

МИНИСТЕРСТВО СЕЛЬСКОГО ХОЗЯЙСТВА РОССИЙСКОЙ ФЕДЕРАЦИИ  
федеральное государственное бюджетное образовательное учреждение  
высшего образования  
**«Санкт-Петербургский государственный аграрный университет»**  
**Калининградский филиал**

Кафедра «Агрономии»

**ФОНД ОЦЕНОЧНЫХ СРЕДСТВ**  
**ПО УЧЕБНОЙ ДИСЦИПЛИНЕ**  
**«Иностранный язык»**

**38.03.01 Экономика**

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(код и наименование направления подготовки бакалавра)

Форма(ы) обучения  
**Очная, заочная**

**Полесск**  
**2016**

## Паспорт фонда оценочных средств по дисциплине

№ п/п	Контролируемые разделы (темы) дисциплины	Код контролируемой компетенции (или ее части)	Наименование оценочного средства
1	Профессиональная сфера общения.	<p>1) Знать: основные значения изученных лексических единиц (слов, словосочетаний); признаки изученных грамматических явлений.</p> <p>2) Уметь: работать в коллективе, толерантно воспринимая социальные, этнические, конфессиональные и культурные различия;</p> <p>3) Владеть: способностью использовать основы философских знаний для формирования мировоззренческой позиции (ОК-1);</p> <p>способностью анализировать основные этапы и закономерности историче-ского развития общества для формирования гражданской позиции (ОК-2);</p> <p>способностью к коммуникации в устной и письменной формах на русском и иностранном языках для решения задач межличностного и межкультурного взаимодействия (ОК-5);</p> <p>способностью работать в коллективе, толерантно воспринимая социальные, этнические, конфессиональные и культурные различия (ОК-6);</p> <p>способностью к самоорганизации и самообразованию (ОК-7);</p> <p>способностью осуществлять поиск, хранение, обработку и анализ информации из различных источников и баз данных, представлять ее в требуемом формате с использованием информационных, компьютерных и сетевых технологий (ОПК-1);</p> <p>готовностью изучать и использовать научно-техническую информацию, отечественный и зарубежный опыт по тематике исследований (ПК-1);</p> <p>готовностью к обработке результатов экспериментальных исследований (ПК-3).</p>	Опрос. Тестирование

2	Социально-культурная сфера общения.	<p>1) Знать: основные значения изученных лексических единиц (слов, словосочетаний); признаки изученных грамматических явлений.</p> <p>2) Уметь: работать в коллективе, толерантно воспринимая социальные, этнические, конфессиональные и культурные различия;</p> <p>3) Владеть: способностью использовать основы философских знаний для формирования мировоззренческой позиции (ОК-1);</p> <p>способностью анализировать основные этапы и закономерности исторического развития общества для формирования гражданской позиции (ОК-2);</p> <p>способностью к коммуникации в устной и письменной формах на русском и иностранном языках для решения задач межличностного и межкультурного взаимодействия (ОК-5);</p> <p>способностью работать в коллективе, толерантно воспринимая социальные, этнические, конфессиональные и культурные различия (ОК-6);</p> <p>способностью к самоорганизации и самообразованию (ОК-7);</p> <p>способностью осуществлять поиск, хранение, обработку и анализ информации из различных источников и баз данных, представлять ее в требуемом формате с использованием информационных, компьютерных и сетевых технологий (ОПК-1);</p> <p>готовностью изучать и использовать научно-техническую информацию, отечественный и зарубежный опыт по тематике исследований (ПК-1);</p> <p>готовностью к обработке результатов экспериментальных исследований (ПК-3).</p>	Опрос. Тестирование.
3	Учебно-познавательная сфера общения.	<p>1) Знать: основные значения изученных лексических единиц (слов, словосочетаний); признаки изученных грамматических явлений.</p> <p>2) Уметь: работать в коллективе, толерантно воспринимая социальные, этнические, конфессиональные и культурные различия;</p> <p>3) Владеть: способностью использовать основы</p>	Опрос. Тестирование. Контрольное аудирование.

		<p>философских знаний для формирования мировоззренческой позиции (ОК-1);</p> <p>способностью анализировать основные этапы и закономерности историче-ского развития общества для формирования гражданской позиции (ОК-2);</p> <p>способностью к коммуникации в устной и письменной формах на русском и иностранном языках для решения задач межличностного и межкультурного взаимодействия (ОК-5);</p> <p>способностью работать в коллективе, толерантно воспринимая социальные, этнические, конфессиональные и культурные различия (ОК-6);</p> <p>способностью к самоорганизации и самообразованию (ОК-7);</p> <p>способностью осуществлять поиск, хранение, обработку и анализ информации из различных источников и баз данных, представлять ее в требуемом формате с использованием информационных, компьютерных и сетевых технологий (ОПК-1);</p> <p>готовностью изучать и использовать научно-техническую информацию, отечественный и зарубежный опыт по тематике исследований (ПК-1);</p> <p>готовностью к обработке результатов экспериментальных исследований (ПК-3).</p>	
4	Бытовая сфера общения.	<p>1) Знать: основные значения изученных лексических единиц (слов, словосочетаний); признаки изученных грамматических явлений.</p> <p>2) Уметь: работать в коллективе, толерантно воспринимая социальные, этнические, конфессиональные и культурные различия;</p> <p>3) Владеть: способностью использовать основы философских знаний для формирования мировоззренческой позиции (ОК-1);</p> <p>способностью анализировать основные этапы и закономерности историче-ского развития общества для формирования гражданской позиции (ОК-2);</p> <p>способностью к коммуникации в устной и письменной формах на русском и иностранном языках для решения задач межличностного и</p>	<p>Опрос. Тестирование Контрольное аудирование. Оценка индивидуальных высказываний и работы в парах и в группах.</p>

		<p>межкультурного взаимодействия (ОК-5);</p> <p>способностью работать в коллективе, толерантно воспринимая социальные, этнические, конфессиональные и культурные различия (ОК-6);</p> <p>способностью к самоорганизации и самообразованию (ОК-7);</p> <p>способностью осуществлять поиск, хранение, обработку и анализ информации из различных источников и баз данных, представлять ее в требуемом формате с использованием информационных, компьютерных и сетевых технологий (ОПК-1);</p> <p>готовностью изучать и использовать научно-техническую информацию, отечественный и зарубежный опыт по тематике исследований (ПК-1);</p> <p>готовностью к обработке результатов экспериментальных исследований (ПК-3).</p>	
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**Темы, выносимые на опрос по разделам дисциплины:**

№ п/п	Контролируемые разделы (темы) дисциплины	Темы, выносимые на опрос
1	Грамматика	<p>Артикль. Виды артиклей.</p> <p>Порядок слов в повествовательном, вопросительном и отрицательном предложениях. Типы вопросов.</p> <p>Имя существительное в единственном и множественном числе, включая исключения. Словообразование существительных.</p> <p>Имя прилагательное. Прилагательные и наречия в положительной, сравнительной, превосходной степенях, включая исключения.</p> <p>Наречия, выражающие количество (much, many, few, little, very), а также имеющие пространственно-временное значение (always, sometimes, often, never, daily, weekly, already, soon, early, here, there). Количественные и порядковые числительные. Словообразование прилагательных.</p> <p>Предлоги. Их употребление в речи для выражения направления, времени, места действия.</p>

		<p>Повелительное наклонение. Основные формы английских глаголов. Правильные и не-правильные глаголы. Временные формы действительного залога: Present, Past и Future Simple; Present, Past и Future Continuous; Present, Past и Future Perfect.</p> <p>Инфинитив и его функции. Место инфинитива в предложении и инфинитивные обороты.</p> <p>Сложное дополнение.</p> <p>Причастие и его формы (Participle 1, Participle 2). Причастный оборот и особенности его перевода.</p> <p>Герундий и его формы.</p> <p>Сложносочиненные и сложно-подчиненные предложения. Условные предложения. Со-гласование времен. Временные формы страдательного залога: Present Simple Passive, Past Simple Passive, Future Simple Passive. Present Continuous Passive, Past Continuous Passive. Present Perfect Passive, Past Perfect Passive, Future Perfect Passive. Модальные глаголы и их эквиваленты. Различные грамматические средства для выражения будущего действия.</p>
2	<p>Устная речь и Аудирование.</p> <p>лексика. Фонетика.</p> <p>Чтение.</p>	<ol style="list-style-type: none"> <li>1. Знакомство: первые контакты. Составление автобиографии.</li> <li>Семья, интересы, хобби.</li> <li>2. Досуг и развлечения. Выходной день в Европе и России.</li> <li>3. Высшее образование в России и Англии. Обучение в Калининградском филиале СПбГАУ.</li> <li>4. Праздники в европейских странах. Обычаи и событийные праздники.</li> <li>5. Здоровый образ жизни и экология.</li> <li>6. Природные ресурсы и сельское хозяйство в Калининградской области и Европы. Проблемы загрязнения окружающей среды.</li> <li>7. Использование современной сельскохозяйственной техники.</li> <li>8. Путешествие на автомобиле, дорожные знаки, поломки.</li> <li>9. Сельскохозяйственная практика за рубежом.</li> <li>10. Путешествие в Лондон. Бронирование гостиницы, заказ блюд в ресторане, поиск достопримечательности, покупки</li> </ol>

		в магазине.
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### Шкала оценивания опроса:

Оценка	Описание
<i>отлично</i>	Демонстрирует полное знание темы. Свободно владеет лексикой. Отвечает на все поставленные дополнительные вопросы.
<i>хорошо</i>	Демонстрирует значительное понимание темы. Владеет лексикой на достаточном уровне. Отвечает на большинство поставленных дополнительных вопросов.
<i>удовлетворительно</i>	Демонстрирует частичное понимание темы. Владеет лексикой на удовлетворительном уровне. Отвечает на некоторые поставленные дополнительные вопросы.
<i>неудовлетворительно</i>	Демонстрирует непонимание темы. Слабо владеет лексикой. Не отвечает на поставленные дополнительные вопросы.

### ВОПРОСЫ К ЗАЧЕТУ.

1. а) Чтение и перевод текста.
- б) Упражнение по грамматике.
- с) Собеседование по теме.

### Вариант экзаменационного билета.

#### 1. Прочитайте и переведите текст.

##### NATURE PROTECTION

About two hundred years ago man lived in greater harmony with his environment because industry was not much developed. Today the situation is quite different, the contradictions between man and nature are dramatic. People all over the world are worried about what is happening to the environment. Newspapers, magazines write about water pollution, air pollution and land pollution.

Now many parts of the world are crowded. Where many people live together, litter is a problem. People don't always put garbage into a garbage can. It is easier to throw away a piece of paper than to find a garbage can for it. But litter is ugly. It makes the city look dirty and spoils the view. Litter is a health problem too. Food, garbage bring animals, which sometimes carry disease.

Much of our waste, waste from factories, chemical industry and heavy industry are very dangerous. Much of this dangerous waste goes into the air and is carried by winds over great distances. People don't get enough oxygen in big cities. They suffer from smog. You can hardly breathe the air any more in our cities. And think of noise. Nowadays most city centres are simply too noisy to live in. We live with a motor car but we must become its master and not its slave.

The Earth is our home. We must take care of it for ourselves and for the next generations. This means keeping our environment clean. The importance of this task is pointed out by ecologists, the scientists who want to control this problem. Each of us must do everything possible to keep the land, air and water clean.

There are many places in our planet that need immediate help. For example Lake Baikal and its shores have been declared a specially protected zone of our country. There is a hope that one of the most beautiful and the deepest lakes of the world will never die.

## **2. Сравните предложения в действительном и страдательном залоге, переведите их.**

1. Students asked the lecturer many questions. The lecturer was asked many questions. 2. The monitor told the first-year students to come to the laboratory. The first-year students were told to come to the laboratory. 3. Usually a lab assistant shows the equipment to the students. Usually the equipment is shown to the students by a lab assistant. 4. Students watched the process with great attention. The process was watched with great attention. 5. Tomorrow our teacher will give us a new task. A new task will be given tomorrow. We shall be given a new task tomorrow. 6. Practice accompanies theory. Theory is accompanied by practice. 7. He asked me to bring a dictionary. He was asked to bring a dictionary. 8. The teacher told the students to sign their drawings. The students were told to sign their drawings. 9. The dean will send the students to a big plant in summer. The students will be sent to a big plant in summer. 10. He taught us to use the lab equipment. We were taught to use the lab equipment.

## **3. Собеседование по теме “Моя семья”.**

### **Тесты и задания контроля качества усвоения материала**

#### **1. Объясните употребление времен группы Continuous, переведите предложения.**

A. 1. I am at my English lesson. I am sitting and doing my exercises. My friend is not sitting, he is standing at the blackboard and looking at me. 2. It is getting cold now, isn't it? Look out. Is it raining now? 3. You are late. What were you doing? – I was translating a text. 4. When I came home my parents were having supper and at the same time they were watching TV. 5. What was he doing when I rang up an hour ago? He was looking through a newspaper when I rang up. 6. Tomorrow we shall be preparing for a test for the whole evening. 7. In July they will be taking their exams for the whole month. 8. What will you be doing tonight at 10 o'clock? Will you be working? No, I shall be reading a book at this hour.

B. 1. New Metro lines are being built now in Moscow. 2. What is going on? A new film is being discussed. 3. What grammar was being explained when you came in? 4. What questions were being discussed at that time? 5. New methods of research are being used in our lab. 6. Much is being done to improve laboratory methods.

#### **2. Переведите предложения с it в различных функциях.**

1. It is autumn. It is the 3rd of October. It is dark in the morning and it is difficult to get up. 2. It is a new subject. It is very important for our future speciality. We shall study it for two years. It will be our future speciality, but we do not know much about it in the first year. 3. It is known that the knowledge of general engineering subjects is the basis for the study of special subjects. 4. It seems that he works a lot. 5. It is said that the chemistry laboratory of our institute is good. 6. The student finds it difficult to translate such a text without a dictionary. 7. It was not easy to study at the institute. 8. It is important to understand the fundamentals of this science. 9. It was A.S. Popov who invented the radio. 10. It is the knowledge of general engineering subjects that is the basis of engineering training.

### **3. Переведите предложения с one в различных функциях.**

1. One must study a lot to become an engineer. 2. We must write only one exercise now. 3. Engineer is one of the most important professions, it is the one that is taught at technical institutes. 4. One cannot translate such an article without a dictionary in the first year. 5. One must have a very good knowledge of general engineering subjects to become a good engineer. 6. One must pass all exams well to enter an institute. 7. Last summer I read many English articles, and my friend read some German ones. 8. This summer we shall spend in the country, the last one we spent in the city. 9. We translated many texts, but there is one more text to translate. 10. One can take this journal from the library.

### **4. Переведите предложения с that и those в различных функциях.**

1. That student studies in our group. 2. Do you know those girls? They are from our institute. 3. The professor that lectures on mechanics is the dean of our faculty. 4. It is known that the knowledge of general engineering subjects is the basis for the study of special subjects. 5. We know that the study of general engineering subjects is necessary for future engineers. 6. That higher education in this country is excellent is known to everybody. 7. The aim of today's foreign policy is that peace in the world should be permanent. 8. The programme for the first-year students differs from that of the third-year students. 9. There are many interesting articles in this journal, read those on your speciality. 10. It is the high qualification of future specialists that will determine the scientific and technological progress of any country.

### **5. Определите время и залог глагола-сказуемого, переведите предложения.**

A. 1. I have not cleaned the window yet. I am cleaning it now. I have cleaned it. 2. But Bob has a different idea. 3. Last year she passed school leaving exams. 4. We will be studying for our exams at the end of the term. 5. While we were having supper, all the lights went out. 6. Will people speak the same language all over the world? 7. People will land on Mars in the 21st century. 8. I think cars will be powered by electric batteries in five years' time and they will not be powered by atomic power in 100 years' time. 9. The Earth is getting warmer

because of the increase of carbon dioxide in the atmosphere.

B. 1. It is evident that electricity will be the energy of the future. 2. The transformer was invented and the first electric lines and networks were set up at the end of the 19th century. 3. New powerful electric stations must be built because it is electricity that offers improved standards of life and work. 4. A combination of electric lines and networks are being set up throughout the country. 5. Electric power has become universal 6. Electricity is transmitted to distant parts of this country by a combination of electric networks. 7. Our power stations have been connected by high voltage transmission lines into several networks.

**6. Повторите времена группы Indefinite (Simple), Continuous, Perfect. Определите время глагола-сказуемого и переведите предложения.**

1. What course are you taking here? Business English? – No, I am not doing Business English yet. I am trying to improve my general English, especially conversation. 2. I liked the lecturer better after I had heard him the second time. 3. My friend will take the course in English next semester. 4. Who has finished the test? 5. We looked at him while he was dancing. 6. How many books of Shaw have you read? 7. Why have not you told them about it? 8. I shall still be studying English in two years' time. 9. The books were taken from the library. 10. You can find the books taken from the library on the table. 11. The exams are held in June. 12. I have been in the laboratory since 8 o'clock. 13. There were many people coming back from their work. 14. Australia is one of the five continents, but it is much smaller than the other four. 15. The light in that room is poor. Please light the candles (свечи). 16. People speak the language of their country. 17. Every country needs good specialists for its further progress of science and technology. 18. By the year 2030 human labour in industry will have been replaced by robots. Families will have robots to do the housework.

**8. Перепишите следующие предложения, обращая внимания на разные значения глаголов to be, to have, to do.**

1. He will still be working if you come so early. 2. Will you have to read all these books? 3. That did you think of me when you first saw me? 4. Have you read anything about the city of London? 5. He is the only child in the family. 6. She is having tea with sugar and milk now. 7. Pete is to study better. 8. I usually have three meals a day.

**9. Переведите следующие предложения, обращая внимание на особенности перевода бессоюзных предложений.**

1. He says they will go to the top of the hill next week. 2. I do not think your work was so difficult. 3. The children know the sun rises in the east. 4. The letter I sent you was very long. 5. The work I am doing now is very difficult. 6. The man you saw yesterday is my friend's father. 7. The girl I knew as a child is our best worker. 8. Let me see the map the teacher gave you. 9. I do not think they are busy today. 10. I thought I saw a fire. 11. The book this student is reading is

very interesting.

**10. Переведите предложения с инфинитивом. Определите его синтаксические функции.**

1. To swim in the lake was pleasant. 2. To think of it helps me to be merry. 3. To smoke is bad for health. 4. It is strange to speak to him about it. 5. My desire is to speak English very well. 6. The purpose of the book is to describe the development of the mankind. 7. We must not speak to him about it. 8. We can actually begin the experiment. 9. The carbon has to be obtained from the carbon dioxide in the air. 10. At sunrise it started to snow. 11. He continued to read the book. I promised him to do it. 12. He advised me to think it over again. 13. He caused me to tell him everything. 14. I requested my friend to wait a little. 15. I told him to shut the door. 16. I had no time to speak to him about it. 17. He was not a boy to play alone. I haven't got anybody to cheer me up. 18. I have come here to see her. 19. To answer this question you could know the rules. 20. Robert came in order to speak to me about it. 21. Once he was studying for three hours so as not to get a bad mark at school.

**11. Переведите предложения со сложными формами инфинитива и определите их форму.**

1. I only want to be given my chance. 2. I was pleased at last to have come to the exhibition. 3. Every man wants to be considered as a well-educated person. 4. He was sorry to have gone there so early. 5. This work must be finished today. 6. I don't want to be disturbed. 7. She was glad to be helped by me. I didn't expect to be invited. 8. I seem to be waiting in vain. 9. It's nice to be sitting here now with you. 10. It was pleasant to be driving a car again. 11. I am glad to have done it. 12. He seems to have come at home. 13. He must have done it. 14. He should have helped her. 15. I could have crossed that river. 16. I hoped to have found him at home. 17. I meant to have phoned you. 18. He felt to have been deceived. 19. She seems to have been asked about it. 20. I know him to have been learning French for many years. 21. For the last few days she seemed to have been talking to nobody.

**12. Прочитайте и переведите предложения, содержащие оборот Complex Subject – «сложное подлежащее».**

1. She was announced to be the winner. 2. They are reported to arrive in two days. 3. He is said to be very ill. 4. She is considered to be the best singer. 5. He is known to be a good writer. 6. I was supposed to meet him. 7. Birds were heard to sing in the garden. 8. He was seen to enter the house. 9. He is reported to be writing a new novel. 10. He is said to have returned at last. 11. She was allowed to go for a walk. 12. They were asked to come earlier. 13. They were ordered to leave the hall. 14. He appeared to know her new address. 15. He seems to know us. 16. He seems (to be) angry. 17. He seems to be watching us. 18. She seemed to have kept all his promises. 19. He proved to be a good friend. 20. He turned out (to be) a smuggler. 21. He is likely to come. 22. He is unlikely to help you.

23. They are sure to come soon.

### **Тексты для перевода.**

#### **ECOLOGICAL PROBLEMS OF BIG CITIES**

There are over 150 super cities in the world with population from one to 15 million and more. Tokyo, New York, London, Mexico City, Rio de Janeiro and Moscow are just a few of the cities which have become super cities.

People in the super cities suffer from polluted environment: bad water, bad air and noise. A new term, urban climate, is used now for such cities. It means high temperature, oppressive atmosphere and intensive smog. Smog can make people feel ill and have difficulty in breathing. In Mexico City just breathing the air is life threatening. It is equivalent to smoking two packs of cigarettes a day. The same situation is in 600 cities of the former Soviet Union.

Air is polluted by the release of harmful substances, smoke from chimneys and exhaust fumes from cars. The problem is especially bad in some cities where there is no much wind and a brown layer of smog hangs in the air.

Some experts consider that it is practically impossible to protect the big cities from pollution. The World Health Organization (WHO) was studying air pollution around the world for over eight years. It measured two things: the level of sulphur dioxide (SO<sub>2</sub>) in the air and the level of smoke. Sulphur dioxide and smoke pollute water and have serious effect on forest, buildings and health of people.

In the WHO report it is shown that the cities with the most considerable level of SO<sub>2</sub> in the air are Milan, Teheran, Prague, Santiago and Sao Paulo. However, the atmosphere in some cities with clean air gets worse in winter. Helsinki, for example, becomes one of the cities with the largest proportion of SO<sub>2</sub> in the air in winter. This must be connected with the heating of houses. One can also mention Glasgow and Warsaw which suffer in the same way.

#### **COMPUTERS IN OUR LIFE**

The computer is known to be a very important invention of the 20th century. The first electronic computer appeared to have the size of a large house, it being limited in power and unreliable. But computers developed quickly. Modern computers based on integrated circuits are millions to billions times more capable than the early ones. They being portable, we can carry them in a little bag.

Computers changed the world a lot. Almost anything you know is run or made by computers. We are becoming increasingly dependent on computers. Computers give access to a lot of information. With a computer we can do a lot of things, for example: write, read newspapers, paint, count and do other things. They are used in hospitals, schools, aeroplanes, trains, at home - everywhere.

There are some disadvantages, of course. Computers can get viruses. Computers becoming out-of-date very quickly, they need to be replaced. The main disadvantage of computers is that staring at a screen for long periods of time can be damaging to the eyes, and sitting on a chair for hours is certainly not healthy.

Also, people can be inclined to become antisocial.

However, the advantages of computers are numerous. Let us take their educational benefits. School subjects become more interesting when presented on a computer screen. In addition, computers are valuable to any business, saving time by being capable of storing and retrieving vast amounts of information at the touch of the button. If there had been no computers, modern technological process would have been impossible.

## WOMEN AND ENVIRONMENT

Environmental books have mostly focused on men's roles, and generally women's involvement with nature has been ignored. So, the result is that women's role in environmental struggles and debates about nature has been hidden from history. However, we can see women of every social class, nation, or color raise their concerns about the environment more openly. Women want to prove to the world that they can be a powerful force for positive changes in the environment and the world around them.

Women are called the main responsible actors in environmental contexts. Technological rationalization has produced environmental problems such as heaps of packaging waste, nondegradable plastics, poisoned grounds and water, allergies through use of chemicals in cosmetics, food, detergents. The "ecologically responsible housewife", thus, is a good economical manager. She economizes energy. She is to be an expert in waste reduction, in cultivating her own vegetables and fruits, of course without using pesticides.

Women in their roles as nurses, purchasers, houseworkers are especially confronted with environmental problems and communal politics. They have to overcome a lot of difficulties: bad connections with public transport services, no buses in evening and night hours.

Women want to be involved in planning processes and be taken seriously as experts with practical experience, not only at home and at their places of work but also in politics, administration, science and in the economy.

Men also consume. And men produce waste too, - frequently toxic waste such as paint, photo chemicals, car waste. Thus, men have to attend environmental education classes as well. They must also consider their environmental responsibility.

## Agricultural operation

Let us now consider the sequence of agricultural operations, beginning with seed-bed preparation.

First of all comes stubble-cleaning which is made by means of a stubble cleaner. This machine turns up the ground, mixes it up with the stubble and partly turns it over. Now we must consider ploughing. In modern practice ploughing is effected by gang-ploughs which are generally trailers, but are sometimes also mounted on the bottom of the plough. The foot cuts the soil, after which the share goes into the ground more deeply, while the mouldboard throws the slices aside. Seed-bed

preparation has to be considered as a preliminary to other kinds of field-work. Seed-bed preparation is effected by refining with the help of sweepers, next with tine and disc harrows, then by levelling, cultivation and occasionally rolling.

After that comes seeding which is at present practically always effected by means of tractor-driven drills. Not unfrequently fertilizers are applied at the same time as drilling takes place. This practice is known as ferti-seeding. Otherwise tractor-drawn spreaders are used. With some crops, cluster-pocket (or checkrow) planting is employed. After that shoots begin to show. In the case of some crops, hilling is necessary while the extraction of weeds by means of weeders is of prime importance seeing that they may stifle the crop or, at least, arrest its growth. These operations can be practised with row-crops which are sown with interrows permitting cultivation.

When the crop is ripe and there is a spell of fine weather harvesting sets in. Swath or subsequent pickup harvesting is now recommended practice. The old way of reaping with the help of scythes and sickles has universally given way to harvesting with the help of harvester-combines which cut, thresh, winnow and bin the corn in one operation. Combines are practically always self-propelled, though they are occasionally tractor-drawn with power take-off (pto). Not outdated, however, are also reapers, which are often of great help during the hot time of harvesting. The best of them are windrowers and self-binding reapers, making ready sheaves on the field.

The time of haymaking is also a, time when every hour of dry weather must be seized. Mowers work on the grassland day and night and the hayrake following them is as busy picking up the cut grass, whereupon the hay is left to dry, then tedded and at last made into haystacks, very often mechanically, by means of a hayloader. Improved haymaking combines are much in use now.

#### General characteristics of soils

The term "Soil" is used when we speak about the superficial portion of the earth's surface composed of broken, and disintegrated rock mixed with varying proportions of decayed and decaying animal and vegetable matter. Below the soil lies the subsoil which is distinguished from the surface soil mainly by a smaller percentage of organic matter and greater compactness. Plants derive all of their mineral content and a large part of their nitrogen content from the soil. Nitrogen is one of the most important components of soil. The other principal elements of mineral food include sulphur, phosphorus, potassium, calcium, magnesium and iron. Apparently, sodium, silicon and manganese are also needed by plants. The ability of assimilation of all these elements varies. This is why humus which contains many of the nutritive elements that are readily assimilated by plants from decayed organic products is so highly valuable. The productiveness of a soil also depends to a great extent on its mechanical properties (especially upon texture and structure) and also on the presence of useful bacteria, the chief function, of which is to help to fix free nitrogen.

Soils must be well supplied with humus so as to develop bacterial life adequately. An important property of soils, which is partly chemical and partly physical, is

their absorptive power for fertilizing components.

In respect of texture and also age, soils can be subdivided into fine sandy soil, sandy soil, loam soil, sandy-loam soil, silt-loam soil, shale-loam soil, muck soil, podzol soil, limy soil, solonetz soil, chernozem (black earth soil), brown soil, red soil. Various crops are adaptable to various soils. Naturally, the contents of humus, greatest in black soil, permits of a vast choice of the best cash crops, notably cereals and gives rich yields. Indeed, bumper crops are obtained on chernozem soils.

Of late various soil amendments are being introduced, principally high molecular substances improving soil structure.

### Surface Features

It must also be stated that besides soil, surface features are of considerable importance in deciding upon the choice of a particular crop.

Land may be flat, undulating, or rugged and this is by all means to be considered in farm planning. Take for example vineyards which thrive best on hillsides as contrasted to plainland more suitable for arable farming.

It is interesting by the way to note that of late in Moldavia a definite classification of terrace altitude for growing different varieties of vine has been developed. It appears that different kinds of grapes give the best yields at the particular height suitable for that variety. Thus, viticulture, to take just one example, is to a considerable extent dependent not only upon soil and precipitation, but also upon elevation.