной  
silage – силос  
silo – силосная яма  
sire – бык-производитель  
slaughter – убой  
slaughter weight – убойная мас-  
са, масса мясной туши  
SNF (solids-not-fat) – сухой  
обезжиренный остаток  
sole source – единственный ис-  
точник  
sorghum – сорго  
source – источник  
soybean meal – соевая мука  
sparingly - умеренно, недоста-  
точно  
species – вид  
spleen – селезенка  
split – расщеплять  
spongelike – губкоподобный  
stable – стойло, хлев, конюшня

stain – окрашивать  
stall – стойло, ставить в стойло;  
конюшня; станок  
stallion – жеребец, производи-  
тель (старше 4 лет)  
sterile – 1. стерильный, стерили-  
зованный; 2. бесплодный,  
неспособный к оплодотворе-  
нию  
stomach – желудок  
store – накапливать, хранить  
straw – солома  
stroma – строма  
succulent – сочный корм, соч-  
ный  
suckle – вскармливать  
suffer from – страдать  
sufficient - достаточный  
supplemental – дополнитель-  
ный  
supply – снабжать, запасать,  
поставлять  
sustain – поддерживать  
sweat – пот

## T

teat – сосок  
thrifty – процветающий, бод-  
рый  
tincture – настойка  
tissue – ткань  
trait – черта, признак  
transmit – передавать  
trap-nest – помещать (птицу) в  
контрольное гнездо  
treatment – лечение  
trough - лоток, корыто  
кормушки

## U

udder – вымя  
urine – моча  
usefulness – пригодность  
uterus – матка

## V

vesicle – биол. пузырек  
vigorous – энергичный  
vigour – сила, энергия

## W

waste – отходы, отбросы  
water-soluble – водораствори-  
мый  
wean – отлучать (от матки), от-  
нимать, отсаживать  
weaning – отъем  
weight – вес, масса  
well-bedded pen – хорошо уст-  
ланый загон  
wheat – пшеница  
whitewashing – побелка  
withdraw – удалять  
wool – шерсть  
wrap – сворачивать, заверты-  
вать

## X

xerotocia – сухие роды

## Y

yak – як  
yard – 1. двор, скотный двор; 2.  
загон  
yeap – ягниться  
yeapling – ягненок, козленок  
yearling – годоводок, годово-



лое животное, годовалый  
yeast – дрожжи  
yeasting of fodder – дрожжевание кормов  
yelt – подсвинок  
yield – 1. урожай, приносить урожай; 2. урожайность; 3. надой (молока); 4. выход продукта  
yoke – 1. привязь; 2. ярмо, хомут  
yolk – желток (яйца)

## **Z**

zebu – зебу  
zinziber – имбирь  
zoome – совокупность животных, сообщество животных  
zootechnician – зоотехник  
zymosis – ферментация

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E-mail: rio\_vsavm@tut.by  
<http://www.vsavm.by>