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Rolnictwo / Agriculture

Introduction

Film dostępny na portalu epodreczniki.pl

wprowadzenie

Film dostępny na portalu epodreczniki.pl

wprowadzenie

Film dostępny na portalu epodreczniki.pl

wprowadzenie

INTRODUCTION TO THE E-RESOURCE

E-RESOURCE AGRICULTURE

ENGLISH

Agriculture in Poland is gradually changing. The number of farms decreases while the area of agricultural land per one farm is growing. The number of commodity farms with a large number of machines and large capital expenditures is also increasing. These changes also entail the demand for educated, entrepreneurial and creative people who will run their own farms using intensive technology and economic calculations but also ecological production methods.

People in the farmer profession generally work on their own or on family farms. They may, however, engage in paid employment on farms and in agricultural enterprises. The highest demand for workers on these farms occurs seasonally in spring, summer, and autumn. Employees in animal production have a higher chance of employment throughout the year. The percentage of households benefiting from paid work has increased and hence, to a lesser extent, the demand for trained farm workers has increased. Appropriately educated farmers will be replacing unskilled workers, which is very important from a social point of view. Work takes place in a natural environment and it is important that the worker understands its importance and influence on the quality of another person's life and the condition of the environment.

Due to the challenges of changing production technologies, rapid biological progress and growing consumer demands, the prestige of the farm technician profession is growing. Farm technicians can run their own business as well as work in agricultural production and service enterprises, offices and institutions of the agricultural service.

In turn, the agribusiness technicians take care of vegetable and animal production and food processing. They are also prepared to carry out the business in the agri-food sector, business accounting and tax settlements. As a result, the agribusiness technician develops the technology and cultivates the plants, organizes and carries out the various stages of production, plans how to supply the farm with resources for plants production, cultivates the soil, sows and plants seeds, organizes plants care and protection against weeds, diseases and pests. The technicians carry out periodic inspection and evaluation of plantations, including seed orchards during vegetation, plan and carry out plant harvesting, inspect and maintain water-melioration equipment, organize and supervise livestock farming, feeding, and grooming, manage proper fuels and their safe storage, handle, maintain, and operate, in accordance to the safety and hygiene conditions, motors and electrical appliances used in agriculture, they support and properly operate machines, evaluate the technical condition of used agricultural equipment, perform maintenance and fine repairs, plan how to provide the farm with tools for machinery and equipment, keep records of plants and animal production, calculate the costs incurred in plants and animal production, ensure that all technological steps in plants and animal production follow the requirements of the Common Agricultural Practice and the Cross Compliance Rules, use ecological methods in plants and animal production, sell direct products of plants and animal origin, identify recipients for products made on their own farms, prepare commercial offers, oversee the work of other employees in small teams, use EU funds. In addition to typical agricultural work, they are also involved in the planning and organization of food processing, documentation related to it, and are also prepared to sell processed foods in compliance with applicable laws. The agribusiness technicians conduct business activities, organise production, logistics and commercial activities for their company. According to the applicable law, they keep the accounting books of the company, draw up and analyse the financial statements. In addition to the above tasks, they keep the account for public-law liabilities.

According to the research published on the portal barometrzawodow.pl in the years 2011-2016 in Poland there was a large surplus of job seekers in the profession defined as „farmer and breeder". Also professions classified as „agriculture and forestry specialists" in some voivodships exceed the number of jobs assigned to them [https://barometrzawodow.pl/en/polska/prognozy-na-mapach/2011/specialisci-rolnictwa-i-lesnictwa,2011 , Poland, 2016, Polish, the relationship-between-available-sila-client-to-a-nbsp-on-demand-workers, 2,9,246,,, 1.0]. However, in most voivodships people with these qualifications balance the labour market demand.

Results of the survey conducted for the needs of the Voivodship Labour Office in Toruń for the years 2011-2014 indicate that in the agricultural professions the number of registered unemployed persons is significant. It is worth noting, however, that the situation on the labour market is more favourable in the case of having higher education as compared to the occupational one. So improving your skills makes it easier to get a job in the industry [https://wup.torun.pl].

PRESENTATION OF MATERIALS CONTAINED IN E-RESOURCE AND INFORMATION ON HOW TO USE THEM

According to the assumptions of the project, the materials that have been prepared for this e-resource are aimed at presenting typical occupational situations in the context of the professional language.

Vocational education programs in the field of agriculture take into account current knowledge, paying special attention to new technologies and the latest teaching concepts. Those programs also take into account general school tasks and cross-curricular skills acquired during upper secondary education as part of general curricula. One of these skills is the ability to communicate in the mother tongue and in foreign languages. Moreover, in Polish vocational training, the obligation to learn a foreign professional language has been introduced into the education process.

To meet the needs of the labour market, we provide teachers and students of Polish vocational schools with e-Resources to learn a foreign language in occupations: farmer, farm technician and agribusiness technician.

Among the prepared material, among others, are films, animations, audio and video materials that introduce the material, and didactic exercises and games to check the level of material assimilation.

We encourage everyone to use them!

DESCRIPTION OF EDUCATIONAL GOALS AND OUTCOMES

In the professional area VIII. Agricultural-forestry with environmental protection in the group of agricultural-breeding professions, in the farming trade, three separate professions have been classified:

- farmer 613003,

- farm technician 314207,

- agribusiness technician 331402.

Each of the professions shares a common classification RL.3.

Table 1. Connections of classifications in the farming trade

Qualification		Symbol of the profession	Profession in which it appears	Common elements
RL.3.	Running agricultural production	613003	Farmer	PKZ(RL.c) PKZ(RL.d)
		331402	Agribusiness technician	
		314207	Farm technician	
RL.16	Organising and supervising agricultural production	314207	Farm technician	OMZ PKZ(RL.c) PKZ(RL.d) PKZ(RL.f)
RL.6.	Organising and conducting business activity in agribusiness	331402	Agribusiness technician	OMZ PKZ(RL.d) PKZ(RL.f)

As it can be seen it table 1, apart from the connections in qualifications, there is a strong connection with common PKZ(RL.c) and PKZ(RL.d), which appear in professions from this group. Those skills are essential for those professions (they appear in each of them), they are the basis for education connected with qualification RL.3.

Student:

1) perform control and maintenance activities on farm tractors;

2) abides to the provisions of the traffic law;

3) abides to the rules of driving a farm tractor;

4) performs activities connected to driving and operating a farm tractor in the scope essential for obtaining the T-category driving license.

Legal basis:

- Ordinance of the Minister of Education of 13 March 2017 on the classification of vocational education professions

http://dziennikustaw.gov.pl/du/2017/622/1

- Ordinance of the Minister of Education of 31 March 2017 on the core curriculum of vocational education

http://dziennikustaw.gov.pl/DU/2017/860/2

PKZ(RL.d) Skills that are the foundation for education in professions: farmer, farm technician, agribusiness technician

Student:

1) distinguishes the vehicles, machines, devices and tools used in agriculture;

2) recognises parts and components of vehicles, machines and devices;

3) recognises the types of corrosion and determines the ways to protect metals from corrosion;

4) distinguishes the properties of habitats and plant management;

5) recognizes the type of soil and assesses its agricultural value;

6) classifies fertilizers and assesses their influence on the soil and plants;

7) recognizes plants and animal species;

8) recognizes crop plants and weeds;

9) distinguishes breeds and types of livestock;

10) uses computer software facilitating the performance of the tasks.

Educational goals and outcomes in the farmer profession:

https://www.ore.edu.pl/images/files/KSZTALCENIE_ZAWODOWE/zawody2-3/cd/rolnik_613003.pdf

RL.3. Running agricultural production

1. Running agricultural production

Student:

1) determines the influence of climate and soil factors on the growth, development, and yield of plants;

2) selects plants for climate and soil and economic conditions of the given region;

3) selects crop rotation for the specific conditions of the farm;

4) carries out maintenance work on water and land drainage equipment;

5) plans the organic and mineral fertilisation;

6) evaluates the quality of the seeds;

7) prepares seeds for sowing;

8) plans agrotechnical treatments suitable to the soil conditions and crop plants requirements;

9) carries out agrotechnical treatments connected with crop plants production;

10) recognizes diseases, pests and weeds of crop plants;

11) selects methods and means of plants protection in accordance to the rules of integrated plants protection;

12) selects tools, devices and machines for work in plants production;

13) observes machines and devices used in plants production;

14) cultivates plants in accordance with Common Agricultural Practice and the Cross Compliance Rules and economic account;

15) uses ecological methods of plants cultivation;

16) respects the conditions of storage of products of plants origins;

17) stores and prepares products of plants origin for sales;

18) conducts direct sales of products of plants origins.

2. Running livestock production

Student:

1) determines the position of organs and systems in livestock organisms;

2) determines life processes in livestock organisms;

3) recognises species, types, and races of livestock;

4) defines the directions of livestock farming;

5) recognises and evaluates the quality of feed uses in feeding of livestock;

6) prepares, maintains and stores the feed;

7) analyses the influence of rational feeding of the livestock on the production and economic results;

8) selects tools, devices, and machines for works in livestock production;

9) operates machines and devices used in livestock production;

10) performs work connected with feeding, breeding, and grooming of livestock;

11) performs works connected with animal hygiene and maintenance of farm outbuildings;

12) determines the zoo hygienic conditions in livestock rooms;

13) performs the livestock production in accordance with Common Agricultural Practice and the Cross Compliance Rules;

14) recognizes the disease symptoms based on the appearance and behaviour of livestock;

15) abides the rules of identification and registration and trade in livestock;

16) used ecological methods in livestock production;

17) prepares animals for auctions, shows and exhibitions;

18) prepares animals and products of animal origin for sales;

19) carries out direct sales of animals and products of animal origin.

3. Operating technical means used in agriculture

Student:

1) uses technical documentation, operating instructions of farming machines and devices, and norms and catalogues;

2) recognises construction and operating materials used in farming machines and devices;

3) operates devices and systems of renewable energy;

4) operates water supply equipment used in livestock buildings;

5) operates and maintains water and land drainage devices;

6) selects vehicles and means of transport for the type of work performed in agriculture;

7) prepares vehicles, machines, tools, and devices for work;

8) calibrates the sprinklers used in plants protection;

9) performs technical maintenance and conservation of farming vehicles, machines, and devices.

Educational goals and outcomes in the profession of farm technician:

https://www.ore.edu.pl/images/files/KSZTALCENIE_ZAWODOWE/zawody2-3/cd/technik_rolnik_314207.pdf

RL.16. Organising and supervising agricultural production

1. Organising plants production

Student:

1) predicts the weather based on atmospheric measurements and meteorological observation. forecasts and weather maps;

2) operates meteorological equipment;

3) performs technical maintenance of drainage equipment and plans their maintenance and repair;

4) plans the methods of countering the soil degradation and devastation processes;

5) designs plants rotation depending on climate and soil conditions;

6) plans and organises work connected with soil cultivation, fertilization and protection of crop plants;

7) selects machines and tools for the type of cultivation with taking into account the requirements of crop plants;

8) selects technologies of crop plants cultivation and feed production on grasslands;

9) runs seed plantations;

10) organises the process of plants production in accordance with Common Agricultural Practice and the Cross Compliance Rules;

11) organises the storage and sales of products of plants origin in compliance with food quality and food safety norms;

12) plans plants production on a farm based on economic analysis;

13) supervises the performance of tasks in plants production;

14) abides to the provisions of law on seed production, environmental protection, plants protection, and food safety;

15) uses software to support the organisation and control of plants production process.

2. Organising livestock production

Student:

1) defines the functions and meaning of organs and systems of livestock;

2) defines the conditions necessary to secure the well-being of livestock;

3) analyses the conditions of livestock production and the requirements of the well-being of livestock;

4) selects breeds and types of livestock for specific conditions of the farm and production technology;

5) organises work associated with the breeding of livestock;

6) defines the physiological basis of livestock feeding;

7) sets the feeding standards and the feed rations for livestock;

8) analyses the influence of rational feeding and zoo hygienic conditions on the health of livestock;

9) plans and organises works connected with maintenance and storage of feeds;

10) organises work connected with preparation and distribution of feeds;

11) organises storage and sale of products of animal origin in accordance to the food quality and food safety norms;

12) organises work connected with breeding on the farm;

13) determines the influence of livestock farming and breeding on the environment;

14) organises livestock production in accordance with Common Agricultural Practice and the Cross Compliance Rules;

15) plans the livestock production on a farm based on the economic analysis;

16) supervises the performance of tasks in livestock production;

17) uses software that facilitates the organisation and supervision of livestock production.

Educational goals and outcomes in the profession agribusiness technician:

https://www.ore.edu.pl/images/files/KSZTALCENIE_ZAWODOWE/zawody2-3/cd/technik_agrobiznesu_331402.pdf

RL.07. Organising and conducting business activity in agribusiness

1. Conducting business activity in agribusiness

Student:

1) draws up documents connected with conducting business activity;

2) selects the organizational and legal form of the company;

3) organises the logistics, production trade and services in an agribusiness company;

4) defines the financial needs of the company;

5) defines the financing sources of the company's business activity;

6) defines personnel needs;

7) selects the techniques of company management;

8) plans marketing activities in agribusiness.

2. Planning food processing

Student:

1) uses the technical and technological documentation and the results of food lab tests;

2) selects raw material, food additives and auxiliary materials used in food processing;

3) defines the conditions of mechanical, thermal and diffusional operations on raw materials;

4) selects production technologies for selected food products;

5) selects methods of food preservation;

6) draws up demand for raw materials, packaging and food additives;

7) selects machines and devices used in food processing;

8) operates machines and devices used in food processing plants;

9) organises work connected with food processing;

10) selects methods of managing the production waste;

11) applies the provisions of the law and norms in food processing;

12) applies food safety systems.

3. Bookkeeping and preparing tax statements of the company in agribusiness

Student:

1) applies the provisions of the law governing accounting and taxes;

2) prepares accounting documents in accordance to the applicable law;

3) distinguishes between assets and capital of the company;

4) prepares the inventory of company assets;

5) records inventory differences in company assets;

6) calculates the wear of fixes assets;

7) records business operations on accounts;

8) prepares the balance sheet and profit and loss statement;

9) prepares financial statement;

10) classifies the costs;

11) calculates the costs of business activity in agribusiness;

12) calculates employee remuneration and prepares documents regarding the remuneration;

13) prepares documents regarding mandatory and voluntary insurance in agribusiness;

14) prepares simplified forms of accounting records;

15) uses financial and accounting software.

ESTIMATED NUMBER OF HOURS NEEDED TO ACHIEVE THE ASSUMED EDUCATIONAL OUTCOMES

QUALIFICATION DESIGNATION	QUALIFICATION NAME	PROFESSION NAME	NUMBER OF HOURS
RL.3	Running agricultural production	farmer	30
		farm technician	
		agribusiness technician	
RL.3.1	Running plants production	-	10
RL.3.2	Running animal production	-	10
RL.3.3	Operating technical means used in agriculture	-	10

RL.16	Organising and supervising agricultural production	farmer technician	20
RL.16.1	Organising plants production	-	10
RL.16.2	Organising livestock production	-	10
RL.6	Organising and conducting business activity in agribusiness	agribusiness technician	30
RL.6.1	Conducting business activity in agribusiness	-	10
RL.6.2	Planning food processing	-	10
RL.6.3	Bookkeeping and preparing tax statements of the company in agribusiness	-	10

DIVISION INTO PROFESSIONS ETC. (TABLE OF CONTENTS)

Farmer

RL.3 Running agricultural production

RL.3.1 Running plants production

RL.3.2 Running livestock production

RL.3.3 Operating technical means used in agriculture

Farmer technician

RL. 16 Organising and supervising agricultural production

RL.16.1 Organising plants production

RL.16.2 Organising livestock production

Agribusiness technician

RL.6 Organising and conducting business activity in agribusiness

RL.6.1 Conducting business activity in agribusiness

RL.6.2 Planning food processing

RL.6.3 Bookkeeping and preparing tax statements of the company in agribusiness

WPROWADZENIE DO E-ZASOBU

E-ZASÓB ROLNICTWO

JĘZYK ANGIELSKI

Rolnictwo w Polsce ulega stopniowym zmianom. Zmniejsza się liczba gospodarstw, przy równoczesnym wzroście powierzchni gruntów rolnych przypadających na jedno gospodarstwo. Zwiększa się również ilość gospodarstw towarowych charakteryzujących się korzystaniem z dużej ilości maszyn, a także dużymi nakładami kapitałowymi. Z tymi zmianami wiąże się również zapotrzebowanie na osoby wykształcone, przedsiębiorcze i kreatywne, które będą prowadziły własne gospodarstwa z wykorzystaniem intensywnych technologii i rachunku ekonomicznego, ale również ekologicznych metod produkcji.

Osoby posiadające wykształcenie w zawodzie rolnik z zasady pracują we własnych lub rodzinnych gospodarstwach rolnych. Mogą jednak wykonywać pracę najemną w gospodarstwach i przedsiębiorstwach rolnych. Największe zapotrzebowanie na pracowników w tych gospodarstwach występuje sezonowo wiosną latem i jesienią. Przez cały rok na zatrudnienie mogą liczyć pracownicy w produkcji zwierzęcej. Odsetek gospodarstw korzystających z pracy najemnej się zwiększa i stąd w niewielkim stopniu, ale wzrasta, zapotrzebowanie na pracowników wykształconych w zawodzie rolnik. Odpowiednio wykształceni rolnicy będą więc zastępować pracowników niewykwalifikowanych, co jest bardzo ważne ze społecznego punktu widzenia. Praca odbywa się w środowisku naturalnym i ważne jest jak człowiek ją wykonujący rozumie jej znaczenie i własny wpływ na jakość życia drugiego człowieka oraz stan tego środowiska.

Wobec wyzwań związanych ze zmieniającymi się technologiami produkcji, szybkim postępem biologicznym oraz rosnącymi wymaganiami konsumentów rośnie również prestiż zawodu technik rolnik. Technik rolnik może prowadzić własną działalność gospodarczą, jak również pracować w rolniczych przedsiębiorstwach produkcyjnych i usługowych, w urzędach i instytucjach służb rolnych.

Z kolei technik agrobiznesu prowadzi produkcję roślinną i zwierzęcą oraz przetwórstwo żywności. Przygotowany jest także do prowadzenia działalności gospodarczej w sektorze rolno-spożywczym, prowadzenia rachunkowości przedsiębiorstwa i rozliczeń podatkowych. W związku z tym technik agrobiznesu opracowuje technologie i prowadzi uprawę roślin, planuje, organizuje i przeprowadza poszczególne etapy produkcji, planuje zaopatrzenie gospodarstwa w środki do produkcji roślinnej, prowadzi uprawę roli, siew i sadzenie roślin, pielęgnację roślin oraz ochronę przed chwastami, chorobami i szkodnikami, przeprowadza okresową kontrolę i ocenę plantacji, w tym plantacji nasiennych w okresie wegetacji, planuje i przeprowadza zbiór roślin, kontroluje i konserwuje urządzenia wodno-melioracyjne, organizuje i nadzoruje prace związane z chowem, pielęgnacją i żywieniem zwierząt gospodarskich, gospodaruje w sposób właściwy paliwami i bezpiecznie je przechowuje, obsługuje z zachowaniem warunków bezpieczeństwa i higieny pracy instalacje, silniki i urządzenia elektryczne używane

w rolnictwie, obsługuje i właściwie eksploatuje maszyny, dokonuje oceny stanu technicznego używanego sprzętu rolniczego, dokonuje konserwacji i drobnych napraw, planuje zaopatrzenie gospodarstwa w narzędzia maszyny i urządzenia, prowadzi dokumentację dotyczącą produkcji roślinnej i zwierzęcej, sporządza kalkulacje ponoszonych kosztów w produkcji roślinnej i zwierzęcej, wszystkie etapy technologiczne w produkcji roślinnej i zwierzęcej prowadzi zgodnie z wymogami Zwykłej Dobrej Praktyki Rolniczej oraz Zasadami Wzajemnej Zgodności, w produkcji roślinnej i zwierzęcej wykorzystuje metody ekologiczne, prowadzi sprzedaż bezpośrednią produktów pochodzenia roślinnego i zwierzęcego, identyfikuje odbiorców na produkty wytworzone we własnym gospodarstwie, przygotowuje ofertę handlową, nadzoruje prace innych pracowników w małym zespole, korzysta ze środków Unii Europejskiej. Oprócz typowych prac związanych z rolnictwem zajmuje się również planowaniem i organizacją przetwórstwa żywności, prowadzeniem dokumentacji z tym związanej, przygotowany jest również do sprzedaży przetworzonej żywności z zachowaniem obowiązujących przepisów prawa. Technik agrobiznesu prowadzi działalność gospodarczą, organizuje działalność produkcyjną, logistyczną i handlową dla swojego przedsiębiorstwa. Zgodnie z obowiązującym prawem prowadzi rachunkowość przedsiębiorstwa, sporządza i analizuje sprawozdania finansowe. Oprócz powyższych zadań rozlicza zobowiązania publiczno-prawne.

Według wyników badań publikowanych na portalu barometrzawodow.pl w latach 2011-2016 w Polsce odnotowano dużą nadwyżkę poszukujących pracy w zawodzie określonym jako „rolnik i hodowca". Również zawody sklasyfikowane jako „specjaliści rolnictwa i leśnictwa" w niektórych województwach przewyższają liczbę miejsc pracy dla nich przeznaczonej [https://barometrzawodow.pl/pl/polska/prognozy-na-mapach/2011/specjalisci-rolnictwa-i-lesnictwa,2011,polska,2016,polska,relacja-miedzy-dostepna-sila-robocza-a-nbsp-zapotrzebowaniem-na-pracownikow,2,9,246,,,1,0,]. Jednak w większości województw osoby o tych kwalifikacjach równoważą zapotrzebowanie rynku pracy.

Wyniki badania przeprowadzonego na potrzeby Wojewódzkiego Urzędu Pracy w Toruniu, za lata 2011-2014, wskazują iż w zawodach z branży rolniczej liczba zarejestrowanych osób bezrobotnych jest znacząca. Warto jednak zwrócić uwagę na fakt, iż sytuacja na rynku pracy jest korzystniejsza w przypadku posiadania wykształcenia wyższego w porównaniu z zawodowym. Tak więc podnoszenie kompetencji ułatwia podjęcie pracy w tej branży [https://wup.torun.pl].

PREZENTACJA MATERIAŁÓW ZAWARTYCH W E-ZASOBIE ORAZ INFORMACJE JAK Z NICH KORZYSTAĆ

Zgodnie z założeniami projektu materiały, które zostały przygotowane do tego e-zasobu nakierowane są na przedstawienie typowych sytuacji zawodowych w kontekście języka branżowego.

Programy nauczania dla zawodów w branży rolnictwo uwzględniają aktualny stan wiedzy ze szczególnym zwróceniem uwagi na nowe technologie i najnowsze koncepcje nauczania. Programy uwzględniają także zapisy zadań ogólnych szkoły i umiejętności ponadprzedmiotowych zdobywanych w trakcie kształcenia w szkole ponadgimnazjalnej umieszczonych w podstawach programowych kształcenia ogólnego. Jedną z tych umiejętności jest umiejętność komunikowania się w języku ojczystym i w językach obcych. Ponadto w polskiej szkole zawodowej wprowadzono do procesu kształcenia obowiązek nauki języka obcego zawodowego.

Wychodząc naprzeciw potrzebom rynku pracy przekazujemy nauczycielom i uczniom polskich szkół zawodowych e-Zasoby do nauki języka obcego zawodowego w zawodach: rolnik, technik rolnik i technik agrobiznesu.

Wśród przygotowanych materiałów znaleźć można m.in. filmy, animacje, materiały audio-wideo, które wprowadzają materiał oraz ćwiczenia i gry dydaktyczne, sprawdzające poziom przyswojenia materiału.

Zachęcamy wszystkich do korzystania z nich!

OPIS CELÓW I EFEKTÓW KSZTAŁCENIA

W obszarze zawodowym VIII. Rolniczo-leśnym z ochroną środowiska, w grupie zawodów rolno-hodowlanych, w branży rolnictwo zakwalifikowane zostały 3 odrębne zawody:

- rolnik 613003,

- technik rolnik 314207,

- technik agrobiznesu 331402.

W każdym z tych zawodów występuje wspólna kwalifikacja RL.3.

Tabela 1. Wzajemne powiązania kwalifikacji w branży rolnictwo

Kwalifikacja		Symbol zawodu	Zawód w którym występuje	Elementy wspólne
RL.3.	Prowadzenie produkcji rolniczej	613003	Rolnik	PKZ(RL.c) PKZ(RL.d)
		331402	Technik agrobiznesu	
		314207	Technik rolnik	

RL.16.	Organizacja i nadzorowanie produkcji rolniczej	314207	Technik rolnik	OMZ PKZ(RL.c) PKZ(RL.d) PKZ(RL.f)
RL.6.	Organizacja i prowadzenie przedsiębiorstwa w agrobiznesie	331402	Technik agrobiznesu	OMZ PKZ(RL.d) PKZ(RL.f)

Jak można zauważyć w tabeli 1,oprócz powiązań w ramach kwalifikacji, występuje silne powiązanie wspólnymi PKZ(RL.c) i PKZ(RL.d), które występują w zawodach tej grupy. Umiejętności te są kluczowe dla tych zawodów (występują w każdym z nich), stanowią podstawę do realizacji kształcenia w powiązaniu z kwalifikacją RL.3.

Uczeń:

1) wykonuje czynności kontrolno-obsługowe ciągników rolniczych;

2) stosuje przepisy prawa dotyczące ruchu drogowego;

3) przestrzega zasad kierowania ciągnikiem rolniczym;

4) wykonuje czynności związane z prowadzeniem i obsługą ciągnika rolniczego w zakresie niezbędnym do uzyskania prawa jazdy kategorii T.

Podstawy prawne:

- Rozporządzenie Ministra Edukacji Narodowej z dnia 13 marca 2017 r. w sprawie klasyfikacji zawodów szkolnictwa zawodowego

http://dziennikustaw.gov.pl/du/2017/622/1

- Rozporządzenie Ministra Edukacji Narodowej z dnia 31 marca 2017 r. w sprawie podstawy programowej kształcenia w zawodach

http://dziennikustaw.gov.pl/DU/2017/860/2

PKZ(RL.d) Umiejętności stanowiące podbudowę do kształcenia w zawodach: rolnik, technik rolnik, technik agrobiznesu

Uczeń:

1) rozróżnia pojazdy, maszyny, urządzenia i narzędzia stosowane w produkcji rolniczej;

2) rozpoznaje części i podzespoły pojazdów, maszyn i urządzeń;

3) rozpoznaje rodzaje korozji oraz określa sposoby ochrony metali przed korozją;

4) rozróżnia czynniki siedliska i zabiegi uprawowe;

5) rozpoznaje gleby i ocenia ich wartość rolniczą;

6) klasyfikuje nawozy i ocenia ich wpływ na glebę i rośliny;

7) rozpoznaje gatunki roślin i zwierząt;

8) rozpoznaje rośliny uprawne i chwasty;

9) rozpoznaje rasy i typy użytkowe zwierząt gospodarskich;

10) stosuje programy komputerowe wspomagające wykonywanie zadań.

Cele i efekty kształcenia w zawodzie rolnik:

https://www.ore.edu.pl/images/files/KSZTALCENIE_ZAWODOWE/zawody2-3/cd/rolnik_613003.pdf

RL.3. Prowadzenie produkcji rolniczej

1. Prowadzenie produkcji roślinnej

Uczeń:

1) określa wpływ czynników klimatyczno-glebowych na wzrost i rozwój oraz plonowanie roślin;

2) dobiera rośliny do warunków klimatyczno-glebowych i ekonomicznych danego rejonu;

3) dobiera zmianowanie roślin uprawnych do określonych warunków gospodarstwa rolniczego;

4) wykonuje prace związane z konserwacją urządzeń wodno-melioracyjnych;

5) planuje nawożenie organiczne i mineralne;

6) ocenia jakość materiału siewnego;

7) przygotowuje materiał siewny do siewu;

8) planuje zabiegi agrotechniczne odpowiednie do warunków glebowych i wymagań roślin uprawnych;

9) wykonuje zabiegi agrotechniczne związane z produkcją roślin uprawnych;

10) rozpoznaje choroby, szkodniki i chwasty roślin uprawnych;

11) dobiera metody i środki ochrony roślin zgodnie z zasadami integrowanej ochrony roślin;

12) dobiera narzędzia, urządzenia i maszyny do prac w produkcji roślinnej;

13) obsługuje maszyny i urządzenia stosowane w produkcji roślinnej;

14) prowadzi uprawę roślin zgodnie ze Zwykłą Dobrą Praktyką Rolniczą i z Zasadami Wzajemnej Zgodności oraz rachunkiem ekonomicznym;

15) stosuje ekologiczne metody uprawy roślin;

16) przestrzega warunków przechowywania produktów pochodzenia roślinnego;

17) przechowuje oraz przygotowuje produkty pochodzenia roślinnego do sprzedaży;

18) prowadzi sprzedaż bezpośrednią produktów pochodzenia roślinnego.

2. Prowadzenie produkcji zwierzęcej

Uczeń:

1) określa położenie narządów i układów w organizmach zwierząt gospodarskich;

2) określa procesy życiowe zachodzące w organizmach zwierząt gospodarskich;

3) rozpoznaje gatunki, typy użytkowe i rasy zwierząt gospodarskich;

4) określa kierunki chowu zwierząt gospodarskich;

5) rozpoznaje i ocenia jakość pasz stosowanych w żywieniu zwierząt gospodarskich;

6) przygotowuje, konserwuje i przechowuje pasze;

7) analizuje wpływ racjonalnego żywienia zwierząt gospodarskich na wyniki produkcyjne i ekonomiczne;

8) dobiera narzędzia, urządzenia i maszyny do prac w produkcji zwierzęcej;

9) obsługuje maszyny i urządzenia stosowane w produkcji zwierzęcej;

10) wykonuje prace związane z żywieniem, rozrodem oraz pielęgnacją zwierząt gospodarskich;

11) wykonuje prace związane z higieną zwierząt i utrzymaniem pomieszczeń gospodarskich;

12) określa warunki zoohigieniczne w pomieszczeniach dla zwierząt gospodarskich;

13) prowadzi produkcję zwierzęcą zgodnie ze Zwykłą Dobrą Praktyką Rolniczą i z Zasadami Wzajemnej Zgodności;

14) rozpoznaje objawy chorobowe na podstawie wyglądu i zachowania zwierząt gospodarskich;

15) przestrzega zasad identyfikacji i rejestracji oraz obrotu zwierzętami gospodarskimi;

16) stosuje metody ekologiczne w produkcji zwierzęcej;

17) przygotowuje zwierzęta do aukcji, pokazów i wystaw;

18) przygotowuje zwierzęta i produkty pochodzenia zwierzęcego do sprzedaży;

19) prowadzi sprzedaż bezpośrednią zwierząt i produktów pochodzenia zwierzęcego.

3. Obsługa środków technicznych stosowanych w rolnictwie

Uczeń:

1) posługuje się dokumentacją techniczną, instrukcjami obsługi maszyn i urządzeń rolniczych oraz normami i katalogami;

2) rozpoznaje materiały konstrukcyjne i eksploatacyjne stosowane w maszynach i urządzeniach rolniczych;

3) obsługuje urządzenia i systemy energetyki odnawialnej;

4) obsługuje urządzenia wodociągowe stosowane w budynkach inwentarskich;

5) obsługuje i konserwuje urządzenia wodno-melioracyjne;

6) dobiera pojazdy i środki transportu do rodzaju prac wykonywanych w rolnictwie;

7) przygotowuje do pracy pojazdy, maszyny, narzędzia i urządzenia;

8) przeprowadza kalibrację opryskiwaczy stosowanych w ochronie roślin;

9) wykonuje czynności związane z przeglądami technicznymi oraz konserwacją pojazdów, maszyn i urządzeń rolniczych.

Cele i efekty kształcenia w zawodzie technik rolnik:

https://www.ore.edu.pl/images/files/KSZTALCENIE_ZAWODOWE/zawody2-3/cd/technik_rolnik_314207.pdf

RL.16. Organizacja i nadzorowanie produkcji rolniczej

1. Organizowanie produkcji roślinnej

Uczeń:

1) przewiduje pogodę na podstawie pomiarów czynników atmosferycznych oraz obserwacji zjawisk meteorologicznych, prognoz i map pogody;

2) posługuje się przyrządami meteorologicznymi;

3) wykonuje przeglądy techniczne urządzeń melioracyjnych oraz planuje ich konserwację i naprawę;

4) planuje sposoby przeciwdziałania procesom degradacji i dewastacji gleb;

5) projektuje zmianowanie roślin w zależności od warunków klimatyczno-glebowych;

6) planuje i organizuje prace związane z uprawą roli, nawożeniem i ochroną roślin uprawnych;

7) dobiera maszyny i narzędzia do rodzaju zabiegów uprawowych z uwzględnieniem wymagań roślin uprawnych;

8) dobiera technologie produkcji roślin uprawnych oraz produkcji pasz na użytkach zielonych;

9) prowadzi plantacje nasienne;

10) organizuje proces produkcji roślinnej zgodnie ze Zwykłą Dobrą Praktyką Rolniczą i z Zasadami Wzajemnej Zgodności;

11) organizuje przechowywanie i sprzedaż produktów roślinnych z zachowaniem norm jakości i bezpieczeństwa żywności;

12) planuje produkcję roślinną w gospodarstwie rolnym na podstawie analizy ekonomicznej;

13) nadzoruje realizację zadań w zakresie produkcji roślinnej;

14) stosuje przepisy prawa dotyczące nasiennictwa, ochrony środowiska, ochrony roślin i bezpieczeństwa żywności;

15) korzysta z programów komputerowych do wspomagania organizacji i kontroli procesu produkcji roślinnej.

2. Organizowanie produkcji zwierzęcej

Uczeń:

1) określa funkcje oraz znaczenie narządów i układów organizmu zwierząt gospodarskich;

2) określa warunki niezbędne do zabezpieczenia dobrostanu zwierząt gospodarskich;

3) analizuje uwarunkowania produkcji zwierzęcej oraz wymogi dobrostanu zwierząt gospodarskich;

4) dobiera rasy i typy użytkowe zwierząt gospodarskich do określonych warunków gospodarstwa i technologii produkcji;

5) organizuje prace związane z rozrodem zwierząt gospodarskich;

6) określa fizjologiczne podstawy żywienia zwierząt gospodarskich;

7) ustala normy żywienia i dawki pokarmowe dla zwierząt gospodarskich;

8) analizuje wpływ racjonalnego żywienia oraz warunków zoohigienicznych na zdrowie zwierząt gospodarskich;

9) planuje i organizuje prace związane z konserwowaniem i przechowywaniem pasz;

10) organizuje prace związane z przygotowaniem i zadawaniem pasz;

11) organizuje przechowywanie i sprzedaż produktów zwierzęcych z zachowaniem norm jakości i bezpieczeństwa żywności;

12) prowadzi prace hodowlane w gospodarstwie rolnym;

13) określa wpływ chowu i hodowli zwierząt na środowisko naturalne;

14) organizuje produkcję zwierzęcą zgodnie ze Zwykłą Dobrą Praktyką Rolniczą i z Zasadami Wzajemnej Zgodności;

15) planuje produkcję zwierzęcą w gospodarstwie rolnym w oparciu o rachunek ekonomiczny;

16) nadzoruje realizację zadań wykonywanych w produkcji zwierzęcej;

17) korzysta z programów komputerowych wspomagających organizację i nadzorowanie produkcji zwierzęcej.

Cele i efekty kształcenia w zawodzie technik agrobiznesu:

https://www.ore.edu.pl/images/files/KSZTALCENIE_ZAWODOWE/zawody2-3/cd/technik_agrobiznesu_331402.pdf

RL.07. Organizacja i prowadzenie przedsiębiorstwa w agrobiznesie

1. Prowadzenie działalności gospodarczej w agrobiznesie

Uczeń:

1) sporządza dokumenty związane z prowadzeniem działalności gospodarczej;

2) dobiera formę organizacyjno-prawną przedsiębiorstwa;

3) organizuje działalność logistyczną, produkcyjną, handlową i usługową w przedsiębiorstwie agrobiznesowym;

4) określa potrzeby finansowe przedsiębiorstwa;

5) określa źródła finansowania działalności przedsiębiorstwa;

6) określa potrzeby kadrowe;

7) dobiera techniki zarządzania przedsiębiorstwem;

8) planuje działania marketingowe w agrobiznesie.

2. Planowanie przetwórstwa żywności

Uczeń:

1) korzysta z dokumentacji technicznej i technologicznej oraz wyników badań laboratoryjnych żywności;

2) dobiera surowce, dodatki do żywności oraz materiały pomocnicze stosowane w procesie przetwórstwa żywności;

3) określa warunki prowadzenia operacji mechanicznych, termicznych i dyfuzyjnych surowców;

4) dobiera technologie produkcji wybranych produktów spożywczych;

5) dobiera metody utrwalania żywności;

6) sporządza zapotrzebowanie na surowce, opakowania i dodatki do żywności;

7) dobiera maszyny i urządzenia stosowane w przetwórstwie spożywczym;

8) obsługuje maszyny i urządzenia stosowane w zakładach przetwórstwa spożywczego;

9) organizuje prace związane z przetwórstwem żywności;

10) dobiera sposoby zagospodarowania odpadów produkcyjnych;

11) stosuje przepisy prawa i normy dotyczące przetwórstwa spożywczego;

12) stosuje systemy zapewnienia bezpieczeństwa zdrowotnego żywności.

3. Prowadzenie rachunkowości i rozliczeń podatkowych przedsiębiorstwa w agrobiznesie

Uczeń:

1) stosuje przepisy prawa dotyczące rachunkowości i przepisy prawa podatkowego;

2) sporządza dokumenty księgowe zgodnie z obowiązującymi zasadami;

3) rozróżnia składniki majątku i kapitałów przedsiębiorstwa;

4) przeprowadza inwentaryzację składników majątkowych przedsiębiorstwa;

5) ewidencjonuje różnice inwentaryzacyjne składników majątkowych przedsiębiorstwa;

6) oblicza zużycie składników majątku trwałego;

7) ewidencjonuje operacje gospodarcze na kontach;

8) sporządza bilans oraz rachunek zysków i strat;

9) sporządza sprawozdanie finansowe;

10) dokonuje klasyfikacji kosztów;

11) sporządza kalkulacje kosztów działalności gospodarczej w agrobiznesie;

12) oblicza wynagrodzenie pracownika oraz sporządza dokumenty dotyczące jego wynagrodzenia;

13) sporządza dokumenty dotyczące ubezpieczeń obowiązkowych i dobrowolnych w agrobiznesie;

14) prowadzi uproszczone formy ewidencji księgowej;

15) korzysta z komputerowych programów finansowo-księgowych.

SZACOWANA LICZBA GODZIN POTRZEBNYCH DO OSIĄGNIĘCIA ZAKŁADANYCH EFEKTÓW KSZTAŁCENIA

OZNACZENIE KWALIFIKACJI	NAZWA KWALIFIKACJI	NAZWA ZAWODU	LICZBA GODZIN
RL.3	Prowadzenie produkcji rolniczej	rolnik	30
		technik rolnik	
		technik agrobiznesu	
RL.3.1	Prowadzenie produkcji roślinnej	-	10

RL.3.2	Prowadzenie produkcji zwierzęcej	-	10
RL.3.3	Obsługa środków technicznych stosowanych w rolnictwie	-	10
RL.16	Organizacja i nadzorowanie produkcji rolniczej	technik rolnik	20
RL.16.1	Organizowanie produkcji roślinnej	-	10
RL.16.2	Organizowanie produkcji zwierzęcej	-	10
RL.6	Organizacja i prowadzenie przedsiębiorstwa w agrobiznesie	technik agrobiznesu	30
RL.6.1	Prowadzenie działalności gospodarczej w agrobiznesie	-	10
RL.6.2	Planowanie przetwórstwa żywności	-	10
RL.6.3	Prowadzenie rachunkowości i rozliczeń podatkowych przedsiębiorstwa w agrobiznesie	-	10

PODZIAŁ NA ZAWODY ITD. (SPIS TREŚCI)

Rolnik

RL.3 Prowadzenie produkcji rolniczej

RL.3.1 Prowadzenie produkcji roślinnej

RL.3.2 Prowadzenie produkcji zwierzęcej

RL.3.3 Obsługa środków technicznych stosowanych w rolnictwie.

Technik rolnik

RL. 16 Organizacja i nadzorowanie produkcji rolniczej

RL.16.1 Organizowanie produkcji roślinnej

RL.16.2 Organizowanie produkcji zwierzęcej

Technik agrobiznesu

RL.6 Organizacja i prowadzenie przedsiębiorstwa w agrobiznesie

RL.6.1 Prowadzenie działalności gospodarczej w agrobiznesie

RL.6.2 Planowanie przetwórstwa żywności

RL.6.3 Prowadzenie rachunkowości i rozliczeń podatkowych przedsiębiorstwa w agrobiznesie

Running plants production

What shall we grow?

1. Film in the standard version.

Film dostępny na portalu epodreczniki.pl

d

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2. Film with subtitles.

Film dostępny na portalu epodreczniki.pl

moduł 7.3

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3. Film with subtitles and pauses. Listen and repeat after the speaker.

Film dostępny na portalu epodreczniki.pl

moduł 7.3

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4. Film with subtitles and narration.

Film dostępny na portalu epodreczniki.pl

Buying fertilizers

Film dostępny na portalu epodreczniki.pl

Moduł 3.1, Which fertilizers should I buy this year? I need nitrogen, phosphate and potash fertilizers. In the process of fertilization we use mineral fertilizers, such as: nitrogen, phosphate and potash fertilizers. We produce natural fertilizers on a farm, such as: manure and slurry. You may also plow secondary crops in order to enrich the soil in nutrients. Those are called green manure. A secondary crop example is mustard. We need to determine the fertilizers' application volume to ensure a sufficient growth and development of plants. You need to be careful though not to cause over-fertilization.Over-fertilization causes environment pollution, worsens plant quality and lowers production profitability. We calculate fertilizers' application rates basing on the results of soil analysis and the plants nutrition requirements. First we determine the plants' requirements and soil properties. Then we make a decision. It should be beneficial to both the farmer and the environment.

Cultivation and utilization of grain

Film dostępny na portalu epodreczniki.pl

animacja bez dzwieku

Weather Forecast

Hypertext is a part of weather forecast for farmers for the upcoming growing season.

Hipertekst stanowi fragment prognozy pogody dla rolników na nadchodzący sezon wegetacyjny.

This is the weather forecast for farmers for the upcoming growing season. The temperatures will be high and the rainfall level low. It may be caused by climatechange and greenhouse effect. It will have a negative impact on soil, especially on the class v and vi light and sandy soil. The crops production will be reduced. If possible implement field irrigation. Also improve melioration systems, which increase water retention. Good conditions for plants development may occur only in depressions, where higher soil humidity will be preserved. On southern slopes a drought may occur, which will increase erosion. Agricultural engineering, plant protection, weed control and fertilization should be treated with extra care. Close attention should be paid to winter crops, which didn't overwinter well because of hard frost and the lack of snow cover. Detailed information will be regularly available on the Institute of MeteorologyInstitute of Meteorology website.

Exercise 1

Familiarize yourself with weather forecast for the upcoming growing season from hypertext document 1 "Weather Forecast." Fill the gaps with the words provided. Zapoznaj się z prognozą pogody na nadchodzący sezon wegetacyjny z dokumentu hipertekstowego nr 1 „Prognoza pogody". Uzupełnij zdania wyrazami.

1. In the upcoming growing season the temperature will be... ____
2. Good conditions for plant development may occur only in .... ____
3. Plants that require special attention are ... ____
4. The rainfall will be... ____
5. On the southern slopes ... may occur. ____
6. You should also improve the ... systems. ____
7. The detailed information will be regularly available at the... page. ____
8. Use... field ____

c) sandy soils | c) fodder | c) root crops | a) first | b) winter crops | a) drought | b)low | b) irrigation | b) retention | c) frost | c) moderate | c) IT | a) irrigation | c) moderate | b) slopes | b) open | a) high | a) high | a) root | b) low | c) web | moderate | a) depressions | low | b) humidity | a) spring crops

Exercise 2

My sowing

The farmers' dialogue:

- Good morning,

- Welcome, how may I help you?

- I see you grow various plants.

- Yes, I incorporate crop rotation selected in accordance with the soil type on my farm.

- I only grow cereals: wheat, rye, barley and maize for corn.

- Do you know that growing only cereal leads to a negative changes in soil?

- I have noticed a smaller harvest from a few fields but I didn't know its cause.

- It may be a monoculture effect.

- I've read about it on the Internet. How can I prevent that?

- You should plan a certain crop rotation. You should take into account different groups of plants: root crops, legumes, oil plants. I grow cereals but also root crops: potatoes and beetroots, as well as, rapeseed and peas.

- Do you plan the crop rotation on your farm yourself?

- Yes, but I know there are computer programmers which you should use.

- Where do you get the seeds of so many different plant species?

- A good farmer buys mostly certified seed. I work with a seed company with which I signed a cultivation contract.

- Is it beneficial?

- Yes because I buy a good quality seed, with an inserted pelleting substance. Later I sell the my crops at a favorable price.

- How much is it?

- I cannot tell you because it is a trade secret of the company. As a fixed supplier I can negotiate the deal.

- Do you sell all of your crops to the same company?

- No, we process fruit and vegetables with my wife on our farm and we conduct a direct sale of those products.

- Thank you for your advice.

- You're welcome.

Chemical protection of a plantation

dangerous for the environment | caustic | flamable | harmful

AM-6400

DIRECTIONS FOR USE

Fungicide, concentrate for the preparation of aqueous emulsion to be used in winter and spring crops protection from diseases caused by fungi. Fungicide is to be applied with field spraying machines.

Application: wheat, triticale, rye, barley: powdery mildew, stem rust,

tan spot, blotches.

Ideal application volume: 0.75 l/ha.

Application period: apply the product to prevent the disease or when the first symptoms appear. The produced can be used during the sprouting, tillering, stem shooting and heading phase. Recommended especially for inflorescence protection.

Recommended dosage of water: 200-400 l/ha.

Precautions for workers:

- Do not eat, drink or some during the application of the product.

- Use chemical resistant gloves and protective clothing while preparing spray liquid and during the application process.

Precautions for the natural environment protection:

- Do not contaminate waters with the plant protection products or its container.

- Do not wash the equipment near surface waters.

- Avoid water contamination through drainage channels of farms and roads.

Time period from application to harvest day (withdrawal period): 42 days.

Plant protection product storage:

- in places where sufficient protection means were introduced ,

- in original containers,

- in cool, well-ventilated area.

The use of empty containers for other purposes is forbidden.

Deliver the unused product to a licensed waste collector.

Do not use in organic crop production.

Exercise 3

Familiarize yourself with the leaflet of a fungicidal plant protection product AM-6400 from hypertext document 3 "Crops' chemical protection." Analyze the sentences below the leaflet, decide if they were true or false. Zapoznaj się z ulotką informacyjną grzybobójczego środka ochrony roślin AM-6400 z dokumentu hipertekstowego nr 3 „Chemiczna ochrona plantacji". Ustosunkuj się do zdań umieszczonych pod ulotką, podejmij decyzję, czy była to prawda czy fałsz.

	Prawda	Fałsz
Fungicides are plant protection products that kill fungi:	◯	◯
The product can't be used preventively	◯	◯
Withdrawal period of AM-6400 is 10 days.	◯	◯
AM-6400 is in concentrated form?	◯	◯
AM-6400 may be used in root crops protection.	◯	◯
While using a fungicide gloves and protective clothing should be worn.	◯	◯
The AM-6400 container can be used for other purposes.	◯	◯
Plant protection product can be stored in warm, place with bad ventilation.	◯	◯

The division of crops and the their use

Film dostępny na portalu epodreczniki.pl

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Exercise 4

Exercise 5

Fill in the gaps in the sentences with correct prepositions. Use the word bank. Uzupełnij luki w zdaniach odpowiednimi przyimkami. Skorzystaj z banku słów.

Eve, could you help me ____ something?

I think that we should assign about a half of arable land ____ cereals

We'll get the hay ____ the meadow.

We will use straw as a bedding ____ the barn

We will sow secondary crops ____ the harvest.

Please mind the fertilizer requirements ____ all the plants

Thank you ____ your help.

You can always count ____ me!

in | after | for | from | with | on | of | to

Exercise 6

Choose the correct answer. Wybierz prawidłową odpowiedź.

In oil protection _____ is used.

_____ is a good animal fodder.

Sugar is produced from _____

Fiber crops include _____

_____ is used in beer production

_____ are root crops

In flower production _____ is used.

The group of industrial plants includes _____

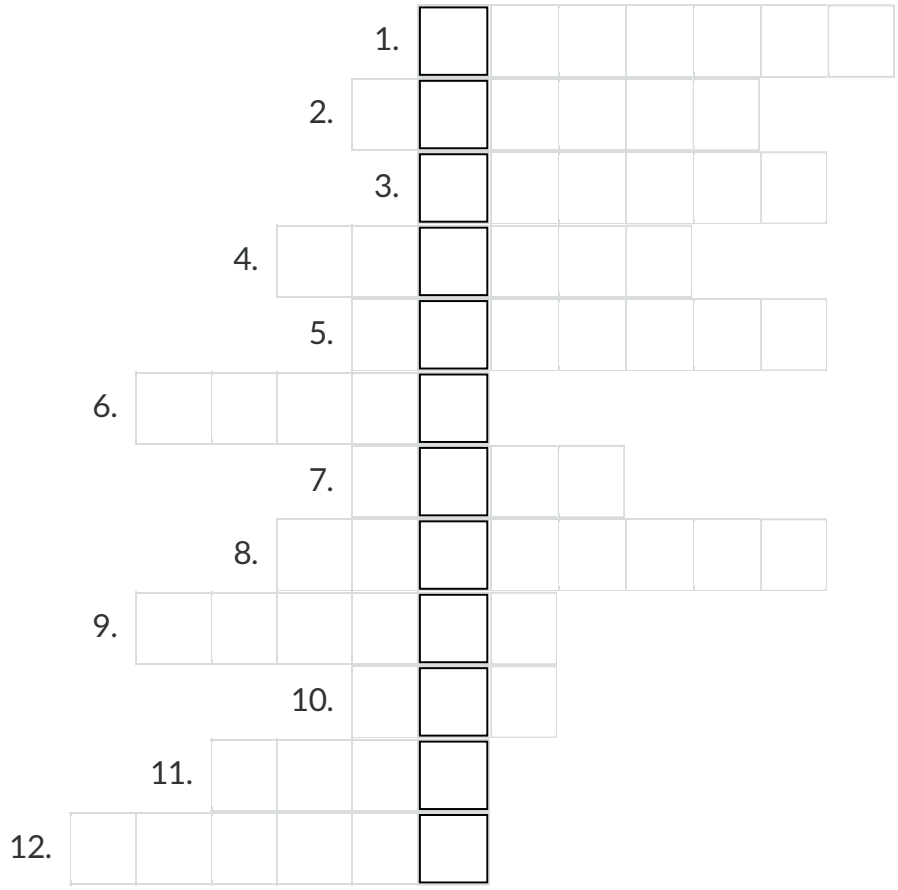
tobacco | beetroot | willow | wheat | willow | lucerne | hemp | potatoes

broad beans | wheat | pea | hops | sunflower | flax | wheat | oats | beetroot

bean | hops | willow | red clover | cotton | barley | rapeseed

Exercise 7

Fill out the crossword with English plant names. Rozwiąż krzyżówkę wpisując w nią nazwy roślin w języku angielskim



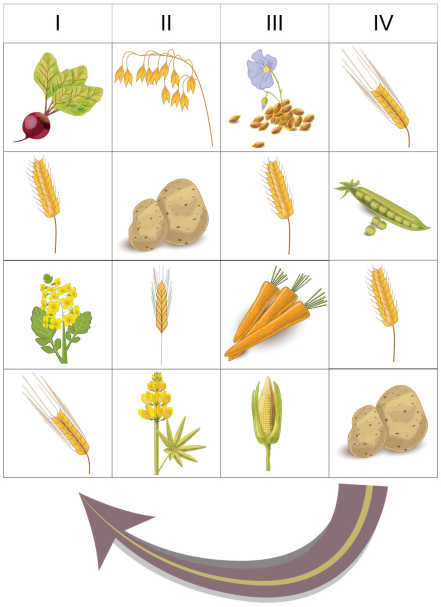
1. gorczyca
2. wierzba
3. koniczyna
4. jęczmień
5. tytoń
6. kukurydza
7. len
8. burak
9. rośliny motylkowe
10. groch
11. fasola
12. marchew

Pictures

Look at the picture and describe the activities. List the words connected to them.
Obejrzyj rysunek i opisz wykonywane czynności. Wymień wyrazy, które wiążą się z widocznymi czynnościami.

Describe the picture using the right vocabulary.
Opisz rysunek używając odpowiednich wyrazów.

Look at the picture. Describe what the outline presents. List the names of the plants and groups to which they belong.
Przyjrzyj się ilustracji. Opisz co przedstawia schemat, wymień nazwy widocznych roślin i grupy, do których należą.



Game

Zasób interaktywny dostępny pod adresem https://zpe.gov.pl/a/DX8Bbsc55

Dictionary

agricultural engineering (n. U) ˌægrɪˈkʌltʃᵊrᵊl ˌendʒɪˈnɪərɪŋ

agrotechnika
application period (n. C) ˌæplɪˈkeɪʃᵊn ˈpɪəriəd

termin stosowania
application volume (n. U) ˌæplɪˈkeɪʃᵊn ˈvɒljuːm

dawka nawozu
aqueous emulsion (n. C, U) ˈeɪkwiəs ɪˈmʌlʃᵊn

emulsja wodna
arable land (n. C) ˈærəbᵊl lænd

grunty orne
are (n. C) ɑː

ar
bad harvest (n. C, U) bæd ˈhɑːvɪst

niski plon
barley (n. U) ˈbɑːli

jęczmień
bean (n. C) biːn

fasola
beetroot (n. C) ˈbiːtruːt

burak
blotches (n. plural) ˈblɒtʃɪz

septorioza
bread (n. U) bred

chleb
broad bean (n. C) brɔːd biːn

bobik
carrot (n. C, U) ˈkærət

marchew
cattle (n. plural) ˈkætl

bydło
cereal (n. C, U) ˈsɪəriəl

zboże
certified (adj.) sɜː.tɪ.faɪd

kwalifikowany
climate (n. C, U) ˈklaɪ.mət

klimat
climate change (n. C) ˈklaɪmət ˌtʃeɪndʒ

zmiany klimatu
clothes (n. plural) kləʊðz

ubrania
clover (n. U) ˈkləʊvə

koniczyna
concentrate (n. C) ˈkɒnsᵊntreɪt

koncentrat
corn (n. U) kɔːn

ziarno
cotton (n. U) ˈkɒtᵊn

bawełna
crop rotation (n. C, U) krɒp rəʊˈteɪʃən

płodozmian
cropping pattern (n. C) krɒpɪŋ ˈpætᵊn

struktura zasiewów
cultivation contract (n. C) ˌkʌltɪˈveɪʃᵊn ˈkɒntrækt

umowa kontraktacji
depression (n. C) dɪˈpreʃᵊn

zagłębienie
development (n. C, U) dɪˈveləpmənt

rozwój
direct sale (n. C, U) daɪˈrekt seɪl

sprzedaż bezpośrednia
disease (n. C, U) dɪˈziːz

choroba
dosage (n. C) ˈdəʊsɪdʒ

dawka
drought (n. C, U) draʊt

susza
environment (n. C, usually singular) ɪnˈvaɪrᵊnmənt

środowisko
erosion (n. U) ɪˈrəʊʒən

erozja
farm (n. C) fɑːm

gospodarstwo
farmer (n. C) ˈfɑːmə

rolnik
fertilization (n. U) ˌfɜːtɪlaɪˈzeɪʃᵊn

nawożenie
fertilizer (n. C) ˈfɜːtɪlaɪzə

nawóz
fertilizer requirements (n. plural) ˈfɜːtɪlaɪzə rɪˈkwaɪəmənts

potrzeby nawozowe
fiber crops (n. plural) ˈfaɪbə krɒps

rośliny włókniste
field (n. C) fiːld

pole
fig leaf (n. C) ˈfɪg ˌliːf

liść flagowy
flax (n. U) flæks

len
flour (n. U) flaʊə

mąka
fodder (n, U) ˈfɒdə

pasza
food (n. C, U) fuːd

pokarm, żywność
frost (n. C, U) frɒst

mróz
fuel (n, U) ˈfjuːəl

paliwo
fungicide (n. C, U) ˈfʌŋgɪsaɪd

fungicyd, środek grzybobójczy
fungus (n. C, plural funɡi, funguses) ˈfʌŋgəs

grzyb
green manure (n. U) griːn məˈnjʊə

nawóz zielony
greenhouse effect (n. C, U) ˈgriːnhaʊs ɪˈfekt

efekt cieplarniany
groups of plants (n. C) gruːps əv plɑːnts

grupy roślin
grow (v.) grəʊ

uprawiać
growing (n. U) ˈgrəʊɪŋ

uprawa
growing season (n. C) ˈgrəʊɪŋ ˈsiːzᵊn

sezon wegetacyjny
growth (n. U) grəʊθ

wzrost
harvest (n. C, U) ˈhɑːvɪst

plon, zbiór
hay (n. U) heɪ

siano
hectare (n. C) ˈhekteə

hektar
hemp (n. U) hemp

konopie
high temperature (n. C, U) haɪ ˈtemprətʃə

wysoka temperatura
hops (n. plural) hɒps

chmiel
humidity (n. U) hjuːˈmɪd.əti

wilgotność
income (n. C, U) ˈɪŋkʌm

dochód
industrial plants (n. plural) ɪnˈdʌstriəl plɑːnts

rośliny przemysłowe
industry branch (n. C) ˈɪndəstri brɑːntʃ

gałąź przemysłu
Institute of Meteorology (n. C) ˈɪnstɪtʃuːt əv ˌmiːtiəˈrɒlədʒi

Instytut Meteorologii
irrigation (n. U) ˌɪrɪˈgeɪʃᵊn

nawadnianie
legume (n. C) ˈlegjuːm

rośliny motylkowe, motylkowe grubonasienne
light soil (n. C, U) laɪt sɔɪl

gleby lekkie
livestock (n. plural) ˈlaɪvstɒk

zwierzęta gospodarskie
lucerne (n. U) luˈsɜːn

lucerna
lupine (n. U) ˈluːpɪn

łubin
maize (n. U) meɪz

kukurydza
manure (n. U) məˈnjʊə

obornik
margarine (n. U) ˌmɑːdʒəˈriːn

margaryna
meadow (n. C) ˈmedəʊ

łąka
melioration (n. C) ˌmiːliəˈreɪʃᵊn

melioracja
microelement (n. C) ˌmaɪkrəʊˈelɪmənt

mikroelement
mineral (adj.) ˈmɪnᵊrᵊl

mineralny
mineral fertilizer (n. C) ˈmɪnᵊrᵊl ˈfɜːtɪlaɪzə

nawóz mineralny
monoculture (n. C, U) ˈmɒnəˌkʌltʃə

monokultura
multi-component (adj.) mʌltɪkəmˈpəʊnənt

wieloskładnikowe
mustard (n. U) ˈmʌstəd

gorczyca
natural fertilizer (n. C) ˈnætʃᵊrᵊl ˈfɜːtɪlaɪzə

nawóz naturalny
nitrate fertilizer (n. C) ˈnaɪ.treɪt ˈfɜːtɪlaɪzə

nawóz azotowy
nutrient (n. C) ˈnjuːtriənt

składnik pokarmowy
nutrition needs (n. plural) njuːˈtrɪʃᵊn niːdz

potrzeby pokarmowe
oats (n. plural) əʊts

owies
oil (n. U) ɔɪl

olej
oil (plants) (n. plural) ɔɪl plɑːnts

oleiste
organic (adj) ɔːˈgænɪk

ekologiczne
over-fertilization (n. U) ˌəʊvəˌfɜrtᵊlɨəˈzeɪʃən

przenawożenie
overwinter (v.) ˌəʊvəˈwɪntə

przezimować
pasture (n, C) ˈpɑːstʃə

pastwisko
pea (n. C) piː

groch
pelleting substance (n. C) ˈpelɪtɪŋ ˈsʌbstᵊns

zaprawa nasienna
phosphate fertilizer (n. C) ˈfɒs.feɪt ˈfɜːtɪlaɪzə

nawóz fosforowy
plan (v.) plæn

planować
plant (n. C) plɑːnt

roślina
plant protection (n. U) plɑːnt prəˈtekʃᵊn

ochrona roślin
plant species (n. C) plɑːnt ˈspiː.ʃiːz

gatunek roślin
plow (v.) plaʊ

przeorać
potash fertilizer (n. C) ˈpɒt.æʃ ˈfɜːtɪlaɪzə

nawóz potasowy
potato (n. C, U) pəˈteɪtəʊ

ziemniak
powdery mildew (n. U) ˈpaʊdəri ˈmɪldʒuː

mączniak prawdziwy
precautions (n. plural) prɪˈkɔːʃᵊnz

środki ostrożności
prevent (v.) prɪˈvent

zapobiegawczo
production profitability (n. U) prəˈdʌkʃᵊn ˌprɒfɪtəˈbɪlɪti

opłacalność produkcji
profitability (n. U) ˌprɒfɪtəˈbɪlɪti

opłacalność
protection (n. U) prəˈtekʃᵊn

ochrona
rainfall (n. U) ˈreɪnfɔːl

opady
rapeseed (n. C) reɪp siːd

rzepak
retention (n. U) rɪˈtenʃᵊn

retencja
root crops (n. plural) ruːt krɒps

okopowe, rośliny okopowe
rye (n. U) raɪ

żyto
sale (n. C, U) seɪl

sprzedaż
sandy soil (n. C, U) ˈsændɪ sɔɪl

gleby piaszczyste
secondary crop (n. C) ˈsekᵊndri krɒp

poplony
seed (n. C) siːd

nasiono, materiał siewny
shooting (n. U) ˈʃuː.tɪŋ

kłoszenie, strzelanie w źdźbło
slope (n. C) sləʊp

zbocze
slurry (n. U) ˈslʌri

gnojowica
small seeded legume (n. C) smɔːl ˈsiːdɪd ˈlegjuːm

motylkowe drobnonasienne
snow cover (n. C) snəʊ ˈkʌvə

okrywa śnieżna
soil (n. C, U) sɔɪl

gleba
soil analysis (n. C, U) sɔɪl əˈnæləsɪs

analiza gleby
soil type (n. C) sɔɪl taɪp

typy gleb
sowing (n. U) səʊɪŋ

siew
soya (n. C) sɔɪə

soja
spray liquid (n. C, U) spreɪ ˈlɪkwɪd

ciecz użytkowa
spraying (n. U) spreɪɪŋ

oprysk
spring (n. C) sprɪŋ

jary, wiosna
sprouting (n. U) spraʊtɪŋ

kiełkowanie
sprouting phase (n. C) spraʊtɪŋ feɪz

faza kiełkowania
stem rust (n. U) stem rʌst

rdza źdźbłowa
straw (n. U) strɔː

słoma
sugar (n. U) ˈʃʊgə

cukier
sun (n. C) sʌn

słońce
sunflower (n. C) ˈsʌnˌflaʊə

słonecznik
tan spot (n. C) tæn spɒt

brunatna plamistość liści
temperature (n. C, U) ˈtemprətʃə

temperatura
tillage (n. U) ˈtɪlɪdʒ

orka
tillering (n. U) ˈtɪlərɪŋ

krzewienie
tillering phase (n. C) ˈtɪlərɪŋ feɪz

faza krzewienia
tobacco (n. U) təˈbækəʊ

tytoń
weather forecast (n. C) ˈweðə ˈfɔːkɑːst

prognoza pogody
weed control (n. C, U) wiːd kənˈtrəʊl

zwalczanie chwastów
wheat (n. U) wiːt

pszenica
willow (n. C) ˈwɪləʊ

wierzba
withdrawal period (n. C) wɪðˈdrɔːˑl ˈpɪə.ri.əd

okres karencji

Running livestock production

Zootechnician’s visit

1. Film in the standard version.

Film dostępny na portalu epodreczniki.pl

moduł 3.2

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2. Film with subtitles

Film dostępny na portalu epodreczniki.pl

moduł 3.2

---

3. Film with subtitles and pauses. Listen and repeat after the speaker.

Film dostępny na portalu epodreczniki.pl

moduł 3.2

---

4. Film with subtitles and narration.

Film dostępny na portalu epodreczniki.pl

Exercise 1

Exercise 2

After watching the film, complete the sentences with correct prepositions. Use the word bank.
Po obejrzeniu filmu, uzupełnij zdania odpowiednimi przyimkami. Skorzystaj z banku słów.

Are there any problems [ ] animal production?

No, my cattle are healthy and [ ] good condition.

First [ ] all, I have repaired the barn.

So far I had been keeping my cattle in a deep litter husbandry [ ] manure.

This is important [ ] the cows' health.

Previously, we kept cows in a tethered system with chains [ ] the manger.

All animals have constant access [ ] water.

I also provide green feed i.e. clover and lucerne [ ] a juicy forage

as | with | for | to | on | in | by | of

Livestock species and products obtained thereof

Film dostępny na portalu epodreczniki.pl

moduł 3.2, Cattle of dairy breeds are maintained to produce milk, later used to produce cheese and butter. Cattle of the meat type, i.e. beef cattle, are maintained for meat. Pigs are kept for meat, lard and fatback. Saddle horses are used for recreational, sports and rehabilitation purposes. Draft horses are used for agricultural, recreational and sport purposes. Horses are also used for meat. Sheep of the wool type are kept for wool. Dairy sheep give milk. We use it to produce cheese. Sheep of the meat type are kept for meat. Laying hens rearing aims at obtaining eggs. Different types of poultry are used for meat production: hens, broilers, ducks, geese and turkeys. Breeding animals aims at keeping the flock of each species and produce calves, piglets, foals, lambs and chickens for sale.

Exercise 3

Exercise 4

Complete the sentences choosing the correct answer. Uzupełnij zdania wybierając prawidłową odpowiedź.

1. ..... are kept for milk and meat. [ ]
2. ..... are kept for meat. [ ]
3. ..... rearing aims at obtaining eggs. [ ]
4. ..... of the wool type are kept for wool. [ ]
5. ..... are used for agricultural, recreational [ ]
6. Breeding swine aims at ..... production. [ ]
7. Different types of poultry are used for meat production, e.g. ..... [ ]
8. Young cattle are called ..... [ ]

c) sows | a) goats | a) chicks | b) bulls | b) calves | a) draft horses | a) cows

c) pigs | c) turkeys | a) laying hens | a) foals | c) ducks | c) broilers

b) pedigree breeding | b) litter | c) suckling pigs | b) piglets | a) castration | b) sheep

a) geese | c) lamb | b) hens | c) goats | b) calves

Milking cows and milking activities

Film dostępny na portalu epodreczniki.pl

moduł 3.2

Pig rearing

Dialogue between farmers:

- Good morning.

- Hello how can I help you?

- I would like to buy some piglets.

- It's good because I just weaned one litter from the sow. Do you want gilts or boars?

- I would like to get a couple.

- If you buy two couples, the price will be lower.

- I do not need four pieces. I would like to fatten them for my own use. I intend to use some of the meat products for direct sale. If it pays off I will buy more piglets from you.

- We will soon select the best animals. Of course the boars are already castrated.

- At what age do you castrate them?

- In the third week of life. All piglets already have ear tags in accordance with the Animal Identification and Registration Act.

- So I no longer have to register them?

- You must report the purchase and mark them with a tattoo.

- I can see there are pigs of all ages in your piggery: sows, boars, piglets, suckling pigs and porkers.

- I mainly deal with the pedigree breeding of meat pig breeds and the sale of piglets. However, some of the offspring I leave for fattening on my own farm.

- Is it worth it?

- Recently the demand for pork has increased and the price is high. Yes, but each group of animals, in a different direction of production, requires different feed. Where do you get the feed from?

- Yes, I have my own crops but I buy feed concentrates suitable for each animal group.

- And the animals in your farm do not get sick?

- Very rarely, because I care about their health, they have adjusted microclimate in the room and continuous veterinary care.

- Are you not afraid of African swine fever?

- I try to prevent illness. I use disinfectant mats, protective clothing, keep the farm clean and restrict access of strangers to the piggery.

- Now I understand why your farm has such a good reputation.

Transfer of knowledge from science to animal farm

The hypertext is the University of Agriculture's cooperation offer for the farmers, within the framework of a project

Attention farmers! The University of Agriculture invites you to participate in the „Learning for Breeders" project . The project is implemented under the Rural Development Programme, financed by European Union funds. We offer advice on the production of various animal species: cattle, pigs, sheep, goats, horses and poultry. We will perform laboratory tests of forage and feed concentrates for free and will evaluate their quality and

nutritional value. On this basis, we will develop an ideal feed dose for the specific direction of use. We will advise you on how to optimize the conditions on your farm to meet animal welfare regulations. Cowsheds, hen houses, stables and piggeries with modern, innovative facilities will be available for you. In our facilities, you can get acquainted with the use of bucket and tubular milking machines, as well as with herringbone parlours and rotary milking parlour. We will organize a training in hygiene and care of livestock and running animal production in accordance with the principles of ergonomics and health and safety. The exhibition will also feature an exhibition of farm animals where you can present your best animals and animal products made on your own farm. Applications for participation in the project can be made at this website: www.am.wystawa.com

Exercise 5

Please refer to the University of Agriculture's cooperation offer from the hypertext document 2 "Transfer of knowledge from science to animal farm." Complete the sentences with the chosen words. Zapoznaj się z ofertą współpracy Uniwersytetu Rolniczego z dokumentu hipertekstowego nr 2 „Transfer wiedzy z nauki do farmy zwierząt". Uzupełnij zdania wyrazami do wyboru.

1. University of Agriculture invites you to participate in a ..... [ ]
2. The project is ..... from European Union funds. [ ]
3. We offer the production of different animal species ..... [ ]
4. We carry out free laboratory tests of the ..... [ ]
5. We will compile the ideal ..... [ ]
6. ..... will be available for you. [ ]
7. In our facilities you can read about the use of a/an ..... [ ]
8. The ..... of breeding animals will also be a part of the project. [ ]

a) breeding | a) forage | c) a barn | c) advice | b) hygienic | c) meat use | a) financed
b) feeding dose | b) laying use | b) shops | b) opinion | b) exhibition | a) cowshed
a) rearing | c) co-operation | c) pig farm | c) identification | a) fields | a) milking
c) used | c) fattening | b) project | b) nutrition | a) milking machine

Organic animal products

The dialogue between two women - a saleswoman (S) and a customer (C) in a grocery store. The dialogue relates to poultry products, including the organic ones.

S: Good morning. How can I help you?

E: Good morning. Can I have eggs, please?

S: I recommend the organic eggs.

E: I can see they are quite expensive. The ones next to them are much cheaper. What is the difference?

S: Those cheaper ones are from hens kept in an intensive cage system that does not always meet the requirements of animal welfare. These hens are fed with mixed feed concentrates that may contain antibiotics.

E: And what are these organic ones?

S: Organic eggs come from certified farms, where chickens are fed with their own fodder and are kept extensively in the hen house. No antibiotics or GMO products are added to feed.

E: But they are too expensive for me. S:In that case, I recommend barn reared or free range eggs. They are both nutritious and cheap. How do you distinguish them? After all, they all look the same!

S: Please note that each egg is marked. Zero means eggs from organic farming, one means free range, two - barn rearing, and three - cages.

E: In that case, I will take the barn eggs.

S: Here you are. You could also visit the stall with poultry meat, where I recommend carcasses, thighs, drumsticks, fillets, offal, wings and backs.

E: I will gladly visit it.

Exercise 6

Read the dialogue between a saleswoman and a customer in the grocery store in the hypertext document No. 3 "Organic animal products". Decide whether the sentences put under the dialogue are true or false. Zapoznaj się z dialogiem ekspedientki i klientki w sklepie spożywczym z dokumentu hipertekstowego nr 3 „Ekologiczne produkty zwierzęce”. Ustosunkuj się do zdań umieszczonych pod dialogiem, podejmij decyzję, czy to prawda czy fałsz.

	Prawda	Fałsz
The saleswoman recommended organic eggs.	◯	◯
Organic eggs are cheap.	◯	◯
Eggs from hens kept in an intensive cage system are more expensive.	◯	◯
Organic eggs come from certified farms.	◯	◯
On organic farms, hens are fed with their own feed.	◯	◯
Antibiotics and GMO products are added to feeds in the extensive hens feeding.	◯	◯
Eggs marked with Zero are from barn rearing.	◯	◯
The saleswoman at the poultry meat stall recommended drumsticks.	◯	◯

Anatomical structure of cows with assessment of the type

Film dostępny na portalu epodreczniki.pl

moduł 3.2

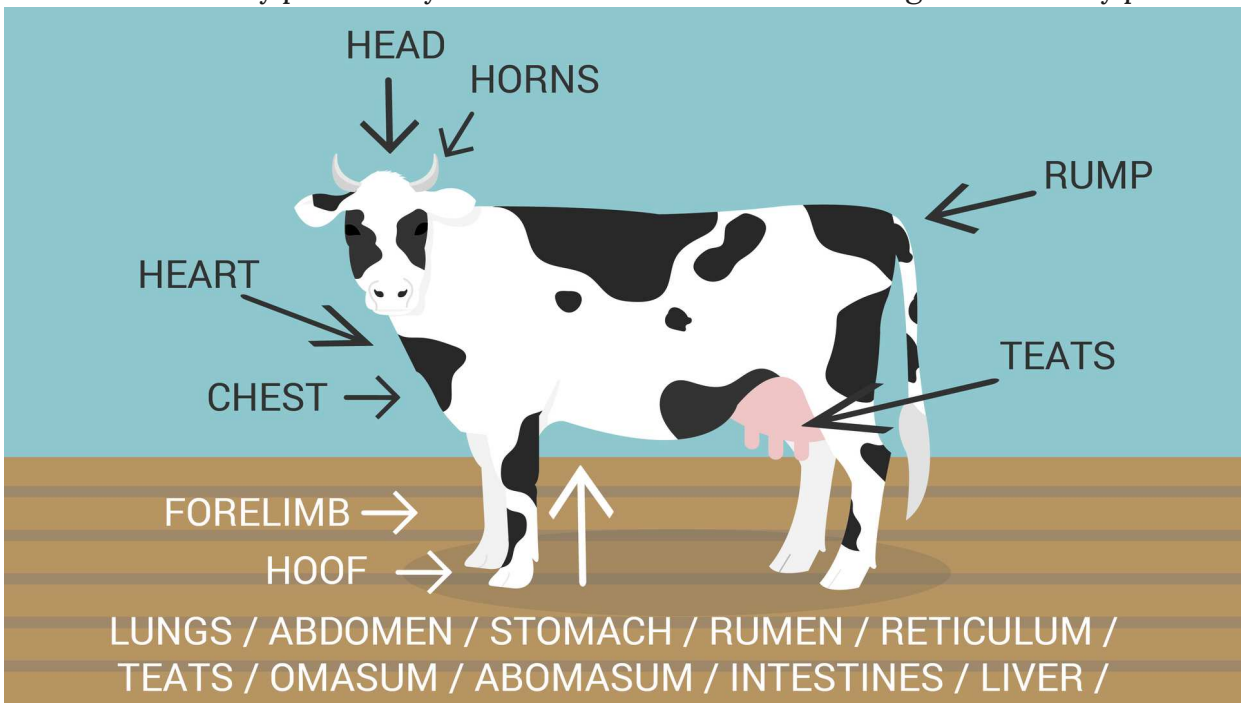
Exercise 7

Match Polish terms with their translations. Połącz polskie terminy z ich tłumaczeniami.

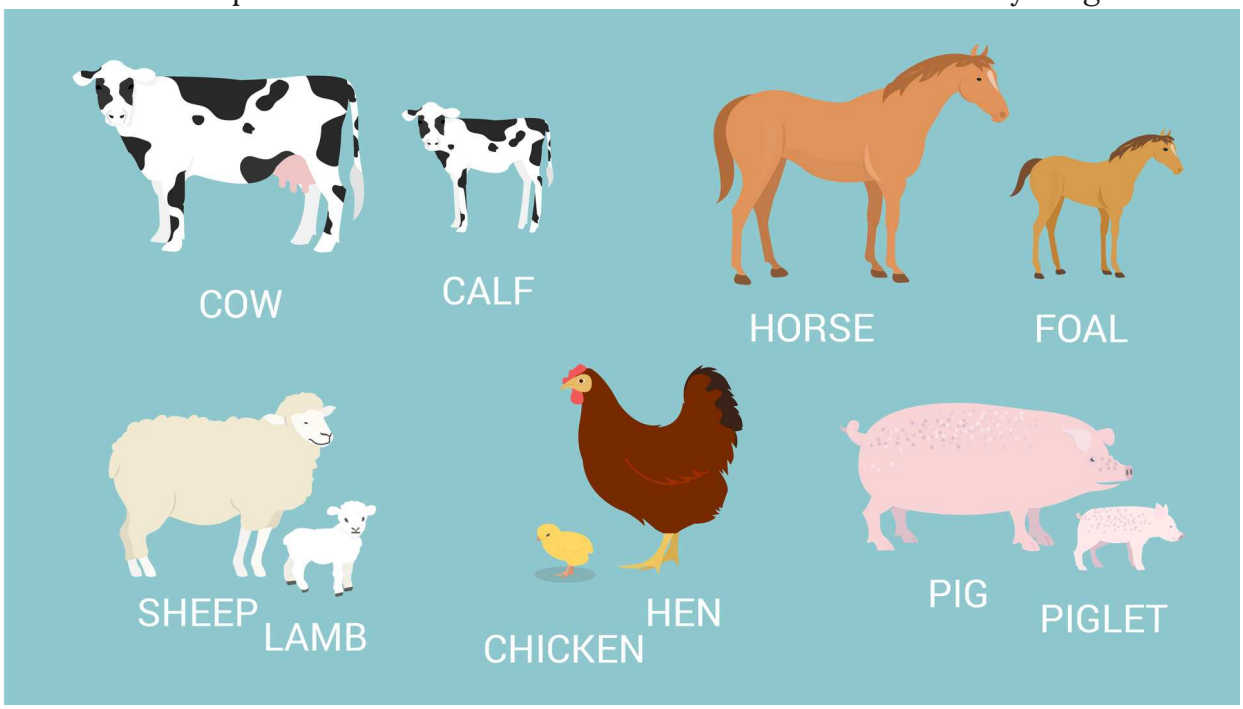
umięśnione kończyny	dehorning
wymię	muscled limbs
sierść	abomasum
racice	head
strzyki	hair
głowa	rump
rogi	horns
trawieniec	teats
zad	hooves
dekornizacja	udder

Pictures

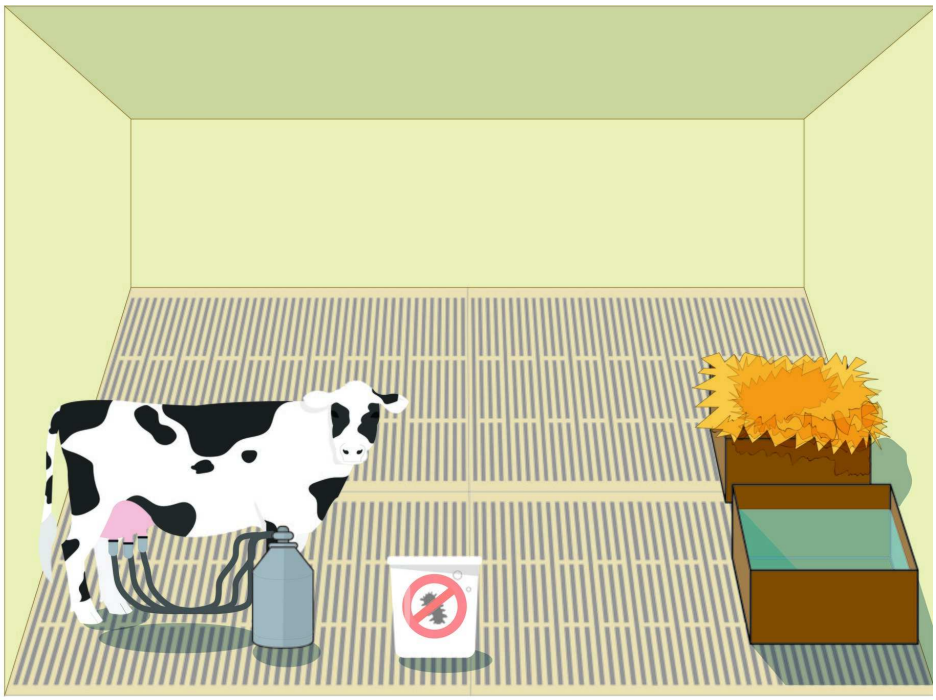
Look at the cow's body parts. Do you know the names for other organs and body parts?



Look at the animal species and learn their names and the names of their youngs:



Describe what you can see in the photograph



Game

Zasób interaktywny dostępny pod adresem https://zpe.gov.pl/a/D1GGA2wzi

Dictionary

advice (n. U) ədˈvaɪs

doradztwo
African swine fever (n. C, U) ˈæfrɪkən swaɪn ˈfiːvə

afrykański pomór świń
age group (n. C) eɪdʒ gruːp

grupa wiekowa
animal (n. C) ˈænɪmᵊl

zwierzę
Animal Identification and Registration System Act (n. C) ˈænɪmᵊl aɪˌdentɪfɪˈkeɪʃᵊn ænd ˌredʒɪ ˈstreɪʃᵊn ˈsɪstəm ækt

ustawa o systemie identyfikacji i rejestracji zwierząt
animal maintenance system (n. C) ˈænɪmᵊl ˈmeɪntᵊnəns ˈsɪstəm

system utrzymania zwierząt
animal product (n. C) ˈænɪmᵊl ˈprɒdʌkt

produkt pochodzenia zwierzęcego
animal production (n. U) ˈænɪmᵊl prəˈdʌkʃᵊn

produkcja zwierzęca
animal welfare (n. U) ˈænɪmᵊl ˈwelfeə

dobrostan zwierząt
antibacterial (adj.) ˌæntibækˈtɪəriəl

antybakteryjny
antibiotic (n. C) ˌæntibaɪˈɒtɪk

antybiotyk
back (n. C) bæk

korpus
barn (n. C) bɑːn

stodoła
barn rearing (n. U) bɑːn ˈrɪərɪŋ

chów ściółkowy
beef cattle (n. C) biːf ˈkætl

bydło opasowe
boar (n. C) bɔː

knurek, knur
box (n. C) bɒks

boks
broiler (n. C) ˈbrɔɪlə

brojler
bucket milking machine (n. C) ˈbʌkɪt ˈmɪlkɪŋ məˈʃiːn

dojarka konwiowa
cage breeding (n. U) keɪdʒ ˈbriːdɪŋ

chów klatkowy
carcass (n. C) ˈkɑːkəs

tusza
castrate (v.) kæsˈtreɪt

wytrzebić
cattle (n. plural) ˈkætl

bydło
certified farm (n. C) ˈsɜːtɪfaɪd ˈfɑːm

gospodarstwa certyfikowane
chain (n. C) tʃeɪn

łańcuch
cowshed (n. C) ˈkaʊʃed

obora
dairy cow (n. C) ˈdeəri kaʊ

krowa mleczna
dairy use (n. C, U) ˈdeəri juːz

użytkowanie mleczne
deep litter husbandry (n. C) diːp ˈlɪtə ˈhʌzbəndri

głęboka obora
demand (n. C, U) dɪˈmɑːnd

popyt
direct sale (n. C, U) daɪˈrekt seɪlz

sprzedaż bezpośrednia
direction of production (n. C) dɪˈrekʃ͡ən ɒv prəˈdʌkʃ͡ən

kierunek produkcji
direction of use (n. C) dɪˈrekʃ°n ɒv juːz

kierunek użytkowania
disinfection mat (n, C) ˌdɪsɪnˈfekʃ°n mæt

mata dezynfekująca
double bucket milking machine (n. C) ˈdʌbl ˈbʌkɪt ˈmɪlkɪŋ məˈʃiːn

dojarka dwukonwiowa
draft horse (n. C) drɑːft hɔːs

użytkowanie zaprzęgowe
drinking apparatus (n. C, U) ˈdrɪŋkɪŋ ˌæpərˈeɪtəs

poidło
drumstick (n. C) ˈdrʌm.stɪk

podudzie
duck (n. C) dʌk

kaczka
ear tag (n. C) ɪə tæg

kolczyk
egg (n. C) eg

jajo
egg marked (with sth) (phrase) eg ˈmɑːkɪt

jajo oznakowane
ergonomics (n. U) ˌɜːgəˈnɒmɪks

ergonomia
European Union (n. C) ˌjʊərəˈpiːən ˈjuːnjən

Unia Europejska
evaluate quality (phrase) ɪˈvæljueɪt ˈkwɒlətɪ

ocenić jakość
exhibition of farm animals (phrase) ˌeksɪˈbɪʃ°n ɒv fɑːm ˈænɪm°lz

wystawa zwierząt hodowlanych
extensively (adv.) ɪkˈstensɪvlɪ

sposób ekstensywny
feed concentrate (n. C) fiːd ˈkɒns°ntreɪt

pasza treściwa
fillet (n. C) ˈfɪlɪt

filet
forage (n. U) ˈfɒrɪdʒ

pasze objętościowe
free (adj., adv.) friː

bezpłatnie
free range (adj.) friː reɪndʒ

chów wolnowybiegowy
free-standing system (n. C) friː ˈstændɪŋ ˈsɪstəm

system wolnostanowiskowy
GMO product (n. C) ˌdʒiːemˈəʊ ˈprɒdʌkt

produkt GMO
goat (n. C) gəʊt

koza
good condition (n. C, U) gʊd kənˈdɪʃᵊn

dobra kondycja
goose (n. C, pl. geese) guːs

gęś
green feed (n. U) griːn fiːd

zielonka
group of animals (n. C) gruːp ɒv ˈænɪmᵊlz

grupa zwierząt
hay (n. U) heɪ

siano
health and safety (compound n.) helθ ænd ˈseɪfti

BHP
hen (n. C) hen

kura
hen house (n. C) ˈhen haʊs

kurnik
herd (n. C sing. + plural v.) hɜːd

stado
herringbone parlour (n. C) ˈherɪŋbəʊn ˈpɑːlə

hala udojowa typu rybia ość
hoof (n. C, plural hoofs, hooves) huːf

racica
horse (n. C) hɔːs

koń
hygiene (n. U) ˈhaɪdʒiːn

higiena
hygiene and care (compound n.) ˈhaɪdʒiːn ænd keə

higiena i pielęgnacja
hygiene and disinfection of the milking machine (phrase) ˈhaɪdʒiːn ənd ˌdɪs.ɪnˈfek.ʃᵊn ɒv ðiː ˈmɪlkɪŋ məˈʃiːn

higiena i dezynfekcja dojarki
industrial nutritive mixture (n. C) ɪnˈdʌstriəl ˈnjuːtrətɪv ˈmɪkstʃəz

przemysłowa mieszanka
intensive cage system (n. C) ɪnˈtensɪv keɪdʒ ˈsɪstəm

intensywny system klatkowy
laboratory test (n. C) ləˈbɒrətᵊri test

badanie laboratoryjne
laying hens (n. C) ˈlaɪɪŋ henz

użytkowanie nieśne kur
litter (n. C) ˈlɪtə

miot
maize silage (n. U) meɪz ˈsaɪ.lɪdʒ

kiszonka z kukurydzy
manger (n. C) ˈmeɪn.dʒə

żłób
manual milking (n. U) ˈmænjuəl mɪlkɪŋ

ubój ręczny, dojenie ręczne
manure (n. U) məˈnjʊə

obornik

meat pig breed (n. C) miːt pɪg ˈbriːd

mięsna rasa świń
meat use (n. C, U) miːt juːz

użytkowanie mięsne
mechanical milking (n. U) mɪˈkænɪkᵊl mɪlkɪŋ

ubój mechaniczny, dojenie mechaniczne
microclimate (n. C) ˈmaɪkrəʊˌklaɪmət

mikroklimat
milk yield (n. C) mɪlk jiːld

wydajność mleczna, udój
milking system (n. C) mɪlkɪŋ ˈsɪstəm

system uboju
mixed feed concentrate (n. C) mɪkst fiːd ˈkɒnsᵊntreɪt

mieszanka pasz treściwych
modernisation (n. U) ˌmɒdᵊnaɪˈzeɪʃᵊn

modernizacja
non-bedding system (n. C) nɒnˈbedɪŋˈsɪstəm

system bezściołowy
nutrition (n. U) njuːˈtrɪʃᵊn

żywienie
nutritional value (n. C, U) njuːˈtrɪʃᵊnəl ˈvæljuː

wartość pokarmowa
offal (n. C) ˈɒfᵊl

podroby
optimize (v.) ˈɒp.tɪ.maɪz

zoptymalizować
organic farming (n. U) ɔːˈgænɪk ˈfɑːmɪŋ

chów ekologiczny
own use (n. C) əʊn juːz

własny użytek
pedigree breeding (n. U) ˈpedɪgriː ˈbriːdɪŋ

hodowla zarodowa
pig (n. C) pɪg

świnia
piggery (n. C) ˈpɪgəri

chlewnia
piglets (n. C) ˈpɪglət

prosię
pork (n, U) ˈpɔːk

wieprzowina
porker (n. C) ˈpɔːkə

tucznik
poultry (n. plural) ˈpəʊltri

drób
poultry meat (n. U) ˈpəʊltri miːt

mięso drobiowe
project (n. C) ˈprɒdʒekt

projekt
protective clothing (n. U) prəˈtektɪv ˈkləʊðɪŋ

odzież ochronna
rearing (n. U) ˈrɪərɪŋ

chów
register (v.) ˈredʒɪstə

rejestrować
rotary milking parlour (n. C) ˈrəʊtəri ˈmɪlkɪŋ ˈpɑːlə

hala udojowa typu karuzela
Rural Development Programme (n. C) ˈrʊərˀl dɪˈveləpmənt ˈprəʊgræm

Program Rozwoju Obszarów Wiejskich
saddle horse (n. C) ˈsædl hɔːs

użytkowanie wierzchowe
sheep (n. C, pl. sheep) ʃiːp

owce
silo (n. C) ˈsaɪləʊ

silos
slat (n. C) slæt

ruszt
sow (n. c) səʊ

locha
stable (n. C) ˈsteɪbl

stajnia
suckling pig (n. C) ˈsʌklɪŋ pɪgz

warchlak
swine (n. C) swaɪn

trzoda chlewna
teat dips after milking (n. C) tiːt /dɪpsˈɑːftə ˈmɪlkɪŋ

kąpiel strzyków po udoju
teat(n. C) tiːt

strzyk
technology (n. C, U) tekˈnɒlədʒi

technologia
tethered system (n. C) ˈteðəd ˈsɪstəm

system uwięziowy
thigh (n. C) θaɪ

udo
tubular milking machine (n. C) ˈtjuːbjələ ˈmɪlkɪŋ məˈʃiːn

dojarka rurowa
tubular milking system (n. C) ˈtjuːbjələ mɪlkɪŋ ˈsɪstəm

rurowy system udojowy
turkey (n. C) ˈtɜːki

indyk
type (n. C) taɪp

typu
udder(n. C) ˈʌdə

wymię
unit/item/animal (n. C) ˈjuːnɪt / ˈaɪtəm / ˈænɪməl

sztuki
veterinary care (n. U) ˈvetᵊrɪnᵊri keə

opieka weterynaryjna
wean off (v.) wiːn ɒf

odsadzić
wing (n. C) wɪŋ

skrzydło
wool sheep (n. C) wʊl ʃiːp

użytkowanie wełniste

Operating technical means used in agriculture

The advantages of machines assembling

1. Film in the standard version.

Film dostępny na portalu epodreczniki.pl

Moduł 3.3

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2. Film with subtitles.

Film dostępny na portalu epodreczniki.pl

Moduł 3.3

---

3. Film with subtitles and pauses. Listen and repeat after the speaker.

Film dostępny na portalu epodreczniki.pl

Moduł 3.3

---

4. Film with subtitles and narration.

Film dostępny na portalu epodreczniki.pl

Exercise 1

Purchase of a tractor

Film dostępny na portalu epodreczniki.pl

Moduł 3.3, What to take into account when buying a new tractor? When a farmer needs a new tractor, they either buy it or rent it. Obviously, the purchase is more expensive but it is worth considering. When a farmer purchases a tractor or expensive tools of a different kind necessary in plant and animal production, he usually buys them on credit. Obviously, good equipment is quite expensive, but at least it is reliable and failures are rare. In any case, there is always a guarantee. This lets us get a refund or a quick repair, or even be provided with a different tractor. A new one. In order to choose a good tractor, it is important to check the cab. Is it big enough? Is it spacious? Is it comfortable? Another thing to consider are technical proprieties. Does it have 4-wheel drive? What about the motor? How powerful is it? What is its operating performance?What are maintenance costs? What about the fuel consumption? After gathering all the necessary information, you can make a really good decision.

Exercise 2

Po obejrzeniu animacji z lektorem „Zakup ciągnika”, zaznacz cechy użytkowe nowoczesnego ciągnika, o których była w niej mowa.

- [ ] always has more power
- [ ] is more expensive to buy than previous models
- [ ] has cheap servicing
- [ ] does not match old machines
- [ ] has a higher operating efficiency
- [ ] smaller fuel consumption
- [ ] has a comfortable cab
- [ ] is cheaper to operate
- [ ] is cheap to buy

I am a driver of an agricultural tractor

Film dostępny na portalu epodreczniki.pl

Moduł 3.3

Preparing a combine harvester to cereal harvest before the season

A conversation between two farmers (a woman and a man) about a combine harvester.

- Good morning,

- Hello neighbour, how can I help you?

- I came to borrow a monkey wrench.

- Here you are.

- We have such a mess in our shop that I cannot find it.

- My tools are arranged and are all in their proper place. It makes doing repair work much safer and quicker.

- Good idea, I'll take inspiration from you.

- What will you be repairing?

- My husband is preparing our combine for the harvest.

- Does it have any problems operating?

- No, but before the season you should check all the combine's componentry, replace worn or damaged consumables, and lubricate all the basic parts of the machine.

- Which parts and elements do you usually replace?

- We replace: blades, screws, belts, chains, filters, oils, bearings. We check the wiring and hydraulic system.

- Can you do these checks yourselves?

- We use the manual of the combine. If there is a serious problem, we contact the service.

- Is your combine suffering from corrosion ?

- No, because after the harvest we secure it with preparation for maintenance. In addition, our combine is kept under a shed.

- I do not have a combine. In my case, the purchase of this machine is unprofitable due to the small cropped area.

- What acreage do the grain crops take on your farm?

- I have 2 hectares of wheat and 1 hectare of barley.

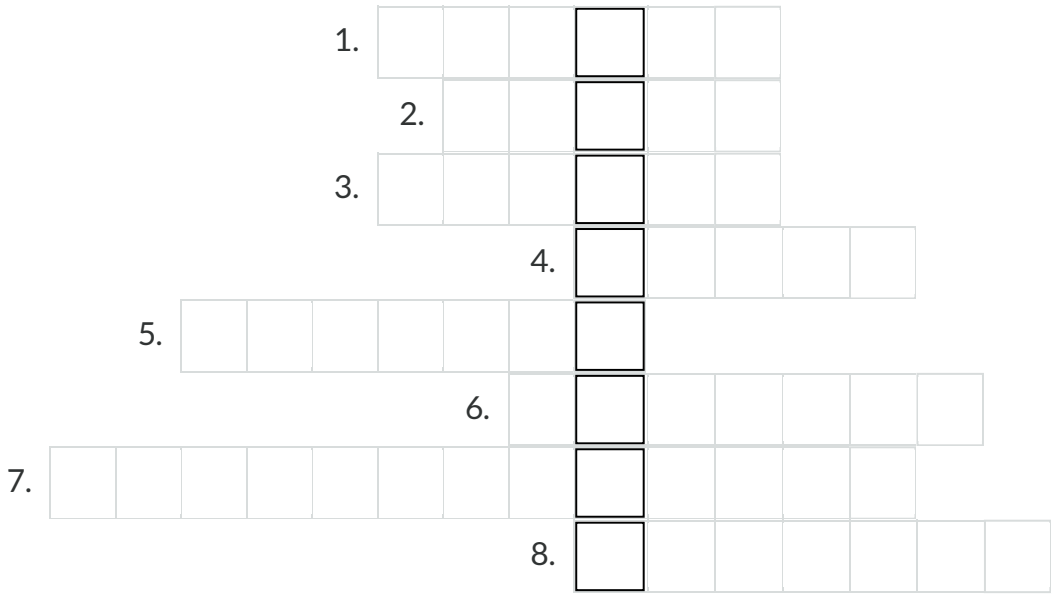
- Indeed it's not much. My husband can harvest crops in your farm with our combine.

- I would gladly use my neighbour's assistance. But I will transport grain from the field with my tractor and trailer. I can also lend it to you in the harvest season.

- Neighbourly cooperation is really attractive.

Exercise 3

Match the names. Dopasuj nazwy.



1. filtr
2. śruba
3. remontować
4. łańcuch
5. usługa zbioru
6. kombajn
7. klucz francuski
8. serwis

Periodic inspection of sprayers

Sprayers attestation - a Reminder from the Inspectorate!
The use of plant protection products using faulty equipment creates the risk of spot contamination and endangers the health of the operator and the consumer. I remind about the obligation to carry out tests proving the technical efficiency of the equipment used for the application of plant protection products.
What equipment is subject to mandatory testing?
Testing is mandatory for:
1. tractor sprayers and self-propelled field sprayers;

2. devices for seed treatment;
3. systems for the use of plant protection products in the form of a spray.

The scope of tests includes:
- correct mounting of safety devices for rotating components,
- assembling the machine with a tractor,
- wear and tear on hoses and hydraulic hoses, a tank, valves, atomizers and travel system,
- the cleanness of the tank, potential leaks,
- fitting of the filler cover.

The frequency of inspections
The test confirming the technical efficiency of the equipment intended for use with plant protection products is carried out at intervals of no more than 3 years. Please note that the work related to the inspections must be performed by authorized persons, protected against contact with chemicals and poisoning. These persons must be wearing protective clothing.
Who conducts the inspection?
On Polish territory there is a network of diagnostic stations for equipment used with plant protection products that can conduct such inspection. Information about such bodies can be found at http://piorin.gov.pl/srodki-ochrony-roslin/rejestry/.
Warning!
The use of plant protection with technically faulty equipment or with uncalibrated equipment, as well as avoiding the obligation to undergo inspections of such equipment is subject to a fine.

> **Exercise 4**

Driving vehicles used in agriculture

An extract from a category T driving licence course. Instructor (I) is giving a lecture interrupted by the questions and answers of the participants (P).

I: Welcome to the preparation course for the category T driving licence exam. Driving licence of this category entitles you to drive the agricultural tractor or low-speed vehicle, including vehicles with a trailer.

P: I'm only 16 years old. Can I take the course?

I: Yes, at this age you can already get permission to drive the tractor but it requires parents consent. Before we move to traffic regulations, you should know the control and maintenance operations of tractors. The scope of maintenance for the tractor includes daily

checks, cleaning and washing, refilling water, proper and timely lubrication and periodic inspections and repairs.

P: Where can the periodic inspection be conducted?

I: Periodic inspection of tractors and agricultural trailers is carried out every two years at the Regional Vehicle Inspection Station.

P: What do daily checks include?

I: Before starting work, always check the technical condition of the tractor and trailer, especially: the steering system of a tractor, trailer's braking system, tractor's wiring, street lighting and signal lighting, the state of the clutch and coupling-hooking devices, also, check and refill the fuel.

P: Can I use biofuel for a tractor?

I: Absolutely! This may be a diesel containing biodiesel or even pure biodiesel. Some even use rapeseed oil.
The person driving the tractor must comply with the rules relating to any other vehicles.

D: Are there any special rules for agricultural tractors?

I: yes. The most important is the speed limit, for agricultural tractors, including those with a trailer, the limit is 30 km / h.

P: How many trailers can an agricultural tractor pull?

I: A maximum of two. It is necessary to remember that you cannot transport people in an agricultural trailer! That's it for today. At the next meeting I will talk about road lighting. Thank you for your attention.

> **Exercise 5**

Grain production cycle

Film dostępny na portalu epodreczniki.pl

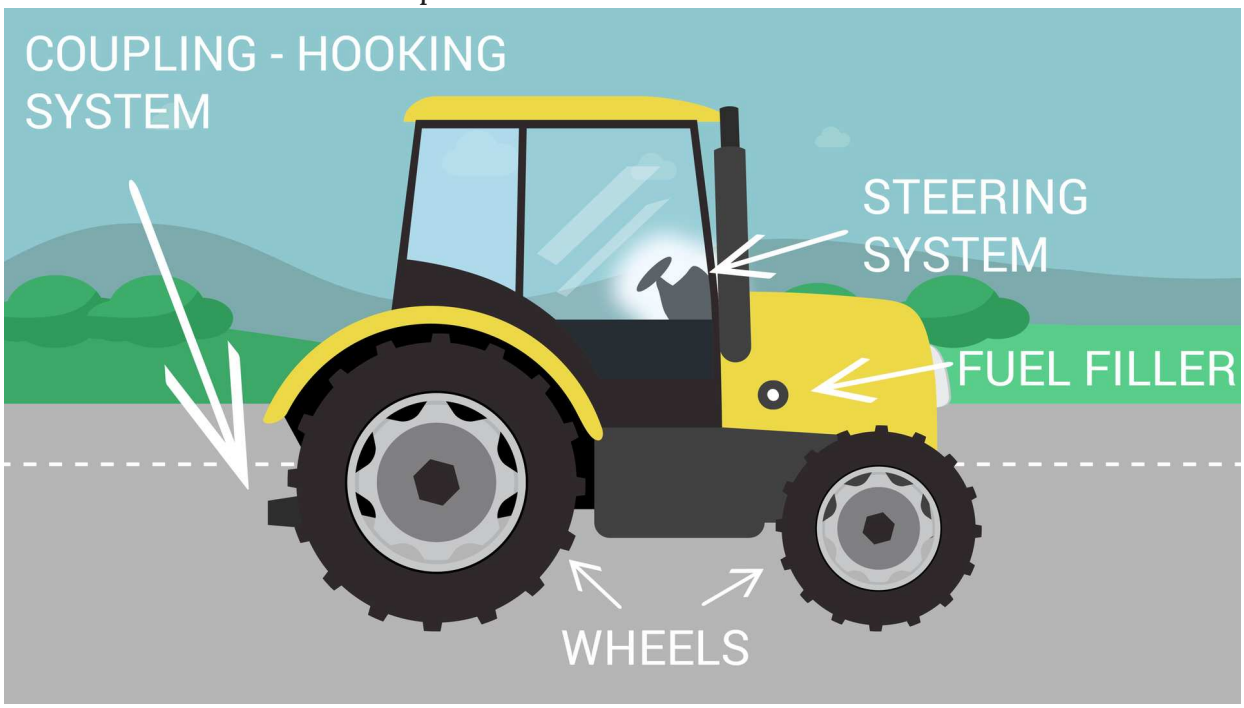
Moduł 3.3

Exercise 6

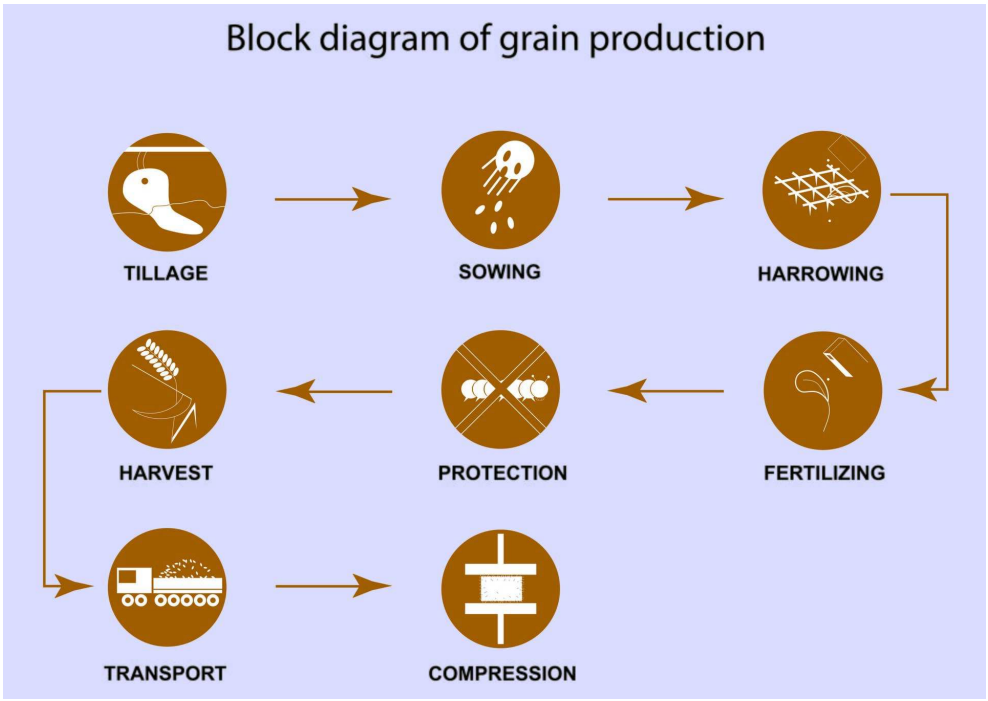
	Prawda	Fałsz
The objectives of tillage are crushing, loosening and flipping the top layer of soil.	◯	◯
Tillage is performed with a drill seeder.	◯	◯
The objective of harrowing is loosening the surface layer of the soil, weeding, reducing evaporation and leveling the field.	◯	◯
Harrowing is carried out with the use of a sprayer.	◯	◯
The objective of cultivating is turning the top layer of soil.	◯	◯
Grains are harvested in a single step by a combine harvester.	◯	◯
Pesticides in the form of aqueous solutions are spread on the field with the use of mounted sprayers only.	◯	◯
Grains are transported from the field with the use of round balers.	◯	◯

Picture

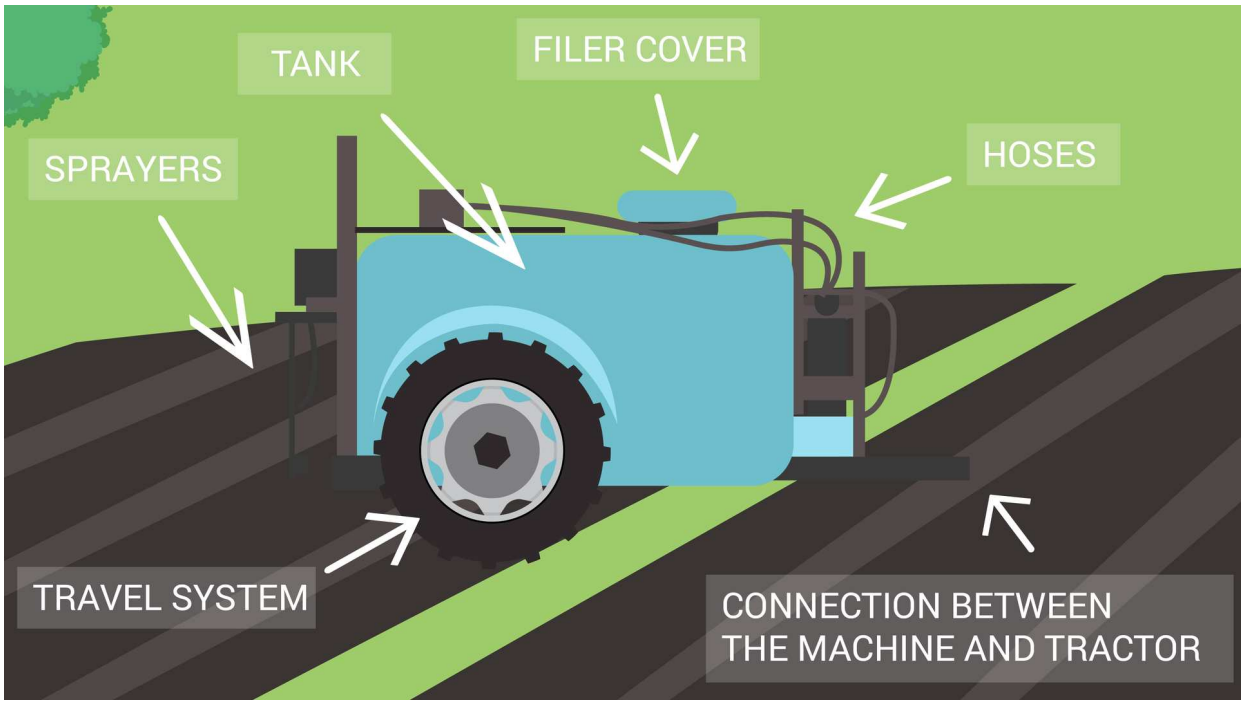
Learn the names of the tractor's parts.



Use the given elements to form a diagram of activities done in grain cultivation. Name the machines used for these activities.



Learn the names of the elements of the sprayer checked during periodical inspections.



Game

Zasób interaktywny dostępny pod adresem https://zpe.gov.pl/a/DsD53XR1u

Exercises

Exercise 7

Use the scattered words to create groups according to specified criteria. Z rozsypanych wyrazów stwórz grupy według podanego kryterium.

Plant protection

Category T driving license

Maintenance of a tractor

Tillage

Tilling and seeding unit

Procedures performed on the field

Consumables of the machines

age
fuel consumption
filters
speed limit
daily checks
repairs
deep
protective clothing
screws
seed drill
harrowing
certificate
fuel-feed installation
active harrow
after-tillage roller
periodic inspections
secondary tillage
rolling
primary tillage
bearings
tillage
inspection
sowing
belts
harvest
cultivating
4-wheel drive
mineral fertilization
single ploughing
trailer
sprayers
powerful engine
agricultural tractor
hoses
water replenishment
soil loosening system
chains
plough
cleaning

Technical parameters of the tractor

self-propelled sprayer

Dictionary

4-wheel drive (n. C, U) fɔː wiːl draɪv

napęd na 4 koła

active harrow (n. C) ˈæktɪv ˈhærəʊ

brona aktywna

after-tillage roller (n. C) ˈɑːftə ˈtɪl.ɪdʒ ˈrəʊlə

wał doprawiający

age (n. C, U) eɪdʒ

wiek

agricultural tractor (compound n.) ˌægrɪˈkʌltʃᵊrᵊl ˈtræktə

ciągnik rolniczy

assembling machines (phrase) əˈsemblɪŋ məˈʃiːnz

agregatowanie maszyn

atomizer (n. C) ˈæt.ə.maɪ.zə

korpus rozpylacza

authorized person (n. C) ˈɔːθᵊr.aɪzd ˈpɜːsᵊn

uprawniona osoba

bearing (n. C) ˈbeərɪŋ

łożysko

belt (n. C) belt

pas

biodiesel (n. U) ˈbaɪəʊˌdiːzl

biodiesel

biofuel (n. C, U) ˈbaɪəʊˌfjʊəl

biopaliwo

blade (n. C) bleɪd

nożyk
braking system (n. C) ˈbreɪkɪŋ ˌsɪstəm

układ hamulcowy
broadcast spreader (n. C) ˈbrɔːdkɑːst ˈspredə

rozsiewacz nawozów
cab (n. C) kæb

kabinę
category T driving license (n. C) ˈkætəgˈri tiː ˈdraɪvɪŋ ˈlaɪsˈns

prawo jazdy kategorii T
certificate (n. C) səˈtɪfɪkət

atest
chain (n. C) tʃeɪn

łańcuch
clean (v.) kliːn

czyścić
clutch (n. C) klʌtʃ

sprzęgło
combine (n. C) kəmˈbaɪn

kombajn
combine harvester (n. C) ˌkɒmbaɪnˈhɑːvɪstə

kombajn zbożowy
componentry (mass noun) kəmˈpəʊnəntri

podzespoły
compression (n. U) kəmˈpreʃˈn

prasowanie
consumables (n. plural) kənˈsjuːməblz

materiały eksploatacyjne
consumer (n. C) kənˈsjuːmə

konsument
control and maintenance operation (compound n.) kənˈtrəʊl ænd ˈmeɪntənəns ˌɒpˈrˈeɪʃˈn

czynność kontrolno-obsługowa
corrosion (n. U) kəˈrəʊʒᵊn

korozja
coupling-hooking device (n. C) ˈkʌplɪŋ ˌhʊkɪŋ dɪˈvaɪs

urządzenie zaczepowo-przyłączeniowe
course (n. C) kɔːs

kurs
credit (n. U) ˈkredɪt

kredyt
cultivate (v) ˈkʌltɪveɪt

kultywatorować
cultivator (n. C) ˈkʌltɪveɪtə

kultywator
daily checks (n. plural) ˈdeɪli tʃeks

codzienne przeglądy
deep tillage (n. U) diːp ˈtɪlɪdʒ

orka głęboka
diesel (n. U) ˈdiːzᵊl

olej napędowy
drive an agricultural tractor (phrase) draɪv æn ˌægrɪˈkʌltʃᵊrᵊl ˈtræktə

kierować ciągnikiem rolniczym
driving licence (n. C) ˈdraɪvɪŋ ˈlaɪsᵊns

prawo jazdy
dry (v.) draɪ

osuszać
engine / motor (n. C) ˈendʒɪn / ˈməʊtə

silnik
equipment (n. U) ɪˈkwɪpmənt

sprzęt
equipment diagnostic station (n. C) ɪˈkwɪpmənt ˌdaɪəgˈnɒstɪk ˈsteɪʃᵊn

stacja kontroli sprzętu
excess water (compound noun) ɪkˈses ˈwɔːtə

nadmiar wody
failure (n. C), problem operating (n. C) ˈfeɪljə, ˈprɒbləm ˈɒpəreɪtɪŋ

awaria
faulty (adj.) ˈfɔːlti

niesprawny
fertilize (v.) ˈfɜːtɪlaɪz

nawozić
filler cover (n. C) ˈfɪl.ə ˈkʌvə

pokrywa wlewowa
filter (n. C) ˈfɪltə

filtr
fitting (n. C) ˈfɪtɪŋ

spasowanie
flatten/ mash (v.) ˈflætˀn / mæʃ

ugniatać
free passage of air (phrase) friː ˈpæsɪdʒ ɒv eə

swobodne przenikanie powietrza
fuel consumption (n. U) ˈfjuːəl kənˈsʌmpʃˀn

zużycie paliwa
fuel state (n. C) ˈfjuːəl steɪt

stan paliwa
fuel(n. C, U) ˈfjuːəl

faliwo
fuel-feed installation (n. C) ˈfjuːəl fiːd ˌɪnstəˈleɪʃˀn

zasilanie paliwem
germination (n. U) ˌdʒɜːmɪˈneɪʃˀn

kiełkowanie
get permission (phrase) get pəˈmɪʃˀn

uzyskać uprawnienia
good decision (n. C.) gʊd dɪˈsɪʒˀn

dobra decyzja
good equipment (n. U) gʊd ɪˈkwɪpmənt

dobry sprzęt
guarantee (n. C, U) ˌgærᵊnˈtiː

gwarancja
harrow (v.) ˈhærəʊ

bronować
harvest (n. C, U) ˈhɑːvɪst

usługa zbioru, zbiór
hose (n. C) həʊz

wąż cieczowy
hydraulic hose (n. C) haɪˈdrɔːlɪk həʊz

wąż hydrauliczny
hydraulic system (compound n.) haɪˈdrɔːlɪk ˈsɪstəm

instalacja hydrauliczna
inspection (n. C, U) ɪnˈspekʃᵊn

przegląd
level(v.) ˈlevᵊl

wyrównywać
low-speed vehicle (n. C) ləʊ spiːd ˈviːɪkl

pojazd wolnobieżny
lubricate (v.) ˈluːbrɪkeɪt

nasmarować, smarować
machine (n. C) məˈʃiːn

maszyna
machinery (n. U) məˈʃiːnᵊri

maszyny, maszyneria
maintenance (n. U) ˈmeɪntᵊnəns

konserwacja, obsługa techniczna
maintenance costs (n. plural) ˈmeɪntᵊnəns kɒsts

koszty utrzymania
mandatory testing (n. U) ˈmændətᵊri ˈtestɪŋ

obowiązkowe badania
manual (n. C) ˈmænjuəl

instrukcja obsługi
measure (n. C) ˈmeʒə

zabieg
mineral fertilization (n. U) ˈmɪnᵊrᵊl ˌfɜːtɪlaɪˈzeɪʃən

nawożenie mineralne
monkey wrench (n. C) ˈmʌŋki ˌrentʃ

klucz francuski
mount (v.) maʊnt

mocować, montować
obligation (n. C, U) ˌɒblɪˈgeɪʃᵊn

obowiązek
oil (n. U) ɔɪl

olej
operating performance (n. U) ˈɒpᵊreɪtɪŋ pəˈfɔːməns

wydajność eksploatacyjna
operator (n. C) ˈɒpəreɪtə

operator
periodic inspection (n. C) ˌpɪəriˈɒdɪk ɪnˈspekʃᵊn

przegląd okresowy
plant protection (n. U) plɑːnt prəˈtekʃᵊn

ochrona roślin
plant protection products (n. plural) plɑːnt prəˈtekʃᵊn ˈprɒdʌkts

środki ochrony roślin
plough (n. C) plaʊ

pług
power (n. U) paʊə

moc
power take-off (n. C) paʊə ˈteɪkɒf

wał odbioru mocy
powerful engine (compound noun) ˈpaʊəfᵊl ˈendʒɪn

mocny silnik
preparation (n. C) ˌprepᵊrˈeɪʃᵊn

preparat
primary tillage (n. U) ˈpraɪmᵊri ˈtɪlɪdʒ

podorywka
protection (n. U) prəˈtekʃᵊn

ochrona
protective clothing (compound noun) prəˈtektɪv ˈkləʊðɪŋ

odzież ochronna
quick repair (n. C, U) kwɪk rɪˈpeə

szybka naprawa
rapeseed oil (n. U) ˈreɪpsiːd ɔɪl

olej rzepakowy
reduce evaporation (phrase) rɪˈdjuːs ɪˌvæpəˈreɪʃᵊn

zmniejszać parowanie
Regional Vehicle Control Station (n) ˈriːdʒᵊnᵊl ˈviːɪkl kənˈtrəʊl ˈsteɪʃᵊn

Okręgowa Stacja Kontroli Pojazdów
reliable (adj) rɪˈlaɪəbl

trwały
rent (v.) rent

wynająć
repair (n. C) rɪˈpeə

naprawa, remontować
road lighting (n. U) rəʊd ˈlaɪtɪŋ

oświetlenie drogowe
road sign (n. C) rəʊd saɪn

znak drogowy
roll (v.) rəʊl

wałować
root system (n. C) ruːt ˈsɪstəm

system korzeniowy
rotating component (n. C) rəʊˈteɪtɪŋ

element wirujący
screw (n. C) skruː

śruba
secondary tillage (n. U) ˈsekəndəri ˈtılıdʒ

orka siewna
secure (v.) sɪˈkjʊə

zabezpieczyć
security (n. U) sɪˈkjʊərəti

zabezpieczenie
seed drill / seeder (n. C) siːd drɪl / ˈsiːdə

siewnik
self-propelled sprayer (n. C) ˌself.prəˈpeld ˈspreɪ.ə

opryskiwacz samojezdny
service (n. C) ˈsɜːvɪs

serwis
shed (n. C) ʃed

wiata
shop / workshop (n. C) ʃɒp / ˈwɜːkʃɒp

warsztat
signal lighting (n. U) ˈsɪgnᵊl ˈlaɪtɪŋ

oświetlenie sygnalizacyjne
single ploughing (n. U) ˈsɪŋgl ˈplaʊɪŋ

orka razówka
soaking (n. C) ˈsəʊkɪŋ

podsiąkanie wód gruntowych
soil loosening system (n. C) sɔɪl ˈluːsᵊnɪŋ ˌsɪstəm

układ spulchniający ziemię
sowing (n. C) ˈsəʊɪŋ

siew
speed limit (n. C) spiːd ˈlɪmɪt

ograniczenie prędkości
spot contamination (n. U) spɒt kənˌtæmɪˈneɪʃən

skażenia punktowe
sprayer (n. C) ˈspreɪə

rozpylacz
sprayers attestation (compound n.) ˈspreɪəz ˌætesˈteɪʃᵊn

atestacja opryskiwaczy
steering system (n. C) ˈstɪərɪŋ ˌsɪstəm

układ kierowniczy
system (n. C) ˈsɪstəm

instalacja
tank (n. C) tæŋk

zbiornik
technical condition (n. U) ˈteknɪkᵊl kənˈdɪʃᵊn

stan techniczny
technical efficiency (n. U) ˈteknɪkᵊl ɪˈfɪʃᵊnsi

sprawność techniczna
technical proprieties (n. plural) ˈteknɪkᵊl prəˈpraɪətiz

parametry techniczne
technically faulty equipment (n. U) ˈteknɪkᵊli ˈfɔːlti ɪˈkwɪpmənt

sprzęt niesprawny technicznie
tillage (n. U) ˈtɪlɪdʒ

orka
tilling and seeding unit (n. C) ˈtɪlɪŋ ænd ˈsiːdɪŋ ˈjuːnɪt

agregat uprawowo-siewny
tool (n. C) tuːl

narzędzie
tractor (n. C) ˈtræktə

traktor, ciągnik
traffic regulations (n. plural) ˈtræfɪk ˌregjəˈleɪʃᵊnz

przepisy o ruchu drogowym
trailer (n. C) ˈtreɪlə

przyczepa
transportation (n. U) ˌtrænspɔːˈteɪʃᵊn

transport
travel system (n. C) ˈtrævᵊl ˌsɪstəm

układ jezdny
uncalibrated equipment (n. U) ʌnˈkæl.ɪ.breɪtɪd ɪˈkwɪpmənt

sprzęt nieskalibrowany
valve (n. C) vælv

zawór
water and drainage facility (n. C) ˈwɔːtəʳ ænd ˈdreɪnɪdʒ fəˈsɪlətɪ

urządzenie wodno-melioracyjne
water replenishment (n. U) / refilling water (n. C) ˈwɔːtərɪˈplenɪʃmənt / ˈriːfɪlɪŋ ˈwɔːtə

uzupełnianie wody
wear and tear (compound n. U) ˌweəʳ ændˈteə

stan zużycia
weed killing (compound noun) wiːd ˈkɪlɪŋ

niszczenie chwastów
wiring (n. U) / electrical installation (compound n.) ˈwaɪərɪŋ / ɪˈlektrɪkᵊl ˌɪnstəˈleɪʃᵊn

instalacja elektryczna

Conducting business activity in agribusiness

We are taking a loan

1. Film in the standard version.

Film dostępny na portalu epodreczniki.pl

moduł 7.1

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2. Film with subtitles.

Film dostępny na portalu epodreczniki.pl

moduł 7.3

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3. Film with subtitles and pauses. Listen and repeat after the speaker.

Film dostępny na portalu epodreczniki.pl

moduł 7.1

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4. Film with subtitles and narration.

Film dostępny na portalu epodreczniki.pl

Exercise 1

Let’s start a business - an oil mill

Film dostępny na portalu epodreczniki.pl

moduł 7.1, Before making the decision about starting a business, you have to prepare a business plan. It is important to determine: the sector in which the company will operate, the consumers’ needs and development opportunities. Describe the activity and determine how the company meets market expectations / needs and present a vision for development and specific objectives. So what do you need to know? You need to know how many oil mills are operating in the area, what is the volume of their production, what range of oils they have, and what are the prices of their products. It is a good idea to find a market niche, e.g. you can start producing oil from unusual raw materials or in a very unique way. It is necessary to determine at what scale of activity the revenues will cover its costs. Will it be profitable for us? You should plan the management staff, dealers, advertising and marketing department as well as the production staff. It is necessary to plan the distribution channels of the product. Direct sales are possible: straight from the farm, over the Internet or at marketplaces.Intermediate sales are carried out: through shops, restaurants, wholesalers on the basis of contracts and commercial contracts. It is important to analyze the sources of financing the company: a credit, some extra funding from the European Union? Your own

capital? After making a decision, give it a formal character - register your activity with CEIDG (Central Registration and Information On Business)

Farm organigram

Film dostępny na portalu epodreczniki.pl

moduł 7.1

Training course

The dialogue between two farmers concerning holding accounts of the farm. The farmer (R) prepares invoices for the purchase of fuel in order to obtain excise duty reimbursement, and other VAT invoices that he should deliver to the accounting office. The farmer's wife (ZR) is considering undertaking a training course in accounting, using computer programs.

- Ewa, the first deadline for submitting a request for reimbursement of excise duty to the mayor is approaching. I will need your help.

- How can I help you?

- Please sort the invoices from the fuel purchase which I should attach to the application.

- All of them?

- No, only those that concern diesel fuel used for agricultural production in our farm.

- What will the taxreturn limit be this year?

- This year we will get a return of 86 zł to 1 ha of agricultural land.

- That's a lot. When are you going to the Municipal Office?

- I planned on leaving on Thursday.

- I'm asking because they called from theAccounting Office and reminded me to deliver the invoices for purchase of goods, materials, products and services made this month.

- Will we have such invoices?

- Yes, we have bought rapeseed seeds for sowing for our mill.

- It's a good thing that you remember that. As soon as I am in the Accounting Office, I will settle the fee forrunning the financial settlements of our farm.

- You know Janek, I saw an offer on the Internet of agricultural training in various production branches anddepartments and in accounting.

- Yes?

- I was thinking of undertaking a training course in accounting.

- It can be an expensive training...

- No, because it will be fundedentirely by theEU funds. During the training I will be able to learn how to use a computer program to hold accounts.

- Who are the trainers?

- The employees of agricultural colleges and agricultural counseling centers, as well as practicing accountants.

- It's a very good idea! You should participate.

- After completing such a course I would be able to carry out all the settlements on our farm.

- Great! This way we would saveon monthly fees for keeping the accounting records.

Exercise 2

Familiarize yourself with the hypertext no. 1 “Training”. Decide whether the sentences under it are true or false. Zapoznaj się z treścią hipertekstu nr 1 pt. „Szkolenie”. Ustosunkuj się do zdań umieszczonych pod nim, podejmij decyzję, czy to prawda czy fałsz.

	Prawda	Fałsz
The request for reimbursement of excise duty is addressed to the mayor.	◯	◯
Reimbursement of excise duty applies to diesel used in the production of jams.	◯	◯
In the current year the farmer will receive a refund of excise duty of PLN 86 for 1 ha of agricultural land.	◯	◯
The wife reminds the farmer about a visit to the bank.	◯	◯
The farmer will send invoices for the purchase of machines to the Accounting Office.	◯	◯
The farmer will settle the fee for keeping the farm's financial settlements in the Accounting Office.	◯	◯
The farmer's wife learned the offer of training relating to agritourism.	◯	◯
Training will be provided by financial advisors.	◯	◯
The training relating to agricultural accounting will be funded by EU funds.	◯	◯

Support for entrepreneurs in the countryside

This note is coming from the employees of the Agency for Restructuring and Modernisation of Agriculture, relating to the possibilities of obtaining funds for setting up a non-agricultural activity in rural areas.

Dear Madam
In response to your questions in the email, I would like to inform you that the Agency for Restructuring and Modernization of Agriculture offers various possibilities for co-financing projects in the rural areas under theRural Development Programme. Currently, the call for proposals for the following actions is being conducted:

Modernization of agricultural holdings

1. Incentives for young farmers
2. Aid for starting non-agricultural activities in rural areas
3. Creatingproducer cooperatives
4. Agri-environmental measures
5. Organic farming

incentive

In the situation you presented in the correspondence, the most appropriate action seems to be the action number 6, Organic farming. Your farm is diversified. You run plant production, as well as fruit and vegetable processing and livestock production. You use fodder from your own farm and natural fertilizers. These are important principles used in organic farms. Adjusting your farm to therequirements of organic farming can be easy. However, detailed requirements require agreement with the organization uniting this type of farms. If you meet these requirements, it is possible to co-financethe transition from a conventional system to an organic one. In order to recognize the costs incurred as eligible, it is crucial to obtain an organic farm certificate.

If you are interested in using this program, please inform me.

I encourage you to take advantage of the opportunities offered byagribusiness and participation in programmes implemented by our Agency.

Yours faithfully A.M.

> **Exercise 3**

Consultation in the Agricultural Advisory Centre

The dialogue takes place in the Agricultural Advisory Centre. A farmer (R) consults with an employee (P) of the Centre on the idea for starting a business activity. He explains his concepts. She explains the rules for running a business, division of undertakings and the effects resulting from cessation of agricultural activity.

R: Good morning.

P: Good morning. How can I help you?

R: I am a farmer and I am thinking about starting a non-agricultural activity.

P: Do you have any specific kind of activity in mind?

R: My farm is situated near a lake and a national park. That's why I am considering tourist services.

P: As a farmer you can run an agricultural farm and then you would still be a Agricultural Social Insurance Fund (KRUS) payer.

R: Where should I register the business?

P: You don't have to register it anywhere. It has to be reported to themunicipal officeand the tax office where you will choose the form of taxation. However, you can only rent up to 5 rooms.

R: What if I wanted to open a hotel?

P: It's a non-agricultural activity that must be registered.

R: What about the insurance?

P: You're changing the insuring institution: from KRUS to Social Insurance Institution (ZUS)

R: What is the structural formof such activity?

P: It can be either sole proprietorship or a company.

R: I have a brother-in-law who would like to run abusinesswith me so maybe the company would be a better idea?

P: Companies can be divided into civil law partnerships and commercial companies. Commercial companies can be divided into partnerships andlimited companies.

R: What is the difference?

P: Partnerships are: general partnerships, limited liability partnerships,limited partnerships and limited joint stock partnerships. Limited companies are: limited liability companies and joint-stock companies.

R: Which should I choose?

P: A limited liability company would be beneficial.

R: Why this one?

P: Because both you and your brother in law are financially liable only at the level of the company's capital.

R: So we do not risk our personal property?

P: No. You have to remember that building a hotel in a protected area might not always be possible.

R: Why not?

P:Legislative and government regulationsmight not allow for it: laws and regulations related to the protection of nature and the environment.

R: Could you check my location in legal terms?

P: Of course. I will prepare everything for our next meeting.

Exercise 4

Familiarize yourself with the advice from the Agricultural Advice Centre in the hypertext document no. 3 “Consultation in the Agricultural Advisory Centre.” Complete the sentences with the correct words. Zapoznaj się z poradami z Ośrodka Doradztwa Rolniczego z dokumentu hipertekstowego nr 3 „Porady w Ośrodku Doradztwa Rolniczego”. Uzupełnij zdania wyrazami do wyboru.

I am a farmer and I am thinking about starting a ..... [ ]

I am considering offering a .... [ ]

As a farmer you can start a/an [ ]

In an agrotourism farm you can ..... no more that 5 rooms. [ ]

Companies can be divided into civil law partnerships and ..... [ ]

Limited companies are: ..... or joint-stock companies. [ ]

The owners of a limited liability company are financially liable only at the level of the ..... [ ]

Law and regulations are set by ..... [ ]

Building a hotel in the ..... is not always possible. [ ]

big sum | limited liability companies | repayment scheme | credit period | own cash | rent | pay | protected area | register | managerial staff | tourist services | agrotourism companies | mortgage loan | commercial companies | level of commission | government regulations | agricultural tax | bank property | interest rate | business plan | company's capital | agrotourism farm | financial advisor | bank companies | advertising department | consumers needs | non-agricultural activity

Exercise 5

Match the words in pairs. Połącz wyrazy w pary.

tourist	office
limited	liability
protected	area
financial	company
municipal	capital
agricultural	farm
company's	activity
non-agricultural	services

How to start a business

Film dostępny na portalu epodreczniki.pl

Exercise 6

Arrange the steps necessary in opening a business on the basis of an audio-video sequence "How to start a business". Ułóż kolejność postępowania przy założeniu firmy na podstawie sekwencji audio-video pt. „Jak założyć działalność gospodarczą ”.

Applying for entry in the Central Register and Information on Business Activity.

Opening a bank account.

Filling in the form will give you the Taxpayer’s Identification Number (NIP), National Official Business Register number (REGON) and the application to the Social Insurance Institution.

Submitting the declaration of activity to other institutions, such as the National Labor Inspectorate, Health and Safety, Regulated Activity Register, Veterinary Inspection

Registering for the chosen tax system in the tax office.

Steps necessary in opening a business:

Making a company stamp.

Registering yourself and your employees with the Social Insurance Institution.

Exercise 7

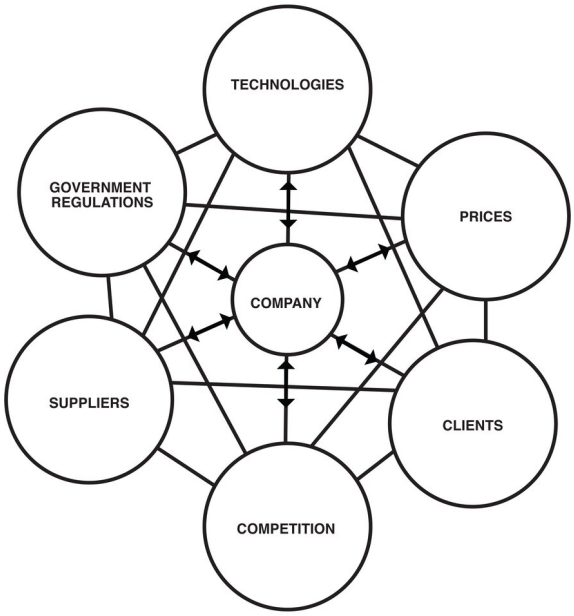
Match Polish words with their translations. Połącz polskie słowa z ich tłumaczeniami.

Polska Klasyfikacja Działalności	tax office
forma opodatkowania	city office
urząd skarbowy	business activity
rodzaj działalności	municipal office
ubezpieczenie	type of activity
urząd miasta	insurance
działalność gospodarcza	Polish Classification of Activities
Centralna Ewidencja i Informacja o Działalności Gospodarczej	tax system
Zakład Ubezpieczeń Społecznych	Central Registration and Information on Business
urząd gminy	Social Insurance Institution

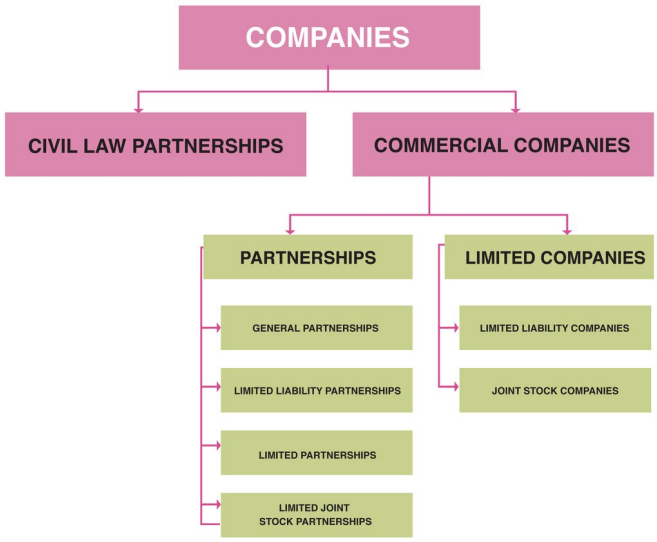
Pictures

Look at the illustration. Explain what you can see. Suggest a dialogue that can take place between a client and a bank employee.

Read, translate and remember the elements of the company's surroundings.



Basing on the hypertext no.3 "Consultation in the Agricultural Advisory Centre", give the English names of the types of companies



Game

Zasób interaktywny dostępny pod adresem https://zpe.gov.pl/a/Dj1M4naFK

Dictionary

accounting (n. U) əˈkaʊntɪŋ

rachunkowość
accounting office (n. C) əˈkaʊn.tɪŋ ˈɒf.ɪs

biuro rachunkowe
accounting records (n. plural) əˈkaʊntɪŋ rɪˈkɔːdz

dokumentacja księgowa
activity (n. C, U) ækˈtɪvəti

działalność
advertising department (n. C) ˈædvətaɪzɪŋ dɪˈpɑːtmənt

dział reklamy
Agency for Restructuring and Modernization of Agriculture (n. C) ˈeɪ.dʒ͡ənsi fə ˌriːˈstrʌktʃ͡ərɪŋ ənd ˌmɒdənaɪˈzeɪʃ͡n əv ˈægrɪkʌltʃə

Agencja Restrukturyzacji i Modernizacji Rolnictwa
agribusiness (n. U) ˈægriˌbɪznɪs

agrobiznes
agritourism (n. U) ˌægrɪˈtʊərɪz͡əm

agroturystyka
agritourism farm (n. C) ˌægrɪˈtʊərɪz͡əm fɑːm

gospodarstwo agroturystyczne
animal production section (n. C) ˈænɪməl prəˈdʌkʃ͡n ˈsekʃ͡n

dział produkcji zwierzęcej
bank (n. C) bæŋk

bank
bank property (n. C) ˌbæŋk ˈprɒpəti

własność banku
big sum (n. C) bɪg ˈsʌm

duża kwota
branch (n. C) brɑːntʃ

gałąź
business (n. C, U) ˈbɪznɪs

biznes
business activity (n. C, U) ˈbɪznɪs ækˈtɪvəti

działalność gospodarcza
business plan (n. C) ˈbɪznɪs plæn

biznes-plan
call for proposals (phrase) kɔːl fɔː prəˈpəʊzᵊlz

nabór wniosków
Central Registration and Information on Business (n. C) ˈsentrəl ˌredʒɪˈstreɪʃᵊn ənd ˌɪnfəˈmeɪʃᵊn ɒn ˈbɪznɪs

Centralna Ewidencja Informacji o Działalności Gospodarczej
certificate (n. C) səˈtɪfɪkət

certyfikat
city office (n. C) ˈsɪti ˈɒfɪs

urząd miasta
civil law partnership (n. C, U) ˈsɪvᵊl lɔː ˈpɑːtnəʃɪp

spółka cywilna
co-financing the activity (phrase) ˌkəʊfəˈnænsɪŋ ðə ækˈtɪvəti

dofinansowanie działalności
collateral (n. U) kəˈlætərəl

zabezpieczenie
commercial company (n. C) kəˈmɜːʃᵊl ˈkʌmpəni

spółka handlowa
commercial contract (n. C) kəˈmɜːʃᵊl ˈkɒntrækt

umowa handlowa
company (n. C) ˈkʌmpəni

firma, spółka
company's capital (n. U) ˈkʌmpənis ˈkæpɪtᵊl

kapitał spółki
competition (n. U) ˌkɒmpəˈtɪʃᵊn

konkurencja
computer program (n. C) kəmˈpjuːtə ˈprəʊgræm

program komputerowy
consumer needs (n. plural) kənˈsjuːmə nidz

potrzeby konsumentów

conventional system (n. C) kənˈvenʃᵊnᵊlˈsɪstəm

system konwencjonalny
copy (v.) ˈkɒpi

skopiować
costs incurred (phrase) kɒsts ɪnˈkɜːd

poniesione koszty
credit (n. C, U) ˈkredɪt

kredyt
credit period (n. C) ˈkredɪt ˈpɪəriəd

okres kredytowania
creditworthiness (n. U) ˈkredɪtˌwɜːðinəs

zdolność kredytowa
current account (n. C) ˈkʌrənt əˈkaʊnt

rachunek bieżący
dealer (n. C) ˈdiːlə

handlowiec
development opportunity (n. C, U) dɪˈveləpmənt ˌɒpəˈtʃuːnəti

możliwość rozwoju
direct sales (n. plural) daɪˈrekt seɪlz

sprzedaż bezpośrednia
distribution (n. C, U) ˌdɪstrɪˈbjuːʃᵊn

dystrybucja
distribution channel (n. C) ˌdɪstrɪˈbjuːʃᵊn ˈtʃænᵊl

kanał dystrybucji
division (n. C) dɪˈvɪʒᵊn

dział
economically justify (v.) ˌiːkəˈnɒmɪkəli ˈdʒʌstɪfaɪ

ekonomicznie uzasadnić
eligible costs (phrase) ˈelɪdʒəbᵊl kɒsts

koszty kwalifikowane
EU funds (phrase) ˌiːˈjuː fʌndz

środki unijne
excise duty (n. C, U) ˈek.saɪz ˈdʒuː.ti

podatek akcyzowy
extract oil (phrase) ɪkˈstrækt ‘ɔɪl

tłoczyć olej
financial advisor (n. C) faɪˈnænʃᵊl ədˌvaɪ.zə

doradca finansowy
financial liability (n. U) faɪˈnænʃᵊl ˌlaɪəˈbɪlətɪ

odpowiedzialność finansowa
financial results (n. plural) faɪˈnænʃəl rɪˈzʌlts

wyniki finansowe
food industry section (n. C) fuːd ˈɪndəstri ˈsekʃᵊn

dział przemysłu spożywczego
form of taxation (n. C) fɔːm əv tækˈseɪʃᵊn

forma opodatkowania
formal character (n. C, U) ˈfɔːməl ˈkærəktə

charakter formalny
fruit and vegetable processing (n. U) fruːt ənd ˈvedʒ.tə.bᵊl ˈprəʊsesɪŋ

przetwórstwo owoców i warzyw
funding (n. U) ˈfʌndɪŋ

dofinansowanie
general partnership (n. C, U) ˈdʒenᵊrᵊl ˈpɑːtnəʃɪp

spółka jawna
guarantee (n. C, U) ˌgærənˈtiː

gwarancja
have (v.) hæv

dysponować
idea (n. C) aɪˈdɪə

pomysł
Identification Document (n. C) aɪˌdentɪfɪˈkeɪʃən ˈdɒkjəmənt

dokument tożsamości
incentive (n. C, U) ɪnˈsentɪv

premia
industry (n. C) ˈɪndəstri

branża
insurance (n. U) ɪnˈʃɔːrˀns

ubezpieczenie
insurance policy (n. C) ɪnˈʃɔːrəns ˈpɒləsi

polisa ubezpieczenia
interest (n. U) ˈɪntrəst

oprocentowanie
interest rate (n. C) ˈɪntrəst ˌreɪt

stopa procentowa
internet sales (n. plural) ˌɪndaɪˈrekt seɪlz

sprzedaż przez Internet
invoice (n. C) ˈɪnvɔɪs

faktura
jam production (n. C) dʒæm prəˈdʌkʃˀn

produkcja dżemów
joint-stock company (n. C) dʒɔɪnt stɒk ˈkʌmpəni

spółka akcyjna
KRUS payer (n. C) krʊs ˈpeɪə

płatnik KRUS
land tax (n. C) ˌlænd ˈtæks

podatek rolny
legislative and government regulations (phrase) ˈledʒɪslətɪv ænd ˈgʌvˀnmənt ˌregjəˈleɪʃˀnz

regulacje legislacyjne i rządowe
level of commision (phrase) ˈlevəl əv ˌkəˈmɪʃən

wysokość prowizji
level of loan installments (phrase) ˈlevəl əv ˌləʊn ɪnˈstɔlmənts

wysokość rat
limited company (n. C) ˈlɪmɪtɪd ˈkʌmpəni

spółka kapitałowa
limited joint stock partnership (n. C, U) ˈlɪmɪtɪd dʒɔɪnt stɒkˈpɑːtnəʃɪp

spółka komandytowo-akcyjna
limited liability company (n. C) ˈlɪmɪtɪd ˌlaɪəˈbɪləti ˈkʌmpəni

spółka z ograniczoną odpowiedzialnością
limited liability partnership (n. C, U) ˈlɪmɪtɪd ˌlaɪəˈbɪləti ˈpɑːtnəʃɪp

spółka partnerska
limited partnership (n. C, U) ˈlɪmɪtɪd ˈpɑːtnəʃɪp

spółka komandytowa
livestock production (n. U) ˈlaɪvstɒk prəˈdʌkʃ͡ən

produkcja zwierzęca
loan (n. C) ləʊn

pożyczka
machine service (n. C) məˈʃiːn ˈsɜːvɪs

usługa maszynami
management staff (n. singular) ˈmænɪdʒmənt stɑːf

kadra zarządzająca
market needs (n. plural) ˈmɑːkɪt nidz

potrzeby rynku
market niche (n. C) ˈmɑːkɪt niːʃ

nisza rynkowa
marketing (n. U) ˈmɑːkɪ.tɪŋ

marketing
money (n. U) ˈmʌni

pieniądze
monthly fee (n. C) ˈmʌnθli fiː

comiesięczna opłata
mortgage (n. C) ˈmɔːgɪdʒ

kredyt hipoteczny
Municipal Office (n. C) mjuːˈnɪs.ɪ.pəl ˈɒf.ɪs

Urząd Gminy
negotiate interest rates (phrase) nəˈgəʊʃieɪt ˈɪntrəst ˌreɪts

negocjować oprocentowanie
non-agricultural activity (n. U) nɒnˌægrɪˈkʌltʃ͡ərəl ækˈtɪvəti

działalność pozarolnicza
oil mill (n. C) ɔɪl mɪl

tłocznia oleju
oil production (n. C) ɔɪl prəˈdʌkʃᵊn

produkcja oleju
open a bank account (phrase) ˈəʊpᵊn ə bæŋk əˈkaʊnt

zakładać konto
organic farming (n. U) ɔːˈgænɪk ˈfɑːmɪŋ

rolnictwo ekologiczne
organic system (n. C) ɔːˈgænɪk ˈsɪstəm

system ekologiczny
own capital (n. U) əʊn ˈkæpɪtᵊl

własny kapitał
participation in the programme (phrase) pɑːˌtɪsɪˈpeɪʃᵊn ɪn ðə ˈprəʊgræm

udział w programie
partnership (n. C, U) ˈpɑːtnəʃɪp

spółka osobowa
payment order (n. C) ˌpeɪmənt ˈɔːdə

nakaz płatniczy
plant production (n. U) plɑːnt prəˈdʌkʃᵊn

produkcja roślinna
plant production section (n. C) plɑːnt prəˈdʌkʃᵊn ˈsek.ʃᵊn

dział produkcji roślinnej
Polish Classification of Activity (n. C) ˈpɒlɪʃ ˌklæsɪfɪˈkeɪʃᵊn əv ækˈtɪvəti

Polska klasyfikacja działalności
practising accountant (n. C) ˈpræktɪsɪŋ əˈkaʊntᵊnt

praktykujący księgowy
prepare (v.) prɪˈpeə

sporządzić
procedure (n. C) prəˈsiːdʒə

procedura
producer cooperative (n. C) prəˈdʒuːsə kəʊˈɒpᵊrətɪv

grupa producentów
production branch (n. C) prəˈdʌkʃ°n brɑːntʃ

gałąź produkcji
production department (n. C) prəˈdʌkʃ°n dɪˈpɑːtmənt

dział produkcji
production staff (n. singular) prəˈdʌkʃən stɑːf

pracownicy produkcji
professional (n. C) prəˈfeʃənəl

profesjonalista
property (n. U) ˈprɒpəti

majątek
protected area (n. C) prəˈtektɪd ˈeəriə

teren objęty ochroną
range (n. C) reɪndʒ

asortyment
reduce (v.) rɪˈdʒuːs

obniżyć
register the business (phrase) ˈredʒɪstər ðə bɪznɪs

zarejestrować działalność
rent (v.) rent

wynajmować
repay the loan (phrase) rɪˈpeɪ ðə ˌləʊn

spłacić kredyt
repayment schedule (n. C) rɪˈpeɪmənt ˈʃedʒ.uːl

harmonogram spłat
report the activity (phrase) rɪˈpɔːt ðə ækˈtɪvəti

zgłosić działalność
requirements (n. plural) rɪˈkwaɪəmənts

wymogi
return limit (n. C) rɪˈtɜːn ˈlɪm.ɪt

limit zwrotu
run the financial settlements (phrase) rʌn ðə faɪˈnæn.ʃ°l ˈsetᵊl.mənts

prowadzić rozliczenia finansowe
Rural Development Programme (n. C) ˈrʊərəl dɪˈveləpmənt ˈprəʊgræm

Program Rozwoju Obszarów Wiejskich
save (v.) seɪv

zaoszczędzić
services department (n. C) ˈsɜːvɪsɪz dɪˈpɑːtmənt

dział usług
settle the fee (phrase) ˈsetˀl ðə fiː

wyregulować opłatę
Social Insurance Institution (n. C) ˈsəʊʃˀl ɪnˈʃɔːrˀns ˌɪnstɪˈtʃuːʃˀn

Zakład Ubezpieczeń Społecznych
sole proprietorship (n. U) səʊl prəˈpraɪətəʃɪp

jednoosobowa działalność gospodarcza
source of financing (n. C) sɔːs əv faɪˈnænˢsɪŋ

źródło finansowania
specified objectives (n. plural) ˈspesɪfaɪd əbˈdʒektɪvz

szczegółowe cele
start an activity (phrase) stɑːt ən ækˈtɪvəti

rozpocząć działalność
start production (phrase) stɑːt prəˈdʌkʃən

rozpocząć produkcję
statement (n. C) ˈsteɪtmənt

wyciąg
structural form (n. C) ˈstrʌktʃˀrˀl fɔːm

forma organizacyjna
tax office (n. C) tæks ˈɒfɪs

urząd skarbowy
the profitability of the project evaluation (phrase) ðə ˌprɒfɪtəˈbɪlɪti əv ðə ˈprɒdʒekt ɪˌvæljuˈeɪʃən

ocena opłacalności przedsięwzięcia
the purchase of land (n. C, U) ðiː ˈpɜːtʃəs əv ˌlænd

zakup ziemi
the purpose of the loan (n. C) ðiː ˈpɜːpəs əv ðəː ˌləʊn

cel kredytu
tourist services (n. plural) ˈtʊərɪst ˈsɜːvɪsɪz

usługi turystyczne
transition from a system (phrase) trænˈzɪʃ°n frəm əˈsɪstəm

przechodzenie z systemu
transport (n. U) ˈtrænspɔːt

transport
type of activity (n. C) taɪp əv ækˈtɪvəti

rodzaj działalności
vision for development (phrase) ˈvɪʒən fɔː dɪˈveləpmənt

wizja rozwoju

Planning food processing

Morning check-in at the butcher's

1. Film in the standard version.

Film dostępny na portalu epodreczniki.pl

moduł 7.2

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2. Film with subtitles.

Film dostępny na portalu epodreczniki.pl

moduł 7.2

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3. Film with subtitles and pauses. Listen and repeat after the speaker.

Film dostępny na portalu epodreczniki.pl

moduł 7.2

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4. Film with subtitles and narration.

Film dostępny na portalu epodreczniki.pl

Exercise 1

Exercise 2

After watching the film decide, which of the following sentences are true, and which are false.
Po obejrzeniu filmu zdecyduj, które z poniższych zdań są prawdziwe, a które fałszywe.

	Prawda	Fałsz
The butchery must deliver a large order for an important customer.	◯	◯
The butchery is supposed to prepare one group of products from their range of lunch meats.	◯	◯
The raw materials haven't been delivered from the meat production department.	◯	◯
Beef and pork are already after cutting.	◯	◯
Cured raw materials must be first washed.	◯	◯
Hams will be formed in the meat netting.	◯	◯
The sausage meat mustn't be chopped in a meat grinder.	◯	◯
All sausage meat must be chopped evenly.	◯	◯

Exercise 3

After watching the film, fill in the gaps in the sentences with correct adjectives or adverbs. Po obejrzeniu filmu uzupełnij luki w zdaniach odpowiednim przymiotnikiem lub przysłówkiem.

It is very _____!

We need to remove _____ salt.

There is a _____ process when making homogenised sausages.

It should be subjected to the _____ thermal treatment.

It is _____ regulated by national and EU regulations.

You mentioned a lot of _____ ingredients.

We will fill _____ casings with the stuffing.

The products we prepare will be subjected to settling, and then to the _____ thermal treatment.

longing | closely | easy | initiative | final | natural | finale | easilingly | differently | differ | different | finally | closing | initial | easily | longingly | longer | excessively | nature | naturally | close | excessive | initially | excess

Milk and milk products

Film dostępny na portalu epodreczniki.pl

moduł 7.2, Milk, right after milking, should be cooled to 4-6 °C. Milk is transported from the producers to the dairy in tankers equipped with a refrigeration system. In the dairy temperature, acidity, density, cleanness and smell are evaluated. Also, a test for adulteration is run. Laboratory tests of milk composition include fat, protein, inhibitory substances and microbiological and cytological quality. The scope and methods of testing are defined by the "Milk and milk products" standard. Raw milk is normalized, i.e. part of fat is subtracted. As a result of heat treatment, pasteurized milk or UHT is produced. They are packed in foil bags, glass or plastic bottles and cardboard boxes. Milk drinks: yoghurt, kefir and curd, are produced by fermentation using active cultures of bacteria, including probiotic bacteria. Cream is formed by centrifuging of fat from fresh milk. Subjecting it to the process of souring leads to the formation of sour cream. Butter is made by churning cream or sour cream. Butter-like products contain additional plant oils in various proportions.Cheese is made by separating curd from milk, which is then subjected to further processing. We divide cheese into: cottage, rennet, ripening and processed cheese.

Exercise 4

After watching the voiced animation, complete the sentences with correct prepositions. Use the word bank. Po obejrzeniu animacji z lektorem, uzupełnij luki w zdaniach odpowiednimi przyimkami. Skorzystaj z banku słów.

Milk is transported from the producers [ ] the dairy.

It is transported [ ] tankers.

These tankers are equipped [ ] a refrigeration system.

Also, a test [ ] adulteration is run.

Raw milk is normalized, i.e. part [ ] fat is subtracted.

Milk drinks: yoghurt, kefir and curd, are produced [ ] fermentation.

Cream is formed by centrifuging of fat [ ] fresh milk.

from | by | of | to | in | for | with

Homemade strawberry preserve

Film dostępny na portalu epodreczniki.pl

moduł 7.2

Storing pome fruit

A conversation between two harvesters (S) on dealing with a group of pome fruit (apples, pears). The interlocutors exchange opinions on the possibility of keeping fruit in the cold store, selling part of the crop immediately after harvest and processing it into juice.

S1: Hello, neighbour.

S2: How are you doing, are you getting ready for the harvest of apples and pears?

S1: Yes, yesterday we started harvesting in our orchard.

S2: So early?

S1: I cultivate varieties of different ripening times: from summer to late-autumn and winter.

S2: I only have late varieties of apples in my orchard, intended for ripening in a cooler with a controlled atmosphere. Apples and pears are climacteric fruits so they can ripen after harvest.

S1: Well, your cooler is equipped with a modern cooling chamber. It gives you the ability to regulate the temperature, oxygen content and carbon dioxide.

S2: Yes, as a result, I sell fruit in spring when prices are high.

S1: Does the maintenance of such a cooler require special rules?

S2: The laws regulate them. There must be a suitable sensor in the room and the door can be opened from the inside and from the outside.

S1: I, in turn, have no possibility of storing fruit, but I process some of the harvest. I sell the rest directly on the farm.

S2: How do you process them?

S1: I have a small juice press. I dry some in a chamber dryer.

S2: Is it worth it?

S1: Yes, I preparedry fruit for market in small packages and sell them at a very good price.

S2: What about the juices?

S1: I pasteurize them, pour them into foil bags in cartons and sell them in this form.

S2: What do you do with the waste that is generated when juice is being pressed?

S1: They are disposed of in an agricultural biogas plant, where they are turned into renewable energy.

S2: Pome fruit utilising can take place in many ways.

S1: And it also brings additional benefits to the environment!

> **Exercise 5**

Announcement of a fruit and vegetable processing company

The text is a press release of a fruit and vegetable processing company. It contains the specified types and species of fruits and vegetables, including their mass and delivery date, information on the ways of receipt and payment.

ALIMAR is looking for fruit and vegetable suppliers.

Alimar is a family business founded in 1991. Thanks to consistently implemented investments, today Alimar is a modern plant in fruit and vegetable processing. We produce frozen foods, salads, jams, marmalades, preserves and nectars. The production meets with the highest European standards. The company has partners in the domestic and European market. The sales dynamics of the company's products have shown a great increase, leading to further investment.

The company will buy any quantity of:

- fruit: berry fruits, pitted fruits, pome fruits;

- vegetables: onion, cucurbits, brassica, root, leafy, nightshade, pulses.

The company guarantees: receipt by its own transport, quick and reliable payment for products which have been delivered, as well as cultivation contracts. We supply our own packaging (crates, cartons, bags).

It is possible to negotiate prices.

We need healthy products without physical damage, with an even and smooth shape, smooth surface, smooth and even color, and a small amount of inedible parts. An adequate degree of ripeness is required. We also offer juice pressing from the fruits and vegetables provided by the customer. Juices are packed in plastic bags with a tap.

Contact: Alimar Company Marketing department

Tel.

E-mail address

Web page

Will this flour make bread?

The conversation between the owner of the bakery (P) with the miller (M) on the types of flour. The baker needs flour to bake bread. The miller explains flour labelling, the cereal species from which it is produced. He also advises which supplements should be used for baking.

M: Hello. How can I help you?

P: I am the owner of a bakery and I would like to purchase someflour.

M: What kind of flour?

P: I need flour that can absorb a lot of water. It needs to make dough made that doesn't stick to the hands or the working elements of the machines. This would guarantee a high yield of high quality bread.

M: Our milloffers the highest quality high gluten wheat flour and rye flour.

P: How do you achieve the high quality of your products?

M: Good raw products are ground in modern grinders. Sorting the milled products allows for obtaining semolina and a few other types of flour.

P: What does the flour type depend on?

M: Flour type depends on the content of minerals and the colour connected to that content. The lower type flour is whiter and the higher type flour is darker.

P: What types are those?

M: Type 450 is the brightest one and the darkest is type 2000.

P: If I want to bake wholemeal bread, then I should use flour type 2000?

M: I would recommend meal.

P: How is it different from the ones mentioned earlier?

M: It is a whole-grain flour.

P: What does that mean?

M: It consists of whole ground grains along with bran. For wholemeal bread, I recommend adding different grains.

P: You mean cereal grains?

M: Not only cereal grains. Bakers often add buckwheat, flax, pumpkin seeds, soybeans or amaranthus to the flour.

P: Does that improve the quality of the bread?

M: Such supplements are often healthy or improve the taste.

P: Do I need natural supplements as I make bread without dough enhancers?

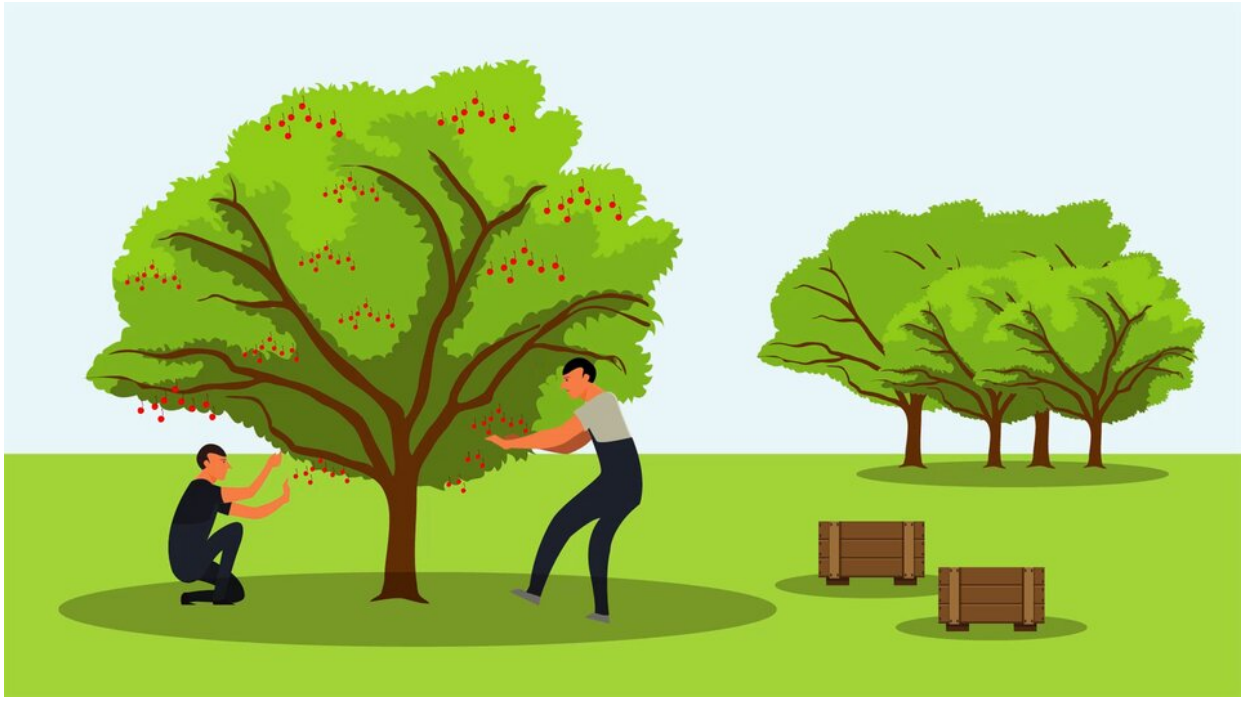
M: If you care about the health value of your products, I recommend spelt flour and one from ecological grains.

P: I would gladly purchase such flour. I am sure it contains no pesticides residues or heavy metals.

M: Prepare the order, please. We will try to deliver all the products to you quickly.

Cherry juice production

Based on the audio-video sequence , decide whether the following statements are true or false



Film dostępny na portalu epodreczniki.pl

moduł 7.2

Exercise 6

Based on the audio-video sequence , decide whether the following statements are true or false
Na podstawie sekwencji audio-wideo podejmij decyzję, czy to prawda czy fałsz

	Prawda	Fałsz
Cherries should only be harvested when they are at their most ripe.	◯	◯
Fruits with pits are crushed to pulp.	◯	◯
After initial selection and washing in the processing plant, the fruits are cooled to + 20 ° C.	◯	◯
After harvest , fruit should reach the dairy as soon as possible.	◯	◯
Sorting is intended to remove contaminated, rotten, moldy or scalded fruit.	◯	◯
Fruits are finely ground.	◯	◯
Warming the pulp improves dye extraction.	◯	◯
The juice obtained can be pasteurized after the seasoning and standardization.	◯	◯
Depectinisation of pulp is designed to remove fat.	◯	◯

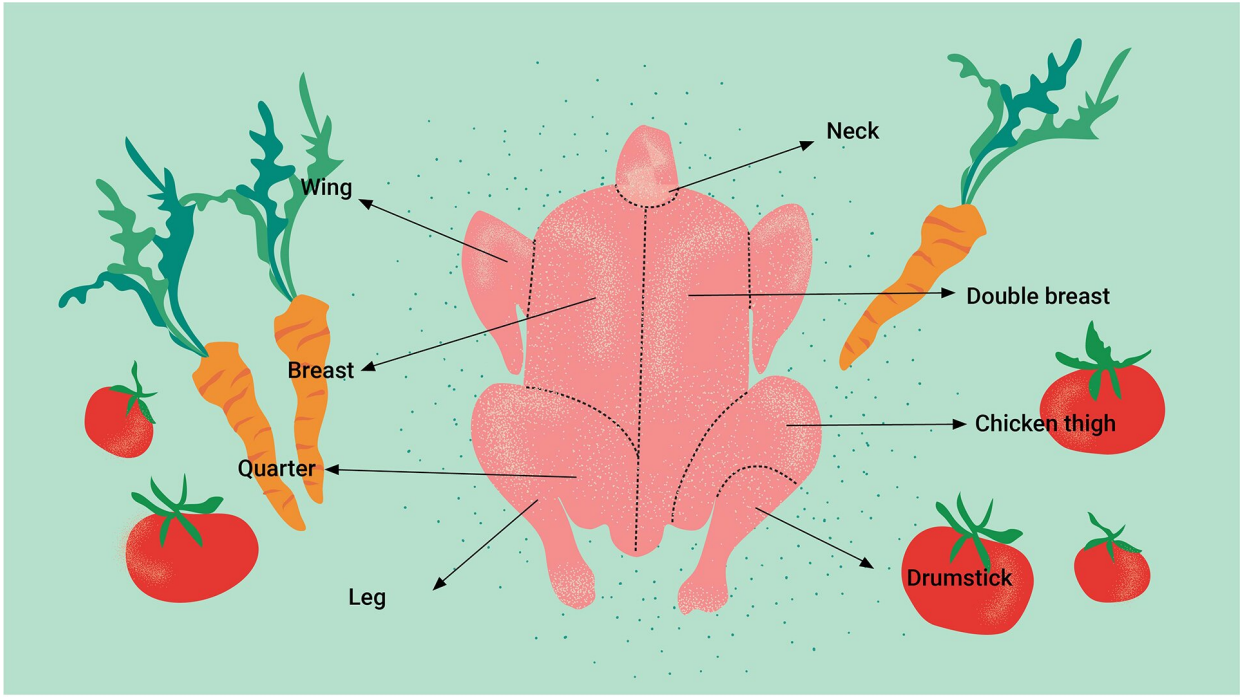
Exercise 7

Watch an audio-video sequence and match the Polish terms to their English equivalents. Po obejrzeniu sekwencji audio-wideo połącz polskie terminy z ich angielskimi odpowiednikami.

pestka	pasteurisation
pasteryzacja	press
drylownica	clarifying
doprawienie	seasoning
ekstrakcja	stone
filtrowanie	normalization
depektynizacja	depectinization
prasa	extraction
normalizacja	stoner
klarowanie	filtering

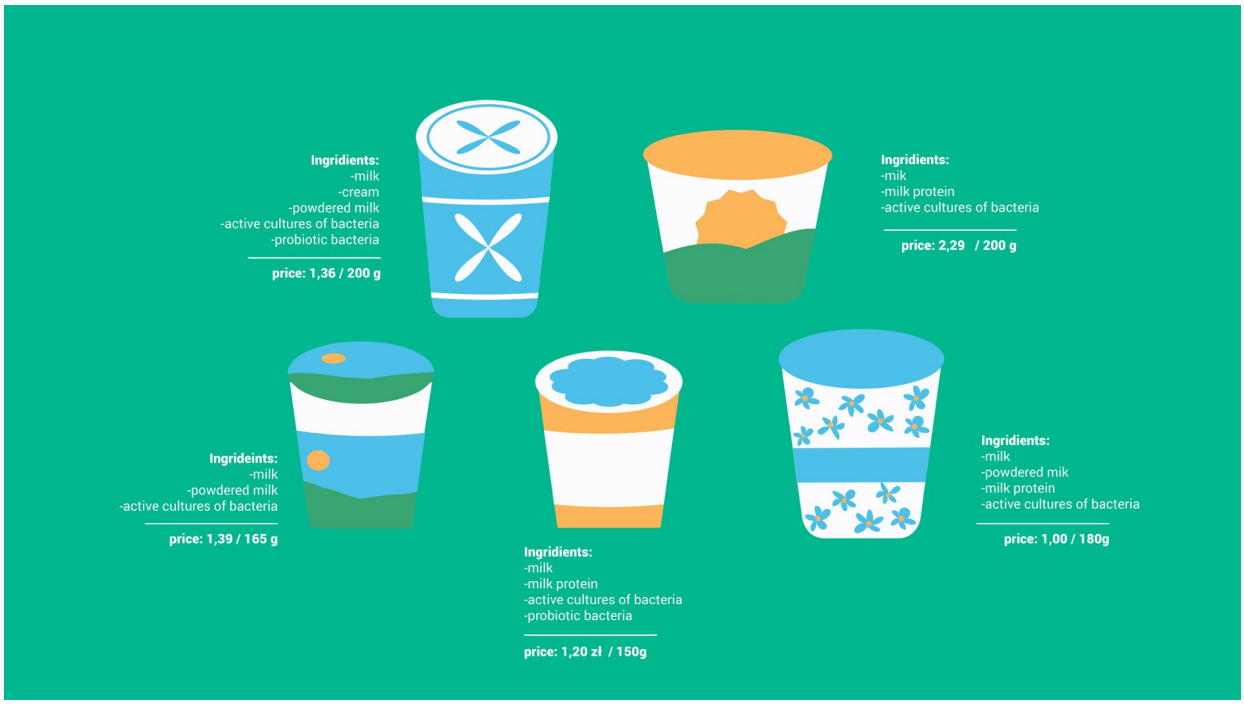
Pictures

Look at the poultry carcass. Read and remember the names of its main parts.



Name the fruit and products obtained from them. Do you know any other ones?

Name the ingredients of individual yoghurts. Compare their price, weight, content



Game

Zasób interaktywny dostępny pod adresem https://zpe.gov.pl/a/DbU6MKyjc

Dictionary

acidity (n. U) əˈsɪdəti

kwasowość
active cultures of bacteria (n. plural) ˈæktɪv ˈkʌltʃəz ɒv bækˈtɪəriə

żywe kultury bakterii
amaranthus (n. U) ˈæməˌrænˈθəs

amarantus
antioxidant (n. C) ˌæntiˈɒksɪdənt

przeciwutleniacz
bakery (n. C) ˈbeɪkəri

piekarnia
berry (adj.) ˈberi

jagodowe
biogas plant (n. C) ˈbaɪəʊˌgæs ˌplɑːnt

biogazownia
bran (n. U) bræn

otręby
brassica (adj.) ˈbræsɪkə

kapustne
buckwheat (n. U) ˈbʌkwiːt

gryka
butcher's (n. C) ˈbʊtʃərz

masarnia
butter-like product (n. C) ˌbʌtəˈlaɪk ˈprɒdʌkt

produkt masłopodobny
casing (n. C, U) ˈkeɪsɪŋ

osłonka
chamber dryer (n. C) ˌtʃeɪmbə ˈdraɪə

komorowa suszarnia
churning (n. U) tʃɜːnɪŋ

zmaślanie
climacteric fruit (n. C, U) klaɪˈmæktərɪk ˌfruːt

owoce klimakteryczne
cold room (n. C) ˌkəʊld ‘ruːm

komora chłodnicza
cold store (n. C) ˌkəʊld ˈstɔː

chłodnia
colorant (n. C) ˈkʌlərənt

barwnik
controlled atmosphere (n. singular) kənˈtrəʊld ˈætməsfɪə

kontrolowana atmosfera
cook (v.) kʊk

gotować
cottage cheese (n. C, U) ˌkɒtɪdʒ ˈtʃiːz

sery twarogowe
crate (n. C) kreɪt

skrzynka
cucurbit (adj.) kju'kɜːbɪt

dyniowate
curd (n. U) kɜːd

skrzep
curing (n. U) kjʊərɪŋ

peklowanie
cytological quality (n. U) ˌsaɪtəˈlɒdʒɪkᵊl ˈkwɒlətɪ

jakość cytologiczna
dairy (n. C) ˈdeəri

mleczarnia
enhancer (n. C) ɪnˈhɑːn.sə

polepszacz
fermentation (n. U) ˌfɜːmenˈteɪʃᵊn

fermentacja
fine-mincing (n. U) faɪn ˈmɪnˈsɪŋ

kutrowanie
flour (n. U) flaʊə

mąka
frozen food (n. C, U) ˌfrəʊzᵊn ˈfuːd

mrożonka
grinding (n. U) ˈgraındıŋ

mielenie
high gluten (adj.) haı ˈgluːtᵊn

wysokoglutenowy
hulling/destemming (n. U) ˈhʌlıŋ / ˌdiːˈstemıŋ

odszypułkowanie
ingredient (n. C) ınˈgriːdiənt

składnik
leafy (addj.) ˈliːfı

liściaste
lunch meat (n. U) lʌntʃ miːts

wędlina
meat cutting (n. U) miːt ˈkʌtıŋ

rozbiór
meat grinder (n. C) miːt ˈgraındə

wilk
meat netting (n. U) miːt ˈnetıŋ

siatka wędliniarska
microbiological quality (n. U) ˌmaıkrəʊbaıəˈlɒdʒıkᵊl ˈkwɒlətı

jakość mikrobiologiczna
mill (n. C) mıl

młyn
milled product (n. C) ˌmıldˈprɒdʌkts

mlewo
nectar (n. U) ˈnektə

nektar
nightshade (adj.) ˈnaıtʃeıd

psiankowate
normalization (n. U) ˌnɔːməlaıˈzeıʃᵊn

normalizacja
onion (adj.) ˈʌnjən

cebulowe
package (v.) ˈpækɪdʒ

konfekcjonować
pausterize (v.) ˈpɑːstʃəraɪz

pasteryzować
pasteurized milk (n. U) ˈpæstʃ°raɪzd mɪlk

mleko pasteryzowane
pome fruit (n. C, U) ˌpəʊm ˈfruːt

owoce ziarnkowe
powidl (n. U) ˈpɔvidəl

powidła
preserve (n. C, U) prɪˈzɜːv

konfitura
probiotic bacteria (n. plural) ˌprəʊbaɪˈɒtɪk bækˈtɪəriə

bakterie probiotyczne
processed cheese (n. C, U) ˌprəʊsest ˈtʃiːz

sery topione
renewable energy (n. C, U) rɪˈnjuːəbl ˈenədʒi

energia odnawialna
rinse (v.) rɪns

płukać
ripening rennet cheese (n. C, U) ˈraɪpənɪŋ ˌrenɪt ˈtʃiːz

sery podpuszczkowe dojrzewające
roller mill (c. U) ˈrəʊlə mɪl

mlewnik
semolina (n. U) ˌsem°lˈiːnə

kasza manna
settling (n. U) ˈsetlɪŋ

osadzenie
smoke (v.) ‘sməʊk

wędzić
smoked meat (n. U) sməʊkt miːt

wędzonka
souring (n. U) ˈsaʊəˈɪŋ

ukwaszenie
spelt (n. U) spelt

orkisz
stone (adj.) stəʊn

pestkowe
strawberry preserve (n. C, U) ˈstrɔːbᵊri prɪˈzɜːv

konfitura truskawkowa
stuffing (n. U) ˈstʌfɪŋ

farsz
test for adulteration (n. C) test fɔːʳ əˌdʌltəˈreɪʃᵊn

próba na zafałszowanie
thermal treatment (n. C, U) ˈθɜːməl ˈtriːtmənt

obróbka termiczna
thickener (n. C, U) ˈθɪkənə

zagęstnik
UHT (adj.) ˌjuːeɪtʃˈtiː

UHT
vaporize (v.) 'veɪpəraɪz

odparować
whole-grain (adj.) ˈhəʊlgreɪn

pełny przemiał
wholemeal (adj.) ˈhəʊlmiːl

razowy

Bookkeeping and preparing tax statements of the company in agribusiness

Financial analysis of a company

1. Film in the standard version.

Film dostępny na portalu epodreczniki.pl

moduł 7.3

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2. Film with subtitles.

Film dostępny na portalu epodreczniki.pl

moduł 7.3

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3. Film with subtitles and pauses. Listen and repeat after the speaker.

Film dostępny na portalu epodreczniki.pl

moduł 7.3

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4. Film with subtitles and narration.

Film dostępny na portalu epodreczniki.pl

moduł 7.3

Exercise 1

Answer the question based on the film “Company financial analysis” Po obejrzeniu filmu połącz polskie terminy z ich angielskimi odpowiednikami

balance	kapitał
liabilities	kapitał własny
capital	bilans
financial status	sprawozdanie finansowe
assets	sytuacja finansowa
financial statements	zysk
accounting year	pasywa
private equity	rok obrachunkowy
costs	koszty
profit	aktywa

Calculation of pork livestock production

Film dostępny na portalu epodreczniki.pl

moduł 7.3, Direct costs are costs that without a doubt can be classified to a specific business activity and their amount is proportional to the production scale. In the case of pork livestock production, direct costs include purchased feed, costs of feed produced on-farm with a commodity potential, veterinary services and purchase of a piglet. Income are the finances coming into the company from sale of products, goods, net services, (without VAT) or other operations which are a part of the basic business activities of the company within a specific accounting period. Direct surplus - it is the production value less the direct costs incurred during that production. Indirect costs mean those costs that cannot be assigned to a specific business activity. Indirect costs in the production of pork livestock include: amortization, which is the depreciation of fixed assets, costs of paid work and other costs, f. ex. insurance costs, taxes, energy. Total costs are a sum of direct and indirect costs. Net agricultural income - is a direct surplus minus the direct cost. The workload of the farmer is not included in the calculation. The remuneration for their work is a part of the agricultural income.

Exercise 2

Familiarize yourself with the animation and match the Polish terms to their English equivalents. Po zapoznaniu się z animacją, połącz polskie terminy z ich angielskimi odpowiednikami

direct costs	koszty bezpośrednie
production scale	skala produkcji
Total costs	dobra
net services	Dochód rolniczy netto
feed produced on-farm with a commodity potential	Nadwyżka bezpośrednia
Indirect costs	usługi netto
Direct surplus	pasz własnych potencjalnie towarowych
Income	Koszty całkowite
goods	Koszty pośrednie
Net agricultural income	Przychód

The company’s assets and their financing sources

Film dostępny na portalu epodreczniki.pl

moduł 7.3

> **Exercise 3**

Financial statement

The hypertext is a description of financial statement elements

Financial statement consists of three basic elements: balance, profit and loss statement and additional information.

Balance shows the assets in the company possession and the financing sources of those assets (liabilities).

Profit and loss statement shows income, costs, profit and loss. The elements of the profit and loss statement must be shown in order and way specified by the Act. Income is divided into:

- income from operations,

- other operational income

- financial income.

Income from operations included:

- income from sales of products -finished goods, intermediate products or services and work, income from material sales

- occurring when unused reserve of materials is sold.

Costs are divided into:

- operational costs,

- other operational costs,

- financial costs.

Operational costs include:

- consumption of materials and energy,

- remuneration (but only for employees connected with production),

- amortization,

- outsources services,

- social security.

Other operational income and costs are connected with:

- sale of the fixed assets,

- intangible assets,

- with damages,

- fines,

- with donations.

The company can also conduct financial activities. Financial income consist of:

- dividends,

- interest rates on investment accounts and granted loans,

- exchange gains

Positive difference between income and costs means that there is a profit. If the difference is negative, then the company incurred a loss.

> **Exercise 4**

The inspection report

Text contains recommendations regarding the document workflow in the company. Due to finding some irregularities during an inspection, the inspecting body has issued recommendations that can be used both in traditional and modern (electronic) document workflow.

Due to finding irregularities in document workflow andstorage in your company, the following rules are recommended:

- saving documents in one specific area ;

- setting up one method for naming documents. Additionally, to facilitate the viewing of documents, it is best to create widely accepted keyphrases - shortcuts/symbols - in order to classify in a faster and easier way:

- adding the date to the document name, - proper organization of documents

-creating one folder for documents relating to one particular area,

- creating backup copies of documents. Keeping back-up copies in the so-called cloud should also be considered.

The dynamic development of your company allows to predict that the number of documents entering your company will be increasing. Therefore, we recommend purchasing a professional software or application supporting theelectronic document workflow in the company.

The additional benefits are:

lowering the operational costs,

improving work in the company,

optimization of information workflow,

process monitoring at all stages, minimizing the risk of their loss,

and saving time. The workplace is obliged to keep in the archive for 50 years the personal records, payrolls, payroll cards, contracts and bills for commissioned work, with social security, which is used to calculate the pension or retirement pension basis. Documents which are not accounting documents can be stored for 5 years.

The market situation for sugar

Farmers talk about the perspectives of sugar beet cultivation in the context of foreign trade. The farmers debate about whether or not they should increase the area of beer cultivation as the price of beet roots is falling. It might be due to an increase of imported sugar from South America, made from sugarcane.The farmers conclude that the situation on the international markets has a direct influence on their decisions.

- Good morning neighbour.

- Morning. What's new?

- I'm just returning from the meeting of the sugar beet producers group.

- What perspectives does that trade have?

- It isn't good. The national production of sugar is still on a downward trend.

- What's the reason for this?

- It is the effect of an increase of cane sugar imported from South America, the price of which is competitive towards beet sugar.

- Why?

- The workforce is cheaper there and the manufacturing costs of the raw material are different.

- And you have invested in new combine harvester...

- Yes, I took out a loan, and the machine is only working for a few days a year.

- So its value is decreasing despite that it is not exploited.

- Yes, its moral wear is greater than itswear and tear.

- Maybe you should offer some harvesting services?

- I did that last year and the income was smaller than the fuel, repair, servicing and insurance costs. That activity was not profitable and I had incurred a loss.

- Did you do it yourself?

- No, as a part of a business activity, I have hired a combine harvester operator using a contract for mandate.

- Isn’t conducting business activity complicated?

- No, finances and documentation are handled by my daughter who has an accounting office. She handles accountancy, personal and property insurance, financial liabilities,and taxes.

- Is she handling it well?

- Perfectly! Not long ago, I had an inspection from the National Labour Inspectorateand it turned out that all of the documents regarding employment and salary calculation were in perfect order.

- And what does your son do?

- He is also supporting my business. He takes care of marketing, customer relations and raw material deliveries.

- You have turned a small farm into a real business!

- Actually it is just a small family business, but I have plans for its further development.

Exercise 5

After reading the hypertext document translate the words and expressions.Po przeczytaniu dokumentu hipertekstowego przetłumacz słowa i zwroty

took out a loan	księgowość
contract for mandate	koszty wytwarzania
manufacturing costs	grupy producentów
customer relations	siła robocza
trade	zaciągnąć kredyt
workforce	kontakt z klientem
producers group	branża
accountancy	umowa-zlecenie

Exercise 6

Match the words with their definitions Dopasuj wyrazy do definicji

.... – is the production value from 1 hectare of crops or of one animal less the direct costs incurred during that production. [ ]

.... – is the sum of direct and indirect costs. [ ]

.... shows the income, costs, profit and loss. [ ]

.... is a basic tool used to record business events. [ ]

..... is the sum of entries on one side of the statement. [ ]

.... is the difference between turnovers on both sides of the account [ ]

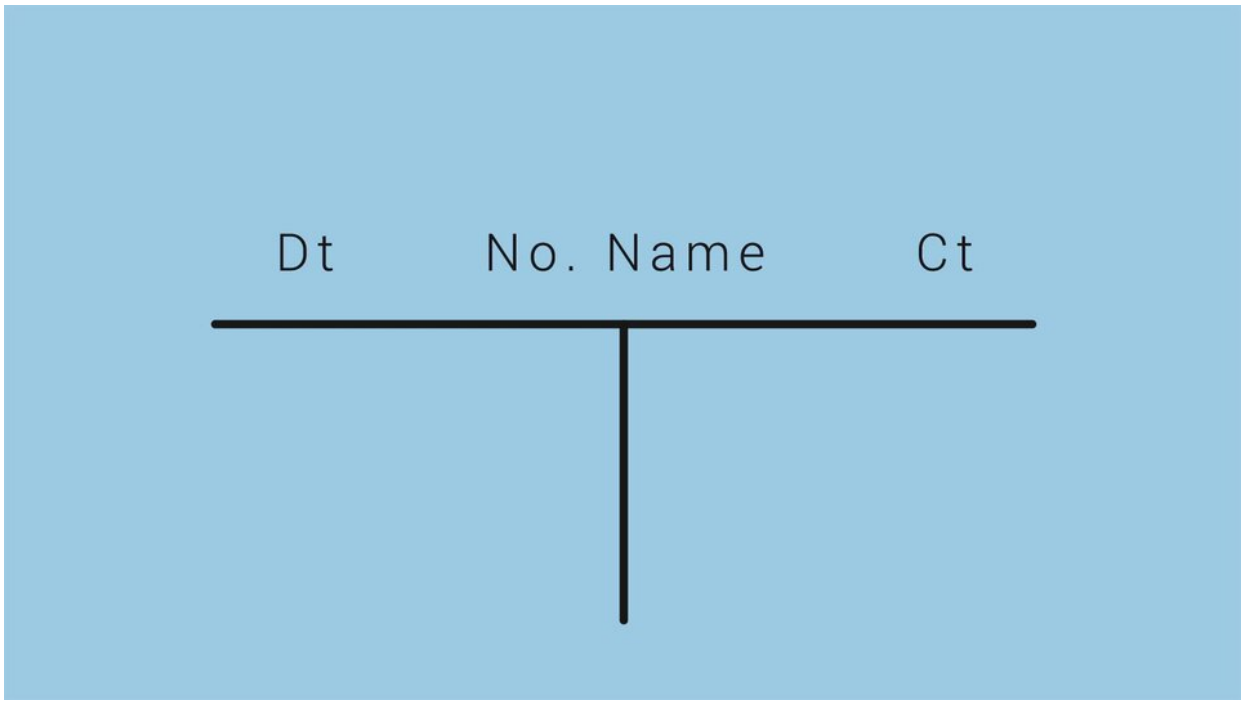
.... are the accounts used to record the elements of the balance. [ ]

.... is the balance on the account at the end of a period. [ ]

..... are finances entering the company from the sale of products, goods, net services (without VAT), or other operations which are a part of the basic business activities of the company within a specific accounting period. [ ]

turnover | opening balance | payables | profit and loss statement | intangible assets | production value | direct surplus | account balance | company shares | total costs | closing balance | wear and tear | opening balance | fixed assets | direct surplus | the right of perpetual usufruct of land | income | current assets | foreign capital | closing balance | net agricultural business | balance | treasury bonds | indirect cost | balance sheet accounts | post-inspection report | accounting ledger

Basic information about account ledgers together with their division.



Film dostępny na portalu epodreczniki.pl

moduł 7.3

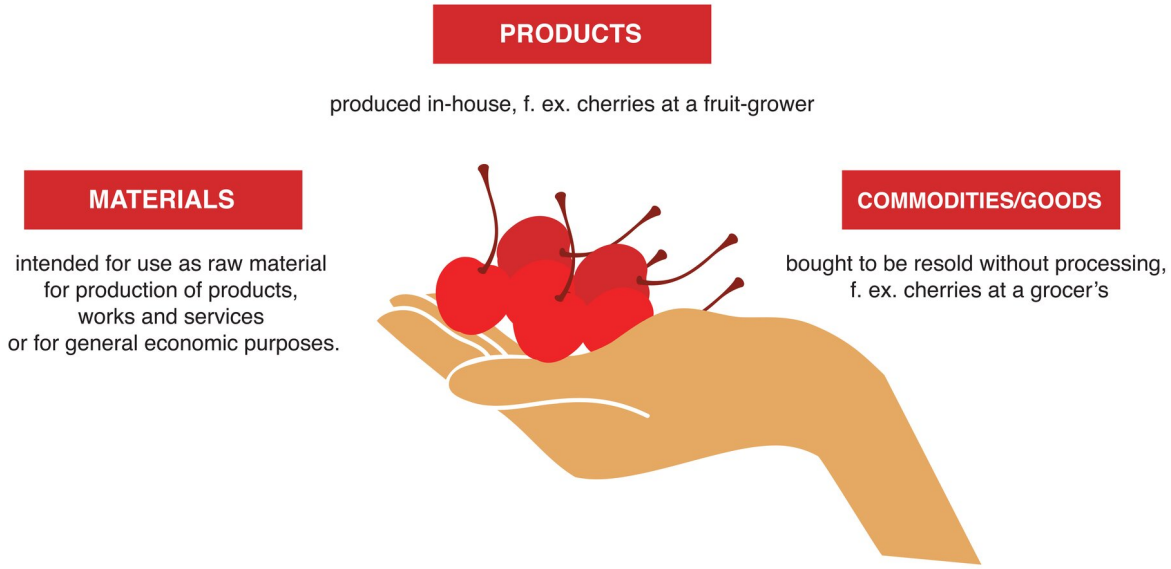
Exercise 7

On the basis of the audio-visual material, choose the right answer. Na podstawie materiału audio-video dokonaj właściwych odpowiedzi

	Prawda	Fałsz
An account ledger is a basic tool used for recording business events.	◯	◯
Account ledgers are graphically represented by the letter U.	◯	◯
The right side of the statement is called “Debit,” Dr in short.	◯	◯
Recording an operation on the Cr side is called debiting or charging the account.	◯	◯
The sum of entries on one side of the account is called turnover.	◯	◯
The account balance is the difference between turnovers on both sides of the statement.	◯	◯
Opening balance (OB in short) is the balance on the account at the end of a given period.	◯	◯
Accounts used for recording the elements of the balance are called balance sheet accounts.	◯	◯
Debit accounts are used to record the values of assets.	◯	◯

Pictures

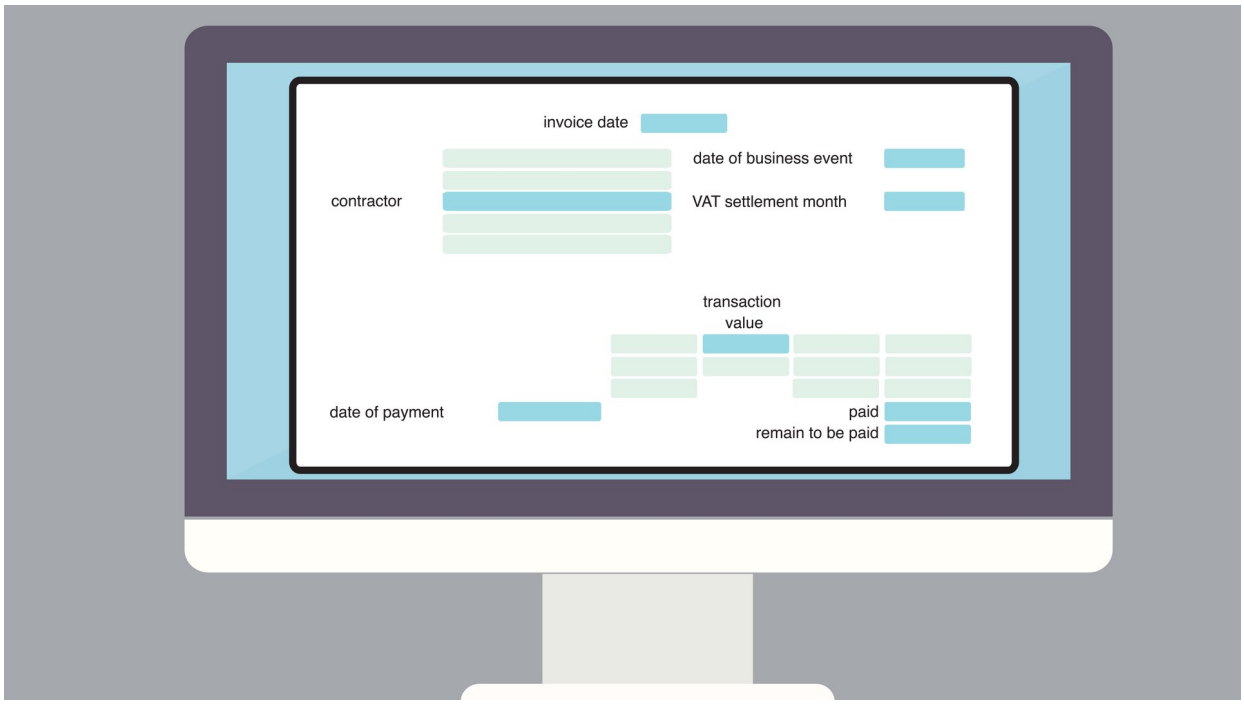
Familiarize yourself with the content of the picture.



Translate the names of individual elements of profit and loss statement visible on the figure into Polish.

PROFIT AND LOSS STATEMENT
A. Net revenues from the sale of products, services, goods and materials.
B. Costs of sold products, services, goods and materials.
C. Cost of sales
D. General administrative expenses
E. Profit (loss) from sales (A-B-C-D)
F. Other operating profit
G. Other operating costs
H. Financial income
I. Financial costs
J. Gross profit (loss) (E+F+G+H-I)
K. Income tax
L. Net profit (loss) (J-K)

Look at the photo and read the terms used in the accounting software



Game

Zasób interaktywny dostępny pod adresem https://zpe.gov.pl/a/DNVBjDE0V

Dictionary

account balance (n. C) əˈkaʊnt ˈbæləns

saldo konta
account ledger (n. C) əˈkaʊnt ˈledʒə

konto księgowe
accountancy (n. U) əˈkaʊntənsi

księgowość
accounting document (n. C) əˈkaʊntɪŋ ˈdɒkjəmənt

dowód księgowy
accounting office (n. C) əˈkaʊntɪŋ ˈɒfɪs

biuro rachunkowe
accounting year (n. C) əˈkaʊnʈɪŋ jiə

rok obrachunkowy
amortization (n. U) əˌmɔːtaɪˈzeɪʃᵊn

amortyzacja
asset (n. C) ˈæset

składnik aktywów
assets (n. C, usually plural) ˈæsets

aktywa, składniki majątku
backup copy (n. C) ˈbækʌp ˈkɒpi

kopia zapasowa
balance (n. C) ˈbæləns

bilans
balance sheet account (n. C) ˈbæləns ʃiːt əˈkaʊnt

konto bilansowe
bill (n. C) bɪl

rachunek
business event (n. C) ˈbɪznɪs ɪˈvent

zdarzenie gospodarcze
business operation (n. C) ˈbɪznɪs ˌɒpərˈeɪʃən

operacja gospodarcza
capital (n. U) ˈkæpɪtəl

kapitał
charging an account (phrase) ˈtʃɑːdʒɪŋ æn əˈkaʊnt

obciążenie konta
closing balance (n. C) ˈkləʊzɪŋ ˈbæləns

saldo końcowe
commissioned work (n. C, U) kəˈmɪʃənd wɜːk

prace zlecone
company assets (n. C, usually plural) ˈkʌmpəni ˈæsets

majątek przedsiębiorstwa
competitive (adj.) kəmˈpetɪtɪv

konkurencyjny
contract (n. C) ˈkɒntrækt

umowa
contract of mandate (n. C) ˈkɒntrækt ɒv ˈmændeɪt

umowa-zlecenie
cost (n. C) kɒst

koszt
credit (n. C, U) ˈkredɪt

kredyt
credit account (n. C) ˈkredɪt əˈkaʊnt

konto pasywne
crediting an account (phrase) ˈkredɪtɪŋ æn əˈkaʊnt

uznanie konta
current assets (n. C, usually plural) ˈkʌrənt ˈæsets

aktywa obrotowe
customer relations (n. plural) ˈkʌstəmə rɪˈleɪʃənz

kontakty z klientami
damages (n. plural) ˈdæmɪdʒɪz

odszkodowania
debit (n. C, U) ˈdebɪt

debet, ciężar konta, winien
debit account (n. C) ˈdebɪt əˈkaʊnt

konto aktywne
direct cost (n. C) daɪˈrekt kɒst

koszt bezpośredni
direct surplus (n. C, U) daɪˈrekt ˈsɜːpləs

nadwyżka bezpośrednia
dividend (n. C) ˈdɪvɪdend

dywidenda
document storage (n. U) ˈdɒkjəmənt ˈstɔːrɪdʒ

przechowywanie dokumentów
document workflow (n. C, U) ˈdɒkjəmənt ˈwɜːkfləʊ

obieg dokumentów
donation (n. C) dəʊˈneɪʃən

darowizna
electronic document workflow (n. C, U) ɪˌlekˈtrɒnɪk ˈdɒkjəmənt ˈwɜːkfləʊ

elektroniczny obieg dokumentów
exchange rate difference (phrase) ɪksˈtʃeɪndʒ reɪt ˈdɪfərəns

różnica kursowa
feed produced on-farm with a commodity potential (phrase) fiːd prəˈdjuːst ˈɒnfɑːm wɪð ə kə ˈmɒdəti pəˈtenʃəl

pasze własne potencjalnie towarowe
financial activity (n. C, U) faɪˈnænʃəl ækˈtɪvəti

działalność finansowa
financial statement (n. C) faɪˈnænᵗʃᵊl ˈsteɪtmənt

sprawozdanie finansowe
financial situation (n. C) faɪˈnænᵗʃᵊl ˌsɪtʃuˈeɪʃᵊn

sytuacja finansowa
finished goods (n. plural) ˈfɪnɪʃt gʊdz

wyroby gotowe
fixed assets (n. C, usually plural) fɪkst ˈæsets

aktywa trwałe, środki trwałe, majątek trwały
for credit (phrase) fɔː ˈkredɪt

dobro konta

foreign capital (n. U) ˈfɒrɪn ˈkæpɪtəl

kapitał obcy
goods (n. plural) gʊdz

dobra
import (n. C, U) ˈɪmpɔːt

import
income (n. C, U) ˈɪŋkʌm

przychód
indirect cost (n. C) ˌɪndaɪˈrekt kɒst

koszt pośredni
information flow (n. C, U) ˌɪnfəˈmeɪʃən fləʊ

przepływ informacji
intangible assets (n. C, usually plural) ɪnˈtændʒəbl ˈæsets

wartości niematerialne i prawne
intermediate product (n. C) ˌɪntəˈmiːdiət ˈprɒdʌkt

półprodukt
investment (n. C) ɪnˈvestmənt

inwestycja, lokata
liabilities (n. C, usually plural) ˌlaɪəˈbɪlətiz

pasywa
liability (n. C) ˌlaɪəˈbɪləti

składnik pasywów
manufacturing cost (n. C) ˌmænjəˈfæktʃərɪŋ kɒst

koszt wytwarzania
marketing (n. U) ˈmɑːkɪtɪŋ

marketing
moral wear (n. U) ˈmɒrəl weə

zużycie moralne
net agricultural income (n. C, U) net ˌægrɪˈkʌltʃərəl ˈɪŋkʌm

dochód rolniczy netto
net service (n. C, U) net ˈsɜːvɪs

usługa netto
opening balance (n. C) ˈəʊpənɪŋ ˈbæləns

saldo początkowe
operation (n. C) ˌɒpərˈeɪʃən

działalność operacyjna
operational costs (n. plural) ˌɒpərˈeɪʃənəl kɒsts

koszty operacyjne
outsourced service (n. C) ˈaʊt.sɔːst ˈsɜːvɪs

usługa obca
paid work (n. U) peɪd wɜːk

praca najemna
payables (n. C, usually plural) ˈpeɪəbəls

zobowiązania
payroll (n. C) ˈpeɪrəʊl

lista płac
payroll card (n. C) ˈpeɪ.rəʊl kɑːd

karta wynagrodzeń
pension (n. C) ˈpenʃən

renta
private equity (n. C, U) ˈpraɪvɪt ˈekwɪti

kapitał własny
process monitoring (n. U) ˈprəʊses ˈmɒnɪtərɪŋ

monitorowanie procesów
producers group (n. C) prəˈdjuːsəz gruːp

grupa producentów
production scale (n. C, U) prəˈdʌkʃən skeɪl

skala produkcji
production value (n. C, U) prəˈdʌkʃən ˈvæljuː

wartość produkcji
profit (n. C, U) ˈprɒfɪt

zysk
profit and loss statement (n. C) ˈprɒfɪt ænd lɒs ˈsteɪtmənt

rachunek zysków i strat
profitability (n. U) ˌprɒfɪtəˈbɪləti

rentowność
receivables (n. C, usually plural) rɪˈsiːvəblz

należności
rent (n. C, U) rent

czynsz
reserves (n. C, usually plural) rɪˈzɜːvz

zapasy
retirement pension basis (n. C) rɪˈtaɪəmənt ˈpenʃən ˈbeɪsɪs

wymiar emerytury
settlement period (n. C) ˈsetlmənt ˈpɪəriəd

okres rozliczeniowy
share capital (n. U) ʃeə ˈkæpɪtəl

kapitał podstawowy
social (adj.) ˈsəʊʃəl

socjalne
social security (n. U) ˈsəʊʃəl sɪˈkjʊərəti

ubezpieczenia społeczne
supplementary capital (n. U) sʌplɪˈmentəri ˈkæpɪtəl

kapitał zapasowy
take out a loan (phrase) teɪk aʊt ə ləʊn

zaciągnąć kredyt
tangible fixed assets (n. C, usually plural) ˈtændʒəbl fɪkst ˈæsets

rzeczowe aktywa trwałe
The National Labour Inspectorate (n. C) ðiː ˈnæʃənəl ˈleɪbə ɪnˈspektərət

Państwowa Inspekcja Pracy
total costs (n. plural) ˈtəʊtəl kɒsts

koszty całkowite
trade (n. C) treɪd

branża
turnover (n. C, U) ˈtɜːnˌəʊvə

obrót
VAT (n. C) ˌviːeɪˈtiː

podatek VAT
wear and tear (phrase) ˌweər ænd ˈteə

zużycie fizyczne
workforce (n. C) ˈwɜːkfɔːs

siła robocza

Organising plants production

Work organization during harvest

1. Film in the standard version.

Film dostępny na portalu epodreczniki.pl

moduł 16.1

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2. Film with subtitles.

Film dostępny na portalu epodreczniki.pl

moduł 7.3

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3. Film with subtitles and pauses. Listen and repeat after the speaker.

Film dostępny na portalu epodreczniki.pl

moduł 7.3

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4. Film with subtitles and narration.

Film dostępny na portalu epodreczniki.pl

moduł 16.1

Exercise 1

Watch the film “Work organization during a harvest season.” Decide, whether the following sentences are true or false. Zapoznaj się z filmem pt. „Organizacja pracy w czasie żniw”. Ustosunkuj się do zdań podejmij decyzję, czy to prawda czy fałsz.

	Prawda	Fałsz
The CEO was informed that storms were approaching.	◯	◯
The CEO was informed about the weather on the computer.	◯	◯
The pressure on the barometer rapidly grows.	◯	◯
The CEO decided to transfer all workers to work on the wheat harvest.	◯	◯
Grass is grown for seeds on the farm.	◯	◯
The CEO intends to rent an additional seeder.	◯	◯
The CEO will hire an additional contractor on the contract.	◯	◯
The farm owner is going to drive the additional tractor.	◯	◯
It is planned to apply zero tillage and direct sowing into the stubble.	◯	◯
The after-crop will enrich the soil in heavy metals.	◯	◯

Usual Good Farming Practice

Film dostępny na portalu epodreczniki.pl

moduł 16.1, Usual Good Farming Practice means management standards including environmental protection, each rational farmer should meet. Following the usual good farming practice is the condition for receiving financial support resulting from Common Agricultural Policy instruments. Fertilizers should be used and stored in a way that is safe for the environment and without causing any harm to humans or animals. Wastewater and municipal waste are used to improve the soil, but may contain heavy metals and pathogenic organisms. Special care should be taken when using them, and only those that comply with the parameters specified in regulations are to be used. The farmer may only use pesticides at his farm that have been authorized for marketing and use.Pesticides applied improperly can cause damage to plants, soil, water and air pollution and pose a risk to human and animal health.Excessive grazing can cause water pollution and permanent damage to turf. In turn, land burning is a threat of the uncontrolled spread of fire and kills many small, useful animals, thus killing the ecosystem. Farmers are required to maintain cleanliness and order on the farm and to have facilities for collection of municipal waste. Farmers whose farms are located in protected areas are obliged to comply with the recommendations and orders resulting from their conservation plans. Incompetent farming leads to soil degradation, resulting in reduction of the organic substance, deteriorates the physical, chemical, aquatic and biological soil properties. Discharging wastewater to the soil and water causes the transfer of pollutants at considerable distances. The consequence is the systematic deterioration of the quality of surface and underground waters.

The organization of row tobacco production

Film dostępny na portalu epodreczniki.pl

moduł 16.1

Exercise 2

Familiarize yourself with the animation and match the Polish terms to their English equivalents. Po zapoznaniu się z animacją, połącz polskie terminy z ich angielskimi odpowiednikami

mineral fertilization	suszenie
chemical protection	ochrona chemiczna
drying	sadzarka
buying	suszarnia
planter	nawożenie mineralne
sorting	zbiór ręczny
seedling	sortowanie
maturation of leaves	skup
dryer	dojrzewanie liści
hand collection	sadzonka

Grass seed production

A Dialogue between a farmer (F) and a representative (R) of a company working on a seed plantation contract farming market. The representative proposes to open a grass seed plantation, explains seed production technology and the rules of the seed contract; he indicates the place of the grass for seeds in the crop rotation. He encourages the farmer to cooperate by presenting additional terms of the offer.

F: Good morning.

R: Good morning. Thank you for taking the time to familiarize yourself with the proposal of our seed company.

F: I am considering the possibility of growing grass for seeds.

R: This cultivation has recently given plantation owners great economic benefits.

F: It's not just the economics that interests me. It is said that grass cultivation helps improving soil properties.

R: Yes, grass leaves a good site for successive plants.

F: What species would you suggest to me? Does it depend on the soil class?

R: Grasses grown for seeds should be sown intorich soils, fertile, not too acidic, with a thick topsoil.

F: I have a field with such properties. Recently, I have carried out maintenance of the irrigation ditch draining the excess water from this area.

R: Very good.

F: So what should I do when choosing the species?

R: The period of time which you can withdraw your field from crop rotation is important.

F: Why?

R: Grasses for seeds are usually grown in three-year cycles: one year of sowing and two years of harvest. Ryegrass is cultivated in one- and two-year short-term cycles.

F: I use crop rotation according to Good Farming Practice.

R: I suggest ryegrass.

F: I have a field where I grew peas in the last growing season. Will it be useful for grass?

R: It's a bad forerunner. There may be a lot of nitrogen in the soil, which will causelodging.

F: What are you suggesting?

R: I suggest the post after crucifer plants.

F: Could it be a rape seed field?

R: Yes of course.

F: What guarantee do I have that I will sell the crop?

R: We will sign a contract with you. An additional income will be generated by the sale of straw, which is aby-product.

F: I'm afraid that the grass seed collection will interfere with other works.

R: It won't, because the seeds are collected before the grain harvest.

F: It's a good news! With a large area of land I have to organize the use of labor and machinery properly.

Cultivation contract

The text is an example of a cultivation contract for production and delivery of rape seeds. It contains standard contract components, specifies the time it is concluded for, delivery conditions, seed quality, payments.

Cultivation contract

Concluded on 1.03.2017 in Krosno between:

MARALI Sp. z o.o [Ltd.]]

Hereinafter referred to as Contractor,

and Jan Nowak

Hereinafter referred to as the Producer.

§ 1

1. The Producer undertakes to produce and deliver to the Contractor the following agricultural product: winter rape seed coming from 6 hectares belonging to the Manufacturer by 1.08.2017.

2. The Contractor undertakes to collect the above product and pay the unit price: 1500 PLN / 1 tonne: one thousand five hundred zloty per tonne.

§ 2

Payment will be made within 14 days of delivery to the Contractor.

§ 3

1. The Manufacturer is obliged to deliver the product to the Contractor'scollection centre at his own expense.

2. The Contractor shall provide the Producer with free soil testing along with fertilizer recommendations and shall supply certified seed.

3. Sowing different seeds authorizes the Contractor to withdraw from the contract.

4. The Contractor is authorized to supervise the performance of the contract, in particular: - inspection of the plantation status, - evaluation of fat content of the seeds.

§ 4

1. The parties agree on the following responsibility rules: - for the absence of the product delivery the Producer will pay the Contractor acontractual penalty of 30% of the value of the product, - for unreasonable refusal to accept the product the Contractor will pay the Producer a contractual penalty of 30% of the value of the product.

2. The Producer is not obliged to pay a contractual penalty if failure to comply is a consequence of circumstances for which he is not liable.

3. Product crop insurance is the responsibility of the Producer.

§ 5

All the amendments to this agreement shall be made in writing or else shall be null and void.

§ 6

In matters not covered by this agreement, the provisions of the Civil Code shall apply.

§ 7

This agreement is made in two identical copies.

Contractor

Producer

> **Exercise 3**

The first day on a farm

The text presents a conversation between a student writing his thesis (D) on a large farm with an administrative secretary (S). The conversation relates to the current state of the farm, its equipment.

D: Good morning. I am happy to be able to write a thesis relating to your farm.

S: Good morning. I will gladly provide you with the information you need.

D: I am most interested in the way work on a large farm is organized.

S: What data do you need?

D: What is the surface of the farm?

S: We currently use 200 physical hectares, but it is 230 hectares in comparative fiscal hectares.

D: It means that you have good soil.

S: Yes, most of them fall into thegood wheat soil, and very good rye soilclasses. These are lands of the II and III soil class.

D: What is the land use structure?

S: The arable land occupies 180 hectares, and 20 hectares are meadows.

D: Meadows? Do you run animal production?

S: Until recently, dairy cattle were kept on the farm. The decrease in profitability caused the livestock department to be liquidated.

D: How are grasslands currently used?

S: They are harvested once a year, according to the requirements of the Good Agricultural Condition. Hay is sold.

D: What is the cultivation pattern?

S: Cereals occupy 140 hectares. They are: wheat, barley and maize for grain. The remaining surface is sown with winter rape seed.

D: More than 75% of crops are cereals ... Maybe you should improve crop rotation.

S: I do not know if our machinery allows for it.

D: Please check the technical condition of the machines.

S: Some are worn out and obsolete.

D: And what is the land layout of your farm?

S: The layout is compact. I will send the map to you by email.

D: Are all the lands owned by the farm?

S: No, 20 hectares are leased.

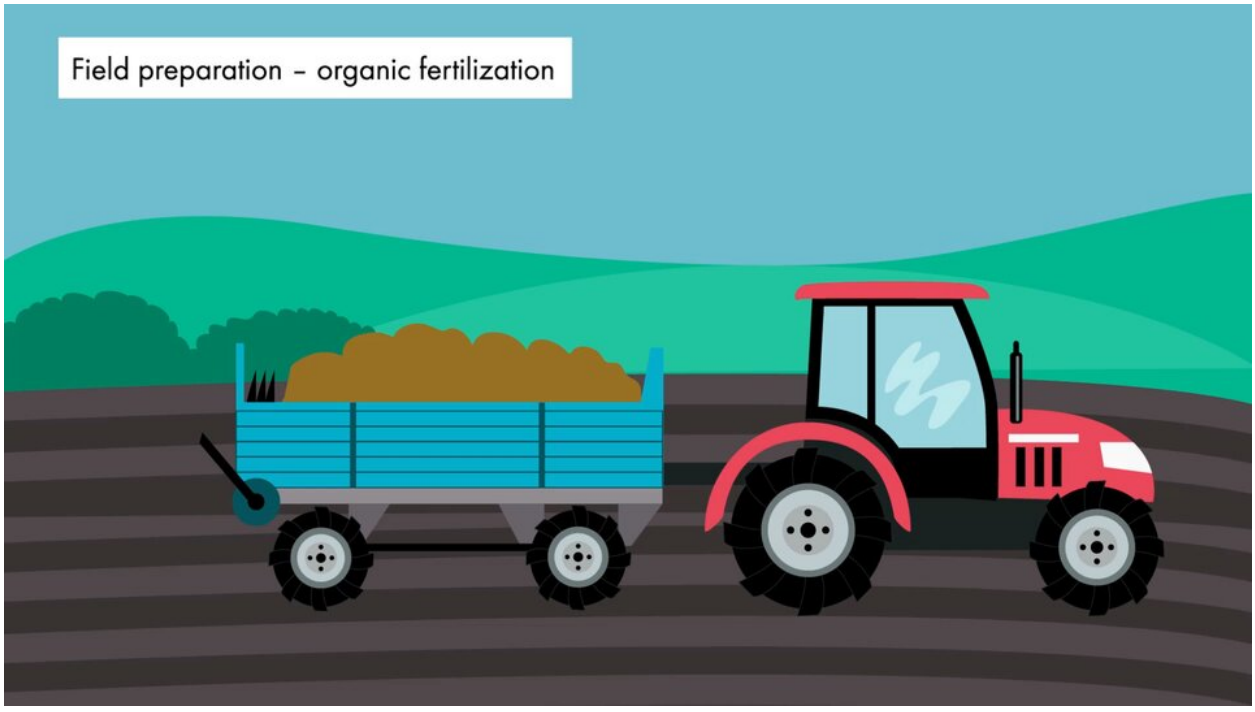
D: What is theemployment situation?

S: We have 5 employees under employment contract, and, during harvest, we employ 2 additional contract workers.

D: The purpose of my diploma thesis is to evaluate the production effects so the data obtained will be very valuable to me.

> **Exercise 4**

Potato production



Film dostępny na portalu epodreczniki.pl

moduł 16.1

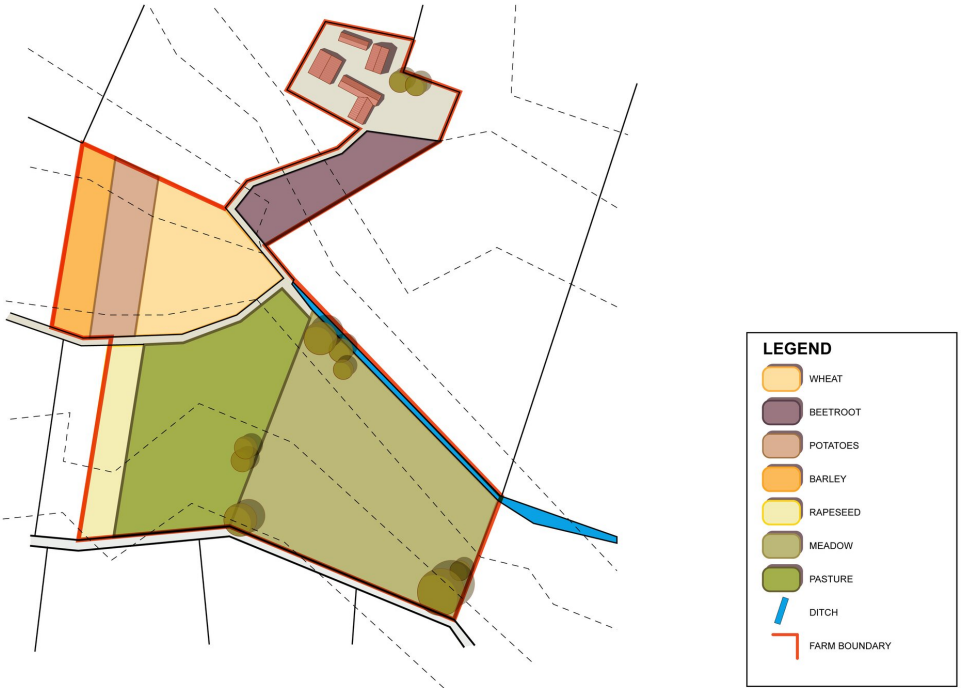
Exercise 5

Listen to the audio-wideo sequence and match the Polish terms to their English equivalents.
Po wysłuchaniu sekwencji audio-wideo, połącz polskie terminy z ich angielskimi odpowiednikami.

sprinkling	przechowywanie
protection	nawożenie mineralne
utilization	zbiór
sorting of bulbs	sadzenie
harvesting	nawożenie organiczne
stimulation / germination	wykorzystanie
mineral fertilization	sortowanie bulw
organic fertilization	ochrona
planting	pobudzanie / podkiełkowanie
storage	obsypywanie

Pictures

Look at the map of land layout on the farm. Describe what you can see.

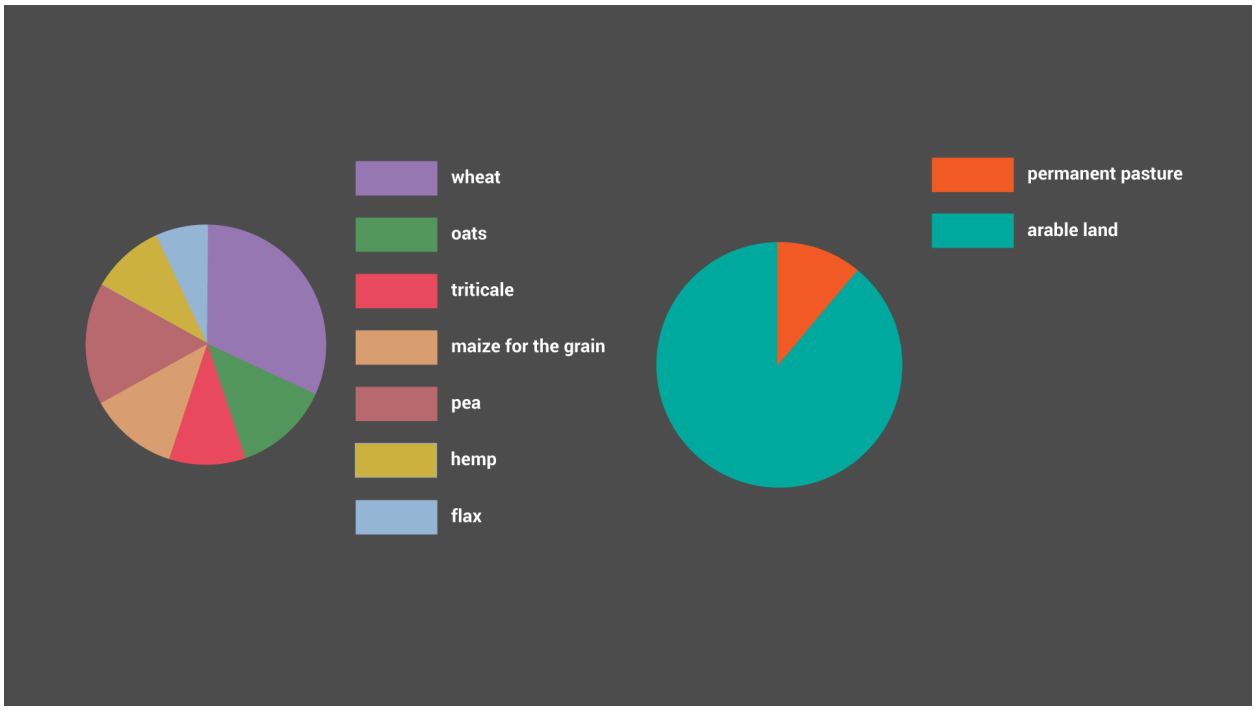


Please refer to the information in the Register of Procedures. Remember the items listed

Date of performing the treatment	Area of the field (physical hectares / comparative fiscal hectare)	Crop	Procedure/ treat-ment performed	Machines used	Preparation used / quantity	Fuel consumption	Person responsible	Supervisor
15.03.	1/1,3	winter oilseed rape	mineral fertilization	tractor, fertilizer spreader	nitrogen fertilizer 300 kg	15 l	Jan N.	Mariusz W.
25.04	1/1,4	sugar beet	sowing	tractor, seed drill	beet seeds / 1 unit	18 l	Piotr Z.	Mariusz W.
27.05.	1/0,9	potato	sprinkling	tractor, sprinkler	-	18 l	Jan N.	Mariusz W.
15.07.	1/1,3	winter oilseed rape	harvest	harvester, tractor, trailer	-	50 l	Marian K.	Mariusz W.

The picture shows two pie charts that depicts land use structure and cultivation patterns on a farm.

Look at the graphs. Examine the data contained therein.



Exercise 6

Exercise 7

Game

Zasób interaktywny dostępny pod adresem https://zpe.gov.pl/a/DDulk4ZBN

Dictionary

acid soil (n. C, U) ˈæsɪd sɔɪl

gleba kwaśna
acreage (n. C, U) ˈeɪkərɪdʒ

areał
authorised for marketing (phrase) ˈɔːθəraizd fɔː ˈmɑːkɪtɪŋ

dopuszczone do obrotu
bacterial disease (n. C, U) bækˈtɪəriəl dɪˈziːz

choroba bakteryjna
barometer (n. C) bəˈrɒmɪtə

barometr
buying (n. U) ‘baɪɪŋ

skup
by-product (n. C) ˈbaɪˌprɒdʌkt

plon uboczny
chemical protection (n. U) ˈkemɪkəl prəˈtekʃᵊn

ochrona chemiczna
Civil Code (n. C) ˈsɪvəl kəʊd

Kodeks cywilny
collection centre (n. C) kəˈlekʃᵊn ˈsentə

punkt skupu
combine operator (n. C) kəmˈbaɪn ˈɒpəreɪtə

kombajnista
Common Agricultural Policy (n. C) ˈkɒmən ˌægrɪˈkʌltʃərəl ˈpɒləsi

Wspólna Polityka Rolna
comparative fiscal hectare (n. C) kəmˈpærətɪv ˈfɪskəl ˈhekteə

hektar przeliczeniowy
contract farming (n. U) ˈkɒntrækt ˈfɑːmɪŋ

kontraktacja
contractor (n. C) kənˈtræktə

kontrahent
contractual penalty (n. C) kənˈtræktʃuəl ˈpenəlti

kara umowna
cultivation pattern (n. C) kʌltɪˈveɪʃᵊn ˈpætən

struktura zasiewów
darnel (n. usually U) ˈdɑːnəl

życica
direct sowing (n. U) daɪˈrekt ˈsəʊɪŋ

siew bezpośredni
ditch (n. C) dɪtʃ

rów melioracyjny
dryer (n. C) ˈdraɪə

suszarnia
drying (n. U) ˈdraɪɪŋ

suszenie
employment situation (n. C) ɪmˈplɔɪmənt ˌsɪtjuˈeɪʃᵊn

stan zatrudnienia
fertile soil (n. C, U) ˈfɜːtaɪl sɔɪl

gleba urodzajna
fertilizer recommendations (n. plural) ˈfɜːtɪlaɪzə ˌrekəmenˈdeɪʃᵊns

zalecenia nawozowe
Good Agricultural Practice (n. C) gʊd ˌægrɪˈkʌltʃərəl ˈpræktɪs

Dobra Praktyka Rolnicza, Dobra Kultura Rolna
good wheat soil (n. C, U) gʊd wiːt sɔɪl

kompleks pszenny dobry
grasslands (n. plural) ˈgrɑːs.lændz

użytki zielone
hand collection (n. U) hænd kəˈlekʃᵊn

zbiór ręczny
heavy metal (n. C) 'hevi ˈmetəls

metal ciężkie
land layout (n. C) lænd ˈleɪaʊt

rozłóg pól
land use structure (n. C) lænd juːz ˈstrʌktʃə

struktura użytkowania
large-scale (adj) ˌlɑːdʒ ˈskeɪˀl

wielkoobszarowy
lease (n. C) liːs

dzierżawa
lodging (n. U) ˈlɒdʒɪŋ

wyleganie
machinery (n. U) məˈʃiːnəri

park maszynowy
management standards (n. plural) ˈmænɪdʒmənt ˈstændədz

standardy gospodarowania
maturation of leaves (n. U) mætʃəˈreɪʃˀn ɒv liːvz

dojrzewanie liści
mechanical planting (n. U) mɪˈkænɪkəl plɑːntɪŋ

sadzenie mechaniczne
mineral fertilization (n. U) ˈmɪnərəl ˌfɜːtɪlaɪˈzeɪʃˀn

nawożenie mineralne
mound (n. C) maʊnd

kopiec
operator (n. C) ˈɒpəreɪtə

operator
organic matter (n. U) ɔːˈgænɪk ˈmætə

materia organiczna
pathogenic organism (n. C) ˌpæθəˈdʒenɪk ˈɔːgənɪzəms

organizm chorobotwórczy
payment (n. U) ˈpeɪmənt

płatność
pest (n. C) pest

szkodnik
physical hectare (n. C) ˈfɪzɪkəl ˈhekteə

hektar fizyczny
plant (n. C) ˈplɑːnt

sadzić
plantation state inspection (n. C) plænˈteɪʃ͡ən steɪt ɪnˈspekʃ͡ən

lustracja stanu plantacji
planter (n. C) ˈplɑːntə

sadzarka, plantator
production effect (n. C) prəˈdʌkʃən ɪˈfekt

efekt produkcyjny
protection plan (n. C) prəˈtekʃ͡n plæn

plan ochrony
responsibility (n. C, U) rɪˌspɒnsəˈbɪləti

odpowiedzialność
rich soil (n. C, U) rɪtʃ sɔɪl

gleba żyzna
seed orchard (n. C) siːd ˈɔːtʃəd

plantacja nasienna
seed potato (n. C) siːd pəˈteɪtəʊ

sadzeniak
seedling (n. C) ˈsiːdlɪŋ

sadzonka
seedlings production (n. U) ˈsiːdlɪŋs prəˈdʌkʃ͡n

produkcja sadzonek
short-term cycle (n. C) ʃɔːtˈtɜːmˈsaɪkl

cykl krótkotrwały
soil class (n. C) sɔɪl klɑːs

klasa bonitacyjna
soil testing (n. U) sɔɪl testɪŋ

próba glebowa
sort (v.) sɔːt

sortować
sorting (n. U) sɔːtɪŋ

sortowanie
sprinkler (n. C) ˈsprɪŋklə

obsypnik
sprinkling (n. U) ˈsprɪŋklɪŋ

obsypywanie
stubble (n. U) ˈstʌbəl

ściernisko
succeeding plant (n. C) səkˈsiːdɪŋ ˈplɑːnt

roślina następcza
three year cycle (n. C) θriː jɪə ˈsaɪkl

cykl trzyletni
topsoil (n. U) ˈtɒpsɔɪl

warstwa orna
transport to the dryer (phrase) ˈtrænspɔːt tə ðə ˈdraɪə

transport do suszarni
transportation of raw materials (phrase) ˌtrænspɔːˈteɪʃᵊn ɒv rɔː məˈtɪəriəlz

transport surowca
tuber (n. C) ˈtʃuːbə

bulwa
unit price (n. C) ˈjuːnɪt praɪs

cena jednostkowa
Usual good farming practice (n. C) ˈjuːʒuəl gʊd ˈfɑːmɪŋ ˈpræktɪs

Zwykła dobra praktyka rolnicza
vegetative propagation (n. U) ˈvedʒɪtetɪv ˌprɒpəˈgeɪʃᵊn

rozmnażanie wegetatywne
very good rye soil (n. C, U) ˈveri gʊd raɪ sɔɪl

kompleks żytni bardzo dobry
viral disease (n. C, U) ˈvaɪrəl dɪˈziːz

choroba wirusowa
waste (n. U) weɪst

odpady
wastewater (n. U) ˈweɪˌstwɔtə

ścieki
wastewater sludge (n. U) ˈweɪˌstwɔtə slʌdʒ

osady ściekowe
work organization (n. U) wɜːk ˌɔgənəˈzeɪʃᵊn

organizacja pracy
workforce (n. group singular) ˈwɜːkfɔːs

siła robocza
zero tillage (n. U) ˈzɪərəʊ ˈtɪlɪdʒ

uprawa bezorkowa

Organising livestock production

Planning cattle feeding

1. Film in the standard version.

Film dostępny na portalu epodreczniki.pl

moduł 16.2

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2. Film with subtitles.

Film dostępny na portalu epodreczniki.pl

moduł 16.2

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3. Film with subtitles and pauses. Listen and repeat after the speaker.

Film dostępny na portalu epodreczniki.pl

moduł 16.2

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4. Film with subtitles and narration.

Film dostępny na portalu epodreczniki.pl

Exercise 1

After watching the film "Planning the nutrition of cattle" address the sentences in the exercise, deciding whether they are true or false. Po obejrzeniu filmu „Planowanie żywienia bydła” ustosunkuj się do zdań umieszczonych w ćwiczeniu, podejmując decyzję, czy to prawda czy fałsz.

	Prawda	Fałsz
The zootechnician needs high protein feed.	◯	◯
Feed is intended for laying hens.	◯	◯
They have their own grains and pulses on the farm.	◯	◯
The zootechnician is interested in purchasing complete feedingstuffs.	◯	◯
They need additives such as premixes, mineral blends and vitamins on the farm.	◯	◯
Wheat and maize are mixed with the sharps in the henhouse.	◯	◯
Maize silage is prepared in transportable silos.	◯	◯
The juicy forage used on the farm is carrot roots and green feed.	◯	◯
The representative suggested chaff additives to the zootechnician.	◯	◯
A program called MNIAM is used on the farm for preparing food doses.	◯	◯

Health and safety in animal production

Film dostępny na portalu epodreczniki.pl

moduł 16.2, Every year about 12% of all accidents in agriculture involves the handling of farm animals. At least 3 people are killed every year! The basis for working with animals safely is to provide them with the proper welfare. This means creating the right living conditions and enabling them to demonstrate natural behaviour. Caring for personal hygiene reduces the risk of zoonoses. Large livestock buildings should include hygienic and sanitary rooms. It is obligatory to use protective clothing when working with animals. Poisonous gases such as hydrogen sulphide and methane are collected in slurry and liquid manure tanks. Using these tanks requires special care. Feed, manure and pre-herding passages should not intersect. Their width should allow enough room for working . Troughs, mangers and waterers should be placed so that handlers do not have to enter animal stalls.When moving between animals, you should signal your presence in voice or by touch. This will avoid scaring animals and their unexpected response, which poses a threat. Use special safety precautions when working with some animals.Bulls are particularly dangerous, and should have a nose ring and be lead with a stick. During some treatments, animals should be immobilized by the use of a crush.

Animal welfare

Film dostępny na portalu epodreczniki.pl

moduł 16.2

The ABC of animal production organization

The text consist of a fragment of a dictionary / index of terms in the field of animal production organization.

Animal culling - removing the animals that do not meet the breeders criteria from the herd.

Good manufacturing practice - the set of actions that must be taken and the conditions that must be met in order for food and materials used in food production ensure a healthy, quality food product.

Livestock unit (LU) - a reference unit for animals weighing 500 kg; animal conversion is done using coefficients.

Extensive rearing - product manufacturing by increasing the number of animals rather than by using measures to increase the productivity of the animals.

Stock turnover - quantitative and qualitative changes within the herd of animals in a given period.Stocking density is the amount of LU per 100 ha of agricultural land.

Selection herd - a group of the best animals selected from the herd for the purpose of becoming parents of the next generation.

Livestock structure - percentage share of individual herds in the total number of animals expressed in livestock units (LU).

Herd structure- percentage share of the average number of animals of a specific type in the whole herd.

Manure unit - an animal (unit) that supplies 10 tons of manure per year. This type of conversion calculates the manure production on the farm.

Feed unit - a livestock unit consuming an average of 3.5 thousand grain units per year.

Use value- the animal's ability to produce. Use value is measured by the amount of product obtained over a certain period of time, e.g. the quantity of milk during the lactation period, annual wool yield, etc.

> **Exercise 2**

Animal production versus environment

A dialogue between a farmer (F) and an employee (E) of the Inspectorate for Environmental Protection during farm inspection. The inspector asks questions about the manner and place of collection of animal excrements, the amount of natural fertilizers used in fields that may adversely affect the environment. The farmer gives answers.

E: Good morning.

F: Good morning. How can I help you?

E: I am an employee of the Inspectorate for Environmental Protection and I would like to carry out an inspection on your farm.

F: Please, come in. What does this inspection concern?

E: I would like to see if the animal production department has any negative impact on the environment.

F: Come in!

E: How many animals are there in your swine herd at the moment?

F: This is calculated as 100livestock units.

E: What groups of animals make up the herd?

F: I run a closed production cycle, so I have different groups.

E: Where do you store the feed?

F: I store the grain in a funnel silo, and the feed I purchase is used on a regular basis.

E: Do you run a rational animal waste management?

F: Yes, I own my own land, where I spill slurry and spread manure.

E: Where do you store manure?

F: I put it on a manure pad. The water solution of manure is discharged into a closed tank.

E: What doses of slurry are you using?

F: Maximum 50 m3 per hectare. Due to this , I do not exceed 170 kg of nitrogen per hectare.

E: This is in line with good farming practice.

F: In order to set supplemental doses of mineral fertilizers I use the fertilizer optimizer module of the BigPig program.

E: The agricultural use of slurry is not easy.

F: Yes. Applying too high a dose can damage the plants.

E: This is not the only effect of overfertilisation with slurry.

F: Is there any other?

E: Yes. Slurry contains a lot of nitrogen and phosphorus causing eutrophication of water reservoirs. Nitrogen can enter the groundwater and contaminate well water.

F: My farm has no such effect!

E: What about air pollution?

F: Some emissions can not be avoided. However, the efficient ventilation system of livestock buildings and lack of deep bedding limit their formation.

E: I will include in the report the solutions you are using on the farm.

Exercise 3

Read the hypertext no 2 “Animal production versus environment” and match the answer with the questions. Zapoznaj się z hipertekstem nr 2 „Produkcja zwierzęca a środowisko” i dopasuj odpowiedź to pytania.

The farmer stores grain in a funnel silo.	Where does the farmer store the grain?
The farmer runs a closed production cycle.	What production cycle does the farmer run?
The inspection concerned the animal production department.	Where is the farmer using the BigPig module?
The swine herd consists of 100 livestock units.	How much slurry does a farmer use per hectare?
These elements cause eutrophication of water bodies.	What elements does slurry contain?
The farmer stores manure on a manure pad.	What phenomenon do these elements cause?
The farmer uses the BigPig module to determinate the supplemental doses of mineral fertilisers.	Where does the farmer store manure?
Slurry contains nitrogen and phosphorus.	How many animals are there in the swine herd?
The farmer uses 50m3 of slurry per hectare	What production department was inspected?
An employee of the Inspectorate for Environmental Protection came for inspection to the farmer.	Who came to the farmer for inspection?

Livestock breeding

The text is part of an article in the trade journal. It discusses ways to mate cows, providing their advantages and disadvantages. It emphasizes that insemination allows for the best use of breeding value of bulls.

There are two basic methods of reproducing cattle: natural mating and artificial insemination.

Natural mating refers to mating a cow and a bull, which gives semen directly to the female reproductive system. Depending on how the mating is organized, there is selective breeding, harem breeding and free mating.

Selective breeding - under the supervision of a man, the bull is individually admitted to the cow exhibiting symptoms of estrous cycle.

Harem breeding - the bull is constantly with a group of about 30 cows and heifers, covering females in the estrous cycle;

Free mating - a group of bulls reside with large herds of cows.

Artificialinsemination (insemination) involves the introduction of a bull semen, taken from the artificial vagina, into the female reproductive system by means of a pipette. Semen taken from the bulls is, after thorough examination, diluted and delivered in this form for the insemination of cows. As a result of the dilution, one ejaculate can inseminate a dozen cows.

Advantages of insemination:

- the ability to use the beststuds (one father produces a few or tens of thousands of offspring a year, not dozens - as in natural mating), which influences the acceleration of breeding progress,

- enabling, through semen conservation in liquid nitrogen, bull testing and using only animals positively labeled,

- reducing the number of studs, which allows for feed and stalls saving,

- the possibility of individual selection of pairs,

- unlimited preservation time for semen, giving you the ability to create gene banks, i.e. preserving the gene pool needed for all types of breeding.

Breeding value information for bulls is available in an electronic version. It is used when pairing couples. A special computer programs are used for this.

Exercise 4

Based on the hypertext no 3 “Livestock breeding” complete the sentences. Na podstawie hipertekstu nr 3 „Rozród zwierząt hodowlanych” uzupełnij zdania.

Basic methods of cattle breeding are: _____ and

Artificial insemination is also called _____

The semen is introduced into the female genital tract using a _____

The semen is taken from the bull to the _____

Insemination affects the acceleration of _____

Natural _____ means mating a cow and a bull.

The bull stays with a group of about 30 cows in _____ breeding.

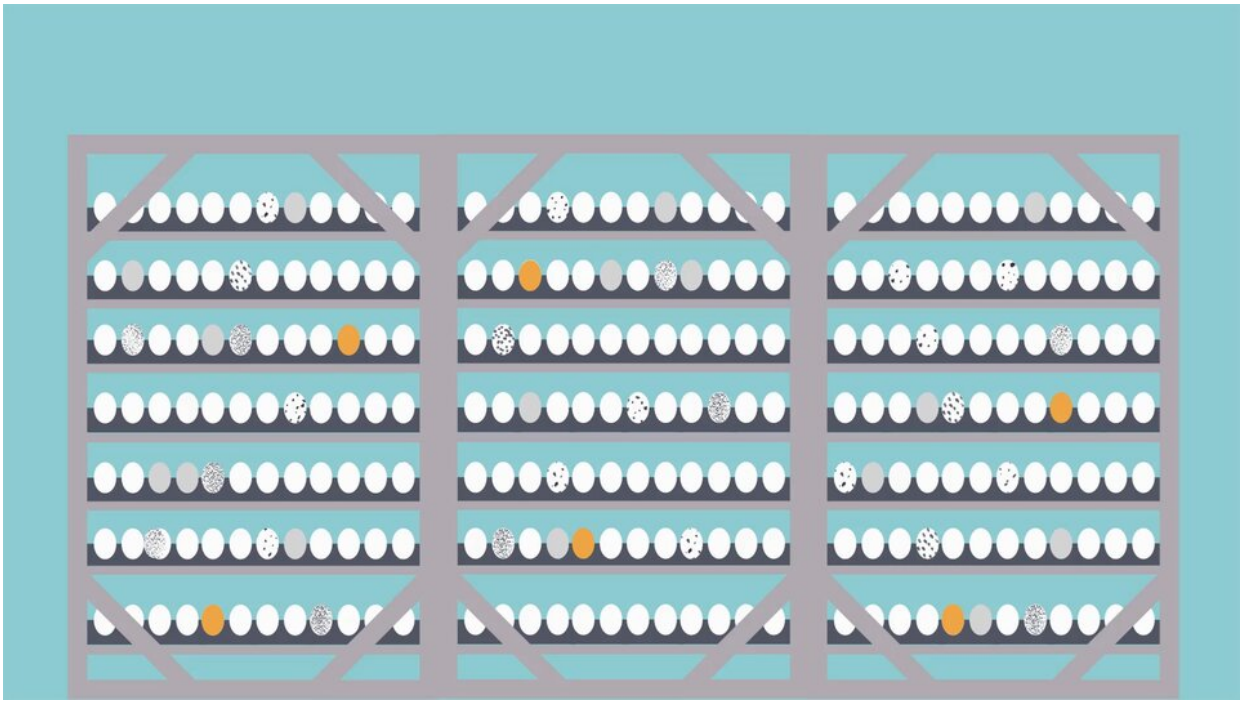
_____ breeding takes place under the supervision of the man.

Free mating - _____ reside with large herds of cows.

Bull semen is preserved in _____

insemination | liquid nitrogen | mating | breeding progress | harem | natural mating | pipette | artificial vagina | Selective | a group of bulls

Organisation of poultry production



Film dostępny na portalu epodreczniki.pl

moduł 16.2

Exercise 5

Watch the audio-visual sequence and complete the sentences with the chosen words. Na podstawie sekwencji audio-wideo uzupełnij zdania wyrazami do wyboru.

1. In the commercial production of poultry, egg hatching is carried out in.... [ ]
2. Sexing is chick segregation according to their ..... [ ]
3. Culling is the process of ..... weak chicks. [ ]
4. Breeding poultry rearing should take place in the conditions that ensure..... [ ]
5. In poultry farms, kept in intensive systems, poultry is kept in ..... conditions. [ ]
6. In the intensive system, feeding is based on ..... [ ]
7. ..... is used in order to regulate the course of sexual maturation, egg yield, feed intake time. [ ]
8. Stocking density, laying hens condition, mortality and culling rate are the elements of ..... [ ]
9. Storehouses and packers are the buildings connected to ..... preparations. [ ]
10. Improving laying and meat hens takes place in .... [ ]

c) production farms | b) cowsheds | b) curing | a) breeding farms | a) removing

b) milk | b) natural | c) sex | b) natural breeding | a) light programs | c) controlled

a) breeding incubators | b) piggery | a) natural feed | b) complete feedingstuffs

c) livestock buildings | a) light programs | b) egg yield | b) animal welfare | a) intensive

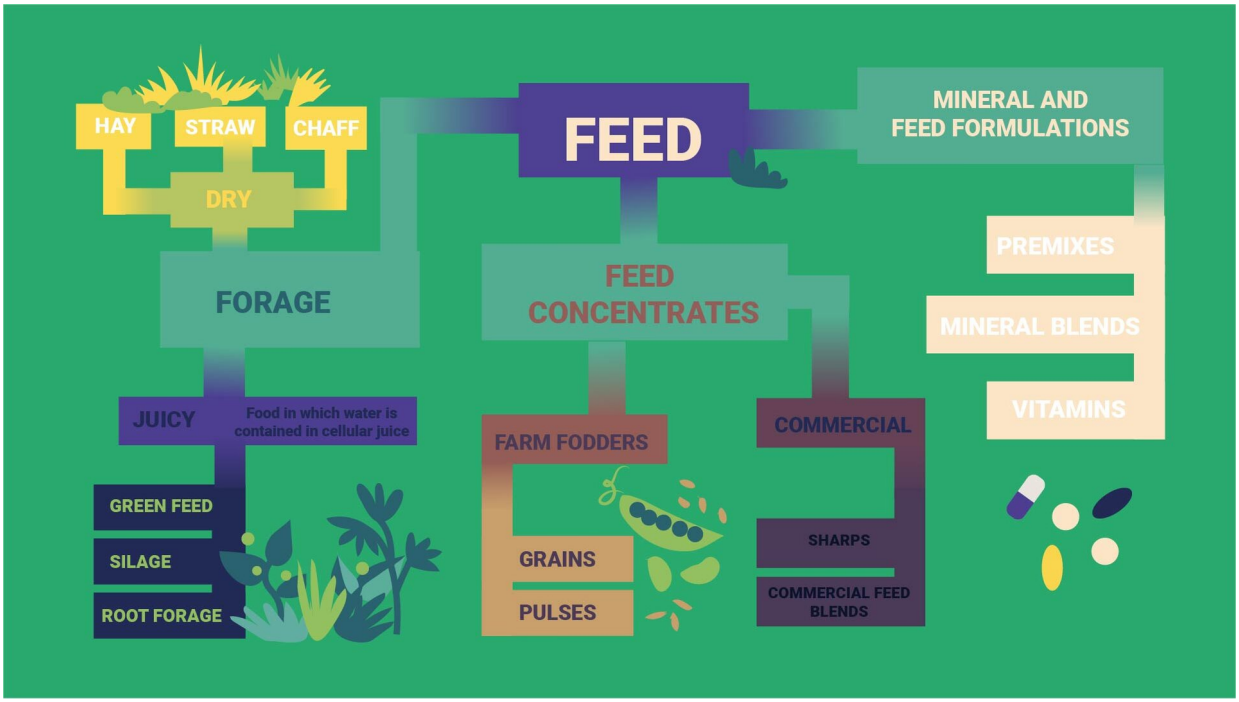
c) ejaculate | c) diagnosing | b) livestock documentation | c) silages | a) eggs

a) development phase | c) harem breeding | c) boxes | c) freedom from stress | a) age

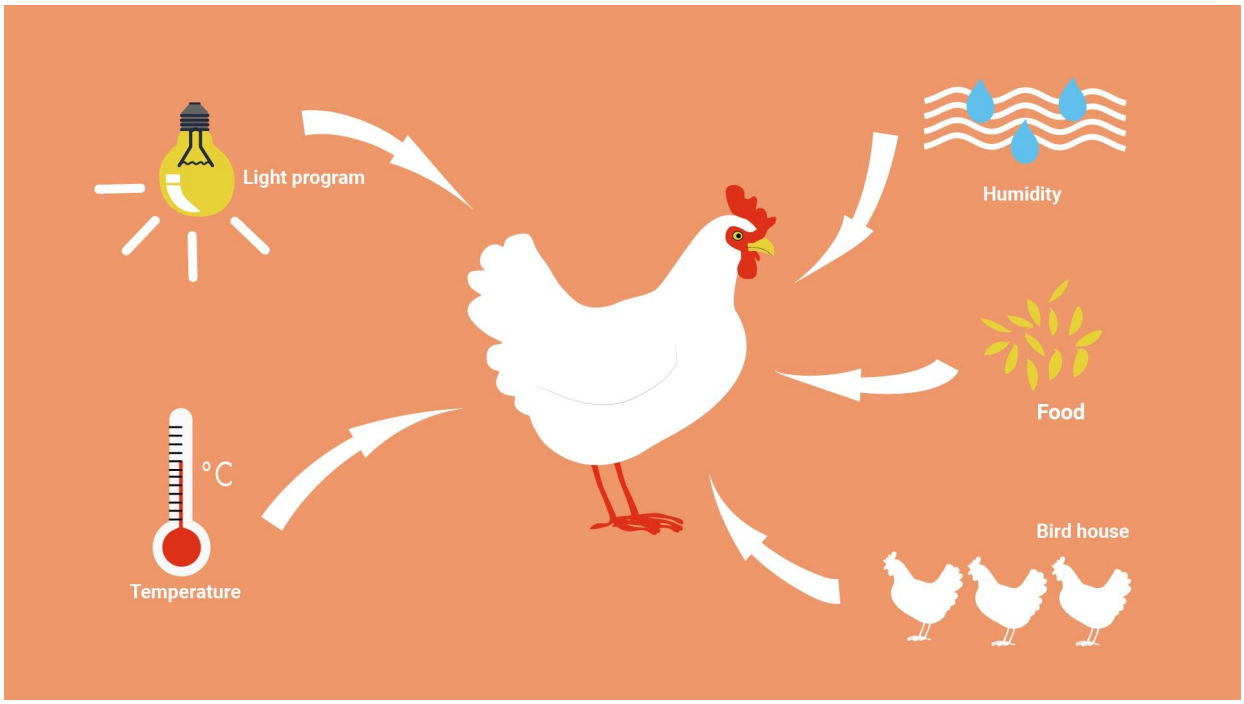
Picture

Look at the picture. List the elements you can see and remember their names.

Take a look at the division of feed used in ruminant feeding. Remember and repeat their names.



Take a look at the illustration and list the factors affecting the number of eggs obtained from laying hens


Light program
Humidity
Food
°C
Temperature
Bird house

Exercise 6

Based on a picture no 2 match the following feeds to the categories. Na podstawie rysunku nr 2 przyporządkuj wymienione pasze do poszczególnych kategorii.

root juicy forage:

farm feed concentrates - grains:

juicy forage - green feed:

juicy forage - silage:

feed concentrates - commercial sharps:

farm feed concentrates - pulses:

dry forage - straw:

oats | legumes straw | maize | cereals straw | beet | rye | wheat | soybean meal | pea | legumes | carrot | potato | broad bean | barley | grasses | lupins

Exercise 7

Game

Zasób interaktywny dostępny pod adresem https://zpe.gov.pl/a/D1qKu1Lla

Dictionary

animal culling (n. U) ˈænɪmᵊl ˈkʌlɪŋ

brakowanie zwierząt
animal waste (n. U) ˈænɪmᵊl weɪst

odchody zwierzęce
animals handling (n. U) ˈænɪməlz ˈhændlɪŋ

obsługa zwierząt
animals welfare (n. U) ˈænɪməlz ˈwelfeə

dobrostan zwierząt
anxiety (n. U) æŋˈzaɪəti

niepokój

artificial insemination (n. U) ˌɑːtɪˈfɪʃᵊl ɪnˌsemɪˈneɪʃᵊn

sztuczne unasienianie
artificial vagina (n. C) ˌɑːtɪˈfɪʃᵊl vəˈdʒaɪnə

sztuczna pochwa
behaviour (n. C, U) bɪˈheɪvjə

zachowania behawioralne
breeding farm (n. C) ˈbriːdɪŋ fɑːm

ferma zarodowa
breeding incubator (n. C) ˈbriːdɪŋ ˈɪŋkjʊbeɪtə

inkubator lęgowy
breeding progress (n. U) ˈbriːdɪŋ ˈprəʊgres

postęp hodowlany
carbohydrate feed (n. U) ˌkɑːbəʊˈhaɪdreɪt fiːd

pasza węglowodanowa
chaff (n. U) tʃɑːf

plewy
chronic stress (n. C, U) ˈkrɒnɪk stres

przewlekły stres
closed cycle (n. C) kləʊzd ˈsaɪkl

cykl zamknięty
commercial production (n. U) kəˈmɜːʃᵊl prəˈdʌkʃᵊn

produkcja towarowa
complete feedstuff (n. C) kəmˈpliːt ˌfiːdstʌf

mieszanka pełnoporcjowa
crush (n. C) krʌʃ

poskrom
deep bedding (n. U) diːp ˈbedɪŋ

głęboka ściółka
diagnosis (n. C, U) ˌdaɪəgˈnəʊsɪs

diagnostyka
egg hatching (n. U) ˈeg hætʃɪŋ

wylęg
egg yield (n. C) ˈeg jiːld

nieśność
ejaculate (n. U) iˈdʒækjəleɪt

ejakulat
emission (n. C, U) ɪˈmɪʃᵊn

emisja
emotional state (n. C) ɪˈməʊʃᵊnᵊl steɪt

stan emocjonalny
ensilage process (n. C) ˈenᵗsəlɪdʒ ˈprəʊses

zakiszanie
estrous cycle (n. C) ˈiːstrəs ˈsaɪkl

ruja
eutrophication of water reservoirs (n. U) ˌjuːtrəfɪˈkeɪʃᵊn ɒv ˈwɔːtə ˈrezəvwɑːz

eutrofizacja zbiorników
extensive rearing (n. U) ɪkˈstensɪv ˌrɪərɪŋ

ekstensywny chów
fear (n. C, U) fɪə

strach
feed mill (n. C) fiːd mɪl

mieszalnia pasz
feed passage (n. C) ˈfiːd ˌpæsɪdʒ

korytarz paszowy
feed unit (n. C) fiːd ˈjuːnɪt

sztuki żywieniowe
fertilizer optimizer module (n. C, U) ˈfɜːtɪlaɪzə ˈɒptɪmaɪzə ˈmɒdjuːl

moduł optymalizacji nawozowej
food dose (n. C) fuːd ˈdəʊs

dawka pokarmowa
freedom from hunger, thirst and malnutrition (phrase) ˈfriːdəm frɒm ˈhʌŋgə θɜːst ənd ˌmælnjuː ˈtrɪʃᵊn

wolność od głodu, pragnienia i niedożywienia,

freedom from pain, traumas and diseases (phrase) ˈfriːdəm frɒm peɪn ˈtrɔːməz ənd dɪˈziːzɪz

wolność od bólu, urazów i chorób,
funnel silo (n. C) ˈfʌnᵊl ˈsaɪləʊ

silos lejowy
gene bank (n. C) dʒiːn bæŋk

bank genowy
gene pool (n. C) dʒiːn puːl

pula genów
good manufacturing practice (n. C) gʊd ˌmænjəˈfæktʃᵊrɪŋ ˈpræktɪs

dobra praktyka produkcyjna
HACCP - Hazard Analysis and Critical Control Points System (n. C) eɪtʃ eɪ siː siː piː - ˈhæzəd ə ˈnæləsɪs ənd ˈkrɪtɪkᵊl kənˈtrəʊl pɔɪnts ˈsɪstəm

HACCP
harem breeding (n. U) ˈhɑːriːm ˈbriːdɪŋ

krycie haremowe
hatch (v.) hætʃ

wyklucie
heifer (n. C) ˈhefə

jałowica
herd structure (n. C, U) hɜːd ˈstrʌktʃə

struktura stada
high protein feed (n. U) haɪ ˈprəʊtiːn fiːd

pasza wysokobiałkowa
hydrogen sulphide (n. C, U) ˈhaɪdrədʒən ˈsʌlfaɪd

siarkowodór
hygienic and sanitary room (n. C) haɪˈdʒiːnɪk ənd ˈsænɪtᵊri ruːm

pomieszczenie higieniczno-sanitarne
insemination (n. U) ɪnˌsemɪˈneɪʃᵊn

inseminacja
lactic acid (n. C, U) ˌlæktɪk ˈæsɪd

kwas mlekowy
laying hens condition (n. C) ˈleɪɪŋ henz kənˈdɪʃᵊn

stan niosek
light program (n. C) laɪt ˈprəʊgræm

program świetlny
livestock building (n. C) ˈlaɪvstɒk ˈbɪldɪŋ

pomieszczenie inwentarskie
livestock structure (n. C, U) ˈlaɪvstɒk ˈstrʌktʃə

struktura inwentarza żywego
livestock unit (n. C) ˈlaɪvstɒk ˈjuːnɪt

duża jednostka przeliczeniowa
living conditions (n. plural) ˈlɪvɪŋ kənˈdɪʃənz

warunki bytowe, warunki utrzymania
manure pad (n. C) məˈnjʊə pæd

płyta gnojowa
manure passage (n. C) məˈnjʊə ˈpæsɪdʒ

korytarz gnojowy
manure unit (n. C) məˈnjʊə ˈjuːnɪt

sztuka obornikowa
mental suffering (n. C, U) ˈmentᵊl ˈsʌfərɪŋ

psychiczne cierpienie
methane (n. U) ˈmiːθeɪn

metan
microbiological preparation (n. C) ˌmaɪkrəʊˌbaɪəˈlɒdʒikᵊl ˌprepᵊrˈeɪʃᵊn

preparat mikrobiologiczny
mineral blend (n. C) ˈmɪnᵊrᵊl blend

mieszanka mineralna
mortality (n. U) mɔːˈtæləti

padnięcia
natural mating (n. U) ˈnætʃᵊrᵊl ˈmeɪtɪŋ

krycie naturalne
nose ring (n. C) nəʊz rɪŋ

kółko nosowe
packer (n. C) ˈpæk.ə

pakowalnia
physical discomfort (n. C, U) ˈfɪzɪkᵊl dɪˈskʌmfət

dyskomfort fizyczny
pre-herding passage (n. C) priːhɜːdɪŋ ˈpæsɪdʒ

korytarz przepędowy
premix (n. C) ˈpriːmɪks

premiks
prophylaxis (n. U) ˌprɒfəˈlæksɪs

profilaktyka
protective clothing (n. U) prəˈtektɪv ˈkləʊðɪŋ

odzież ochronna
puberty (n. U) ˈpjuːbəti

dojrzewanie płciowe
recipe of nutritive mix (n. C) ˈresɪpi əv ˈnjuːtrətɪv mɪks

receptura mieszanki
reproductive system (n. C) ˌriːprəˈdʌktɪv ˈsɪstəm

drogi rodne
selection herd (n. C) sɪˈlekʃᵊn hɜːd

stado selekcyjne
selective breeding (n. U) sɪˈlektɪv ˈbriːdɪŋ

krycie z ręki
semen (n. U) ˈsiːmən

nasienie
sexing (n. U) ˈseksɪŋ

seksowanie
silage additive (n. C) ˈsaɪlɪdʒ ˈædɪtɪvz

dodatek do kiszonki
soybean meal (n. U) ˈsɔɪˌbin mɪəl

śruta sojowa
stock turnover (n. C, U) stɒk ˈtɜːnˌəʊvə

obrót stada
stocking density (n. C, U) ˈstɒkɪŋ ˈdensɪti

obsada zwierząt, obsada ptaków
storehouse (n. C) ˈstɔːˌhaʊs

zbiornica
stud (n. C) stʌd

reproduktor
the Inspectorate for Environmental Protection (n. C) ðiː ɪnˈspektˀrət fɔː ɪnˌvaɪərˀnˈmentˀl prəˈtekʃˀn

Inspekcja Ochrony Środowiska
thermal discomfort (n. C, U) ˈθɜːmˀl dɪˈskʌmfət

dyskomfort termiczny
treatment (n. U) ˈtriːtmənt

leczenie
use value (n. C, U) juːz ˈvæljuː

wartość użytkowa
ventilation system (n. C) ˌventɪˈleɪʃˀn ˈsɪstəm

system wentylacji
water solution of manure (n. C) ˈwɔːtə səˈluːʃˀn ɒv məˈnjʊə

woda gnojowa
well water (n. U) wel ˈwɔːtə

woda studzienna
zoonosis (n. C, plural zoonoses) ˌzuːəˈnəʊsɪs

choroba odzwierzęca