

**МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ**  
**БІЛОЦЕРКІВСЬКИЙ НАЦІОНАЛЬНИЙ АГРАРНИЙ УНІВЕРСИТЕТ**

**ФАКУЛЬТЕТ ПРАВА ТА ЛІНГВІСТИКИ**

**Кафедра іноземних мов**

**ВСТУП ДО ПЕРЕКЛАДОЗНАВСТВА:**

**ПРАКТИКУМ**

**з модуля «Галузевий переклад. Птахівництво»  
для здобувачів першого (бакалаврського) рівня вищої освіти  
спеціальності 035 – Філологія (переклад)**

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Практикум з дисципліни «Вступ до перекладознавства» пропонує вправи для забезпечення засвоєння фонових знань, знайомства з найбільш уживаною термінологією та розвитку перекладацьких навичок і вмінь з галузі сільського господарства, зокрема, птахівництва.

Модуль “Галузевий переклад. Птахівництво” складається із чотирьох змістових модулів: 1. “Chicken. Variety Types. Breeding Recommendations.” 2. “Ducks. Variety Types. Breeding Recommendations.” 3. “Geese. Variety Types. Breeding Recommendations.” 4. “Turkey. Variety Types. Breeding Recommendations.”

Різноманітні типи і види вправ (некомунікативні, умовно-комунікативні, комунікативні і відповідно рецептивні, репродуктивні та продуктивні), створюють сприятливі умови для ефективного засвоєння знань під час аудиторної та самостійної роботи.

Практикум призначено насамперед для студентів філологічних спеціальностей, а також для всіх, хто цікавиться галузевим перекладом.

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**ПЕРЕДМОВА**  
**UNIT I. CHICKEN. VARIETY TYPES. BREEDING**  
**RECOMMENDATIONS.**

**1. Read the text and guess the meaning of the words in bold using the context as a kind of a prompt.**

**POULTRY. INTORUDUCTION.**

The modern **poultry industry** has seen remarkable growth over the past 50 years. Three major factors played a role in helping the poultry industry to become the billion dollar industry.

1. Scientific research: Since the early beginning of the poultry industry, scientific research has played a major role in helping the industry produce **poultry eggs** and meat more efficiently.

Some important findings include the following:

a. Nutritional discoveries like Vitamin D, B12, **feeding high-energy diets** and the importance of amino acids and other **essential nutrients**.

b. **Disease control** like Pullorum, Marek's and the development of vaccines to help in **controlling diseases**.

c. **Genetic improvements** initiated by the "Chicken of Tomorrow Contest" has helped to focus attention on better **meat-type chickens**. Later, the 4-way cross helped to develop extremely efficient and uniform birds.

d. Knowledge related to **managing the birds** for optimum growth and improving management techniques resulted in better efficiency and high quality products.

2. Integration of the various segments of the industry and adopting industrial-like methods for the production, **slaughter**, and marketing of poultry meat and eggs.

3. The industry has also been innovative in developing new, convenient, further-processed, value added products that have replaced **whole and cut-up chicken** and **whole egg** sales. The percentage of whole and cut-up chicken sales has dropped from nearly 100% in 1960 to around 60% today. Products like **breast tenders, cooked breast rolls, boneless wings, deli meats, ground turkey meat, liquid pasteurized eggs** and an assortment of has aided in the overall industries growth. Chicken has also become a **mainstay** of the fast food menus over the past 20 years.

**2. Study the table, match the English words with their Ukrainian equivalent and compare your variants of translation with those given below.**

poultry industry	птахівництво
poultry eggs	харчові яйця домашньої птиці
feeding high-energy diet	дієта з високим вмістом вуглеводів
essential nutrients	незамінні поживні речовини
disease control	протиепідемічне забезпечення
genetic improvement	генетичне вдосконалення
meat-type chicken	кури м'ясних порід



managing the birds  
 whole and cut-up chicken  
 whole egg  
 breast tenders  
 liquid pasteurized eggs  
 breast rolls  
 boneless wings  
 deli meats  
 ground turkey meat  
 frozen pre-cooked meals  
 mainstay

утримання птахів  
 ціла тушка курки та порізнана  
 ціле яйце  
 філе курячої грудки  
 пастеризовані фасовані яйця  
 рулетики з курячої грудки  
 крильця без кісток  
 м'ясні делікатеси  
 заморожене м'ясо індички  
 заморожені м'ясні полуфабрикати  
 основа

**3. Look through the text again and guess what word combinations can be useful as introductory phrases.**

**4. Propose a brief English review of the text. Make sure your review is as long as 300 words.**

**5. Look though the review of your classmate and interpret it into Ukrainian.**

**6. Use the English English dictionary and guess the meaning of the following word when talking about poultry.**

Breed, class, cuticle, domestic, fluff, fowl, layer, offspring, origine, plumage, shell to lay, to mate, variety.

**7. Read the following proper names. Mind their pronunciation.**

Ameraucana, Bantams, Barred Plymouth Rock, Cochin, Cornish, Frizzle, Leghorn, Naked Neck, New Hampshire Red, Polish, Rhode Island Red, Silkie.

**8. Find the English equivalents of the following proper names. Use the previous exercise.**

Род-айленд червоні, червоні н'ю гемпшир, амераукани, бентамки, смугасті плімутрок, кохінхінки, корниши, фриззи, легорн, голошиї, польська, китайські шовкові.

**9. Match the left column with the right one.**

a. how to identify and to classify fowl	1. мають чуб або капелюх із пір'я на голові
b. to be divided into classes, breeds and varieties	2. одиничний ген впливає
c. similar characteristic	3. включають у себе колір пір'я, його структуру та тип гребня
d. non-feathered legs	4. безпері ноги
e. to mate	5. схрещувати
f. to produce offspring	6. спільні риси
g. including plumage colour and pattern, comb type	7. приносити виплід

h. the presence of beards and muffs	8. блакитна підшкаралупова оболонка
i. available in many colours	9. наявні у багатьох кольорах
j. Barred, White, Buff, Partridge, Silver Penciled	10. зозулясте, біле, палеве, строкате, попелясте.
k. dual-purpose breed	11. закручуватися до голови птаха
l. to be raised as ornamental fowl	12. домашня птиця
m. to incubate and brood the chicks	13. висиджувати яйця
n. feathered shanks and loose, soft feather	14. суто м'ясна птиця
o. ultimate meat bird	15. волохаті лапи та пухнасте м'яке пір'я
p. have a crested or hat of feathers on top of their heads	16. як визначати та класифікувати домашню птицю
q. to curl back towards the bird's head	17. порода м'ясо-яєчного напрямку
r. single gene trait affects	18. ділиться на класи, породи та варієти/кроси/популяції
s. blue cuticle	19. наявність борідки та сережок
t. domestic fowl	20. вирощувати як декоративну птицю

**10. Read the text. Get ready with the translation on the sentences printed in italics**

### BREEDS AND VARIETIES

The breeds and varieties of chickens are so numerous that it would be impossible to discuss all of them in detail at this time. However, a basic knowledge of how to identify and classify fowl may be helpful. Domestic fowl are divided into classes, breeds, and varieties.

**Class:** *A grouping of breeds according to the geographic area of their origin or to similar characteristics.*

**Breed:** *An established group of individuals with similar physical features (i.e., body shape or type, skin color, number of toes, feathered or non-feathered legs) that when mated with others of its own kind produce offspring that have the same characteristics. The Plymouth Rock breed is a good example.*

**Variety:** A sub-division of a breed. Differentiating characteristics including plumage color and pattern, comb type, and the presence of beards or muffs. For example, the Plymouth Rock breed is available in many colors - Barred, White, Buff, Partridge, Silver Penciled, etc. In each, the physical shape and features are the same, but the feather color and pattern differ, which constitutes each

Some of the more common breeds and varieties of domestic chickens include:

**New Hampshire Red** have yellow skin, lay brown-shelled eggs and have orange-red adult plumage. *This is a dual-purpose breed which means it has been selected for both a meaty body and to produce eggs.*

**Rhode Island Red** are similar to New Hampshire Reds except they are usually better layers and Rhode Island Reds have deep-red adult plumage. The chicks of Rhode Island Reds are brown in color.

**Barred Plymouth Rock** are dual-purpose chickens that have gray and white striped plumage. The black fluff with a white spot on the tops of their head easily identifies the chicks. This breed was developed in America during the 19th century.

**Cochin** are mainly raised as ornamental fowl, but the females are frequently used to naturally incubate and brood the chicks of other fowl. The Cochin's origin is traced to China but the big, fluffy balls of feathers as we know them today were further developed in America. Cochins have feathered shanks and have extremely loose, soft feathers that give them their fluffy appearance.

**Cornish** were developed as the ultimate meat bird and have contributed to build the vast broiler industry of the world. The Cornish originated in England.

**Leghorn** are grandparents of our modern white-egg industry. Originating in Italy, the Leghorn has a large single comb and is flighty by nature.

Some of the more unusual breeds and varieties of domestic chickens include the following:

**Polish** is another unusual and beautiful breed. They have a crested or hat of feathers on top of their heads.

**Frizzle** have a genetic modification that causes the feathers to curl back towards the bird's head instead of lying naturally.

**Naked Neck** have a bare neck totally absent of feathers. *This single gene trait affects the arrangement and number of feathers over the chicken's body.*

**Silkie** is a blue skinned chicken used for ornamental purposes. *Some hybrids have been developed for the live bird market. This breed of chicken appears to have hair instead of feathers.* This is a genetic trait that causes abnormal texture and appearance of the feathers.

**Ameraucana** were discovered in South America and are nicknamed *Easter egg chickens* because of the blue and green eggs they lay. This is again a genetic modification in which a blue cuticle is applied to the egg. When introduced to brown egg layers, the result is an olive- green shell; introduced to white egg layers, the result is a blue shell.

**Bantams** are the miniatures of the poultry world. The word "Bantam" is the term used to classify the over 350 breeds and varieties of true-breeding miniature chickens.

*There are bantams of almost every breed of large chicken, but there are some types of which there is no large counterpart.* Bantams are purebreds raised for exhibition and hobby. Their small size and numerous shapes, colors, and personalities give them a broad appeal to people who live in urban areas.

**\* make sure you know Ukrainian variant of the phrases underlined in the text.**

**\*\* close your book and let your deskmate read the text. Interpret the text sentence after sentence and paragraph after paragraph.**

### **11. Translate the word combinations into English.**

Домашня птиця, кількість пальців на лапах, наявність пір'я на ногах, червоний гребінець у білу цяточку, м'ясо-яєчна порода, декоративна порода, чубчик із пір'я, на голові, пір'я незвичайного вигляду та текстури, не мати пір'я на шиї, колір оперення, висиджувати курчат, шкаралупа оливкового кольору, м'ясна порода курей, мають багато прихильників, мати червоне пір'я у дорослому віці, чистопородні карликові кури.

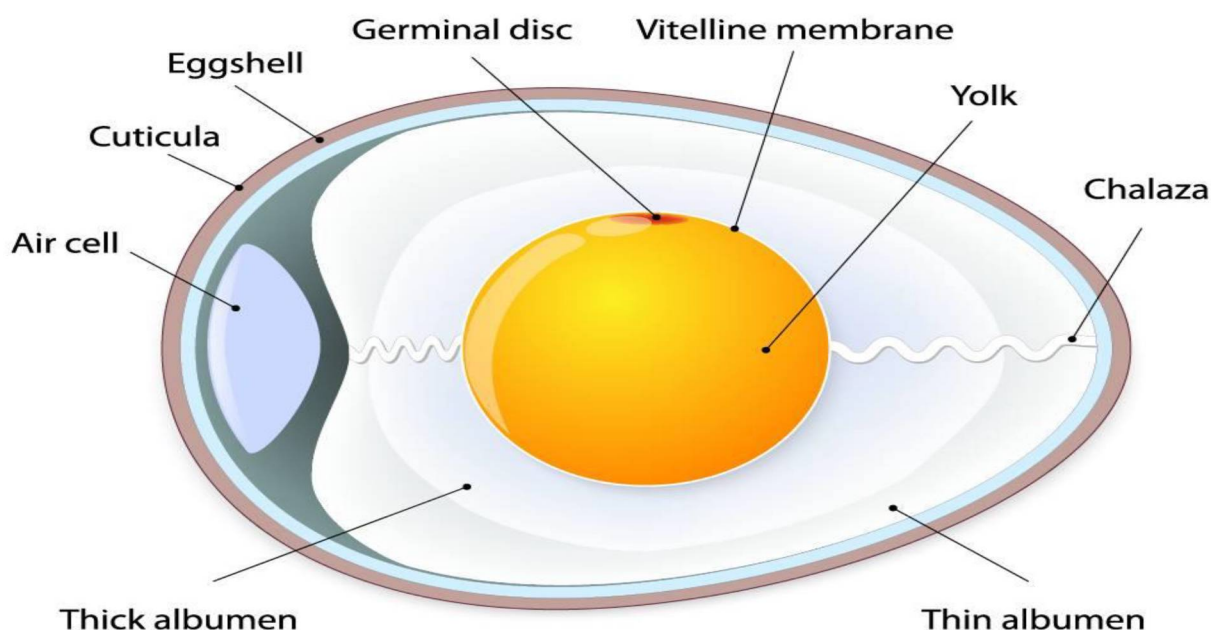
### **12. Translate into English.**

1. Породи тварин — це сукупність особин у межах певного виду тварин, яка має генетично обумовлені стабільні характеристики (властивості та ознаки), що відрізняють її від інших сукупностей особин цього виду тварин, стійко передають їх потомкам та є результатом інтелектуальної, творчої діяльності людини. 2. Групу порід, які об'єднані за географічними ознаками, походженням, а також за подібністю морфологічних характеристик називають «класом». 3. Леггхорн — високопродуктивна порода домашніх курей середземноморського походження яєчного напрямку. Колір оперення найчастіше білий, колір яєчної шкаралупи також білий. 4. Голова середньої величини. Гребінь листоподібний, у півнів прямостоячий, у курей звисає в сторону. Сережки червоні. Вушні мочки білі або блакитні. Шия досить довга, тонка. Забарвлення шкіри жовте або тілесне. 5. У промисловому птахівництві зусилля фахівців спрямовані на те, щоб створити для породи оптимальні умови незалежно від кліматичної зони і пори року. 6. Птахівництво — галузь сільськогосподарського виробництва, основним завданням якої є розведення, вирощування, утримання, годівля птиці, застосування механізації, автоматизації, проведення профілактики захворювань з метою одержання продукції птахівництва. 7. Птахівництво є найбільш інтенсивною галуззю тваринництва, яка при порівняно незначних затратах праці й кормів дає за короткий час високоякісну продукцію. 8. У світі існує безліч порід курей, різних на вигляд, за забарвленням, особливостями розведення і напрямком використання. У різних порід яйця мають різний колір: білий, палевий, зелений, строкатий, зозулятий, червоний тощо. 9. З господарської точки зору породи розділяють на три головні групи: яєчні породи, яєчно-м'ясні породи, м'ясні породи. 10. Породи мають свої особливості. Яєчні кури — невеликого розміру, швидко ростуть, рано дозрівають. Кури яєчно-м'ясних порід більші, з добре розвиненими м'язами, менш скороспілі.

**13. Look at the picture and match the Ukrainian terms with their English equivalent. Translate the sentences into Ukrainian.**

air

## CHICKEN EGG



Зародковий диск, щільний білок, канатик, жовток, шкаралупа, підшкаралупова оболонка, оболонка жовтка, повітряна камера, рідкий білок.

1. A female chick is born with thousands of tiny ova, which are undeveloped yolks. Once she reaches maturity, an ovum will be released into a canal called the oviduct and begin its journey of development. 2. At any given time a productive hen will have eggs of several stages within her reproductive system. The eggs most recently discharged from the ovary are just tiny yolks, and the eggs farther down the oviduct are progressively larger and more developed. 3. From the time an ovum leaves the ovary, it takes approximately 25 hours for the egg to reach the vent for laying. During that time period, the yolk will grow larger while being surrounded by albumen (egg white), wrapped in a membrane, and encased in a shell. Pigment is deposited on the shell as the last step of the egg production process. 4. If sperm is present, the yolk will be fertilized before the albumen is deposited. 5. As a chick embryo develops in a fertilized egg, the yolk provides nourishment and the albumen cushions the embryo. 6. Although a hen has only one exterior opening (the cloaca or vent) for egg laying and elimination, eggs are not contaminated during the laying process. Two separate channels, the oviduct and the large intestine, open into the cloaca. As the egg nears the end of the oviduct, the intestinal opening is temporarily blocked off. The egg passes through the cloaca without contact with waste matter. 7. The typical interval between eggs laid is about 25 hours, so a hen that lays an egg every day will lay a bit later each day. 8. Hens don't usually lay eggs in the dark, so once a hen's laying cycle reaches dusk time, she will usually not lay till the following morning. 9. Eggshell production drains calcium from the hen's body. The comb, wattles, legs, and ear lobes will fade as the calcium



leaches out. Calcium must be replenished through either feed containing calcium, supplements such as oyster shell, or high amounts of calcium in the soil of birds with outdoor access.

**14. Translate the text into English. Use the word below as prompts.**

*Topical issue, inclusive approach, concerned effort, short and long term objectives, scientific planning, risk measurement, resourcing, task control, breeding poultry, provide for the needs, growing birds, rival product, subsistence farming, International Trade Organization.*

## ПТАХІВНИЦТВО В УКРАЇНІ СЬОГОДНІ

Для вирішення актуальних питань реформування галузі птахівництва необхідний системний підхід з чітким розумінням структури галузі як системи, ланки якої узгоджено взаємодіють між собою. Концепція реформування передбачає: чітке формулювання коротко і довгострокових цілей, науково обґрунтованого планування, оцінки можливих ризиків й розробки стратегій щодо їх подолання, ресурсне забезпечення, здійснення контролю за виконанням поставлених завдань, моніторинг галузі та корегування планів під впливом нових умов.

Для розширеного виробництва продукції птахівництва необхідно налагодити роботу племінних птахівничих підприємств, які б забезпечили потреби вітчизняних підприємств і господарств населення якісним молодняком сільськогосподарської птиці за прийнятними цінами.

Для підвищення конкурентоспроможності продукції птахівництва присадибних і фермерських господарств й подальшого розвитку у світлі вступу України в СОТ, необхідно організувати мережу виробничих та обслуговуючих кооперативів, лабораторій контролю якості продукції, роздрібної торгівлі кормами, ветеринарними препаратами, обладнанням, тощо.

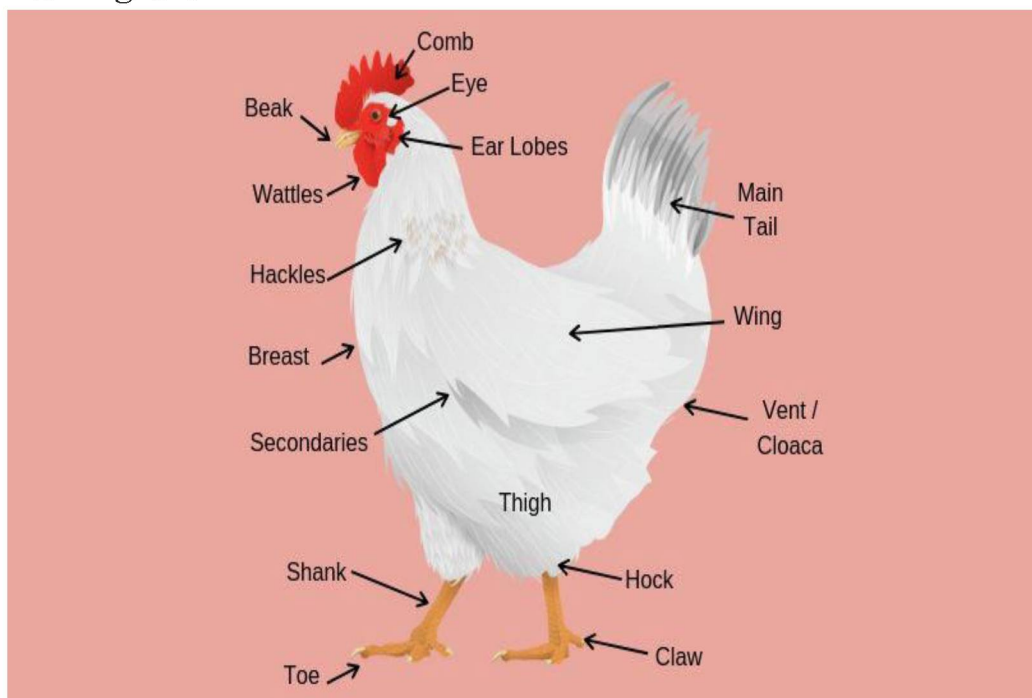
Створення логістичного центру з питань птахівництва й сучасної сільськогосподарської торговельної біржі підвищить ефективність галузі.

**\* let your deskmate read the text in Ukrainian and translate it paragraph by paragraph.**

**15. Translate the sentences into Ukrainian.**

1. Poultry have good eye-sight: detect colour; prefer green and yellow. 2. Shining objects such as water droplets on a nipple line attracts attention and birds learn to drink quickly. 3. It can smell and will detect offensive smells. 4. They avoid areas where ammonia is in the air e.g. wet spots under drinker lines for birds housed on the floor. 5. Hens can hear very well. 6. Noises such as banging of trolleys or crates and people shouting, cause stress and affect immune development after vaccination. 7. The comb and wattles are well supplied with blood vessels. Cool air moving over these areas removes body heat. These organs assist with body temperature regulation in hot weather.

**16. Look at the picture. Make sure you know all the terms. Translate the texts into English.**



**а) Аям Цемані** (Ayam Cemani) є дуже рідкісною породою курей, які розповсюджені в лісах Індонезії. У перекладі з індонезійської мови Аям означає курка, а Цемані - це назва села на Середній Яві, біля міста Соло. Вважається, що кури Аям Цемані є прямими нащадками диких курей з островів Індонезії, зокрема з Суматри. У 1920 році голландські колонізатори вперше їх описали. Перші екземпляри цього птаха і перші інкубаційні яйця були завезені в Європу в 1998-2000 рр. Існує думка, що оригінальні кури Аям Цемані давно вимерли, залишилися тільки гібриди з курами Аям Кеду. Розведенням Аям Цемані займаються в районах Середньої і Східної Яви, Суматри і Мадуро. На своїй батьківщині, в Індонезії, ці повністю чорні рідкісні кури коштують великих грошей. Місцеві жителі купують їх з ритуальною метою, що пов'язано нібито з притаманною їм чорною містичною силою. Особини цієї породи повністю чорні - від гребінця і дзьоба до кігтів. Чорне пір'я цих птахів має гарний смарагдово-фіолетовий відлив. М'ясо і внутрішні органи цієї породи теж мають чорний колір, який зберігається навіть після приготування. Однак покупців, готових заплатити за пару чорних птахів 5000 доларів, цікавлять не так кулінарні, як декоративні якості цієї породи. А ще багато покупців впевнені, що чорні кури приносять своєму власникові довічну удачу.

**б) Найрідкісніша порода в світі, бійцівський Га Донг Тао** (Ha Dong Tao), налічує всього 300 голів і утримується мешканцями В'єтнаму протягом, принаймні, 600 років. Цікаво, що вона практично не зустрічається за межами країни. Це одна з безлічі порід, виведених спеціально для півнячих боїв, що має

багату історію і дуже обмежену популярність в Європі. Її назва вказує на місце походження породи: Га — це курка, Донг Тао — велике в'єтнамське село, де споконвічно проводили півнячі бої. Породу вважається досить важкою — вага півня 6-7 кг, курей 4,5-5,5 кг. Грубої конституції, масивної статури з гіпертрофованим горіховидним гребенем. Але головна особливість цієї породи — це дуже товсті лускаті ноги, за які їх часто називають родичами динозаврів. Лапа дорослого півня може досягати в обхваті товщини зап'ястя дитини. Ці ноги у В'єтнамі — величезний делікатес, подають його на великі свята і на весілля багатіїв. При цьому використовуються ніжки тільки молодих курчат 4-6 місячного віку. Зараз порода розводиться в основному як декоративна і м'ясна. Забарвлення в'єтнамських бійцівських курей, як правило, чорне з червоним або біле.

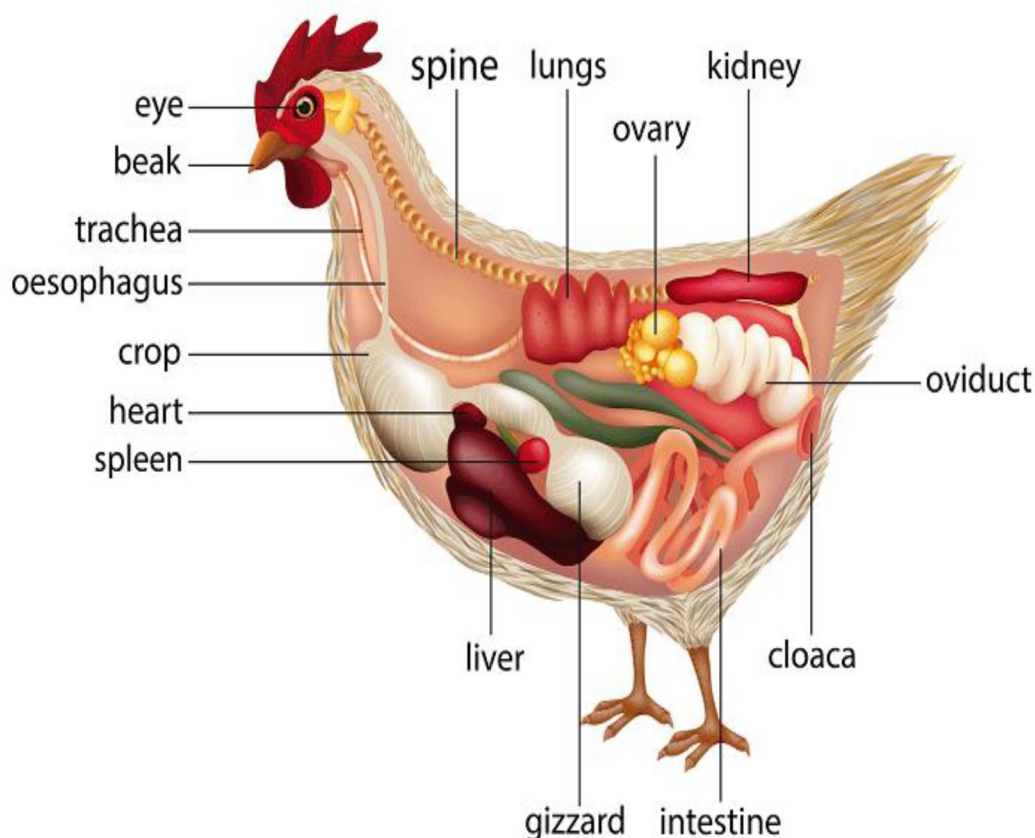
с) Кури породи **Бресс Гальская** (La Bresse Gauloise) — великі кури м'ясо-яєчного напрямку, які по праву вважаються найсмачнішими в світі. Ця порода виведена у французькій провінції Бресс. Саме там є невелика ділянка землі, площею всього в чотири тисячі кілометрів, де живуть єдині в світі птиці, яким дозволено носити «знак якості» АОО (Appellation d'origine contrôlée) з 1957 року. Це знак, на якому пишеться місце походження курей. Прекрасні птиці білосніжного кольору з яскраво-червоним гребінцем і синіми ніжками за свої смакові якості стали відомі з літопису 1591 року. З достовірних джерел відомо, що французький король Генріх IV, вперше покуштувавши цю курочку, виявив бажання, щоб у кожного селянина на столі хоча б раз на тиждень була така сама. Французи дуже трепетно ставляться до курей цієї породи і при вирощуванні неуклінно дотримуються певних правил. Неофіційним символом країни є навіть галльський півень, образ якого завжди карбують на монетах. Особливо цінний так званий бресський каплун. Півнів каструють, після чого вони вже не співають та не топчуть курей, проте дуже багато їдять і сильно товстіють. Годують курей пшеничною і кукурудзяною кашею на молоці. В останні два місяці перед забоєм курей переводять на особливе харчування, в раціон вводять сухарі, розмочені в молоці, і зелений салат. Бресський каплун популярний у Франції ще й тому, що заради цього птаха французи влаштовують ціле куряче шоу, відоме у всьому світі.

\*A **capon** (from Latin: caponem) is a cockerel (rooster) that has been castrated or neutered, either physically or chemically, to improve the quality of its flesh for food, and, in some countries like Spain, fattened by forced feeding.

**\*\* close your book and let your deskmate read the text. Interpret the text sentence after sentence and paragraph after paragraph.**



**17. Look at the picture of a chick's anatomy. Get ready to translate the text into Ukrainian. What the video about how chicken digest their food and interpret it. Get ready with the summary of the video both into English and Ukrainian.**



**18. Translate the sentences into Ukrainian**

1. Female chickens are called pullets for their first year or until they begin to lay eggs. 2. For most breeds, around 20 weeks is a typical age for the first egg. 3. Some breeds lay eggs daily, some every other day, some once or twice a week. 4. Some individual hens never lay eggs, due to narrow pelvises or othe anomalies. 5. Normal laying routines can be interrupted by molting, winter daylight shortage, temperature extremes, illness, poor nutrition, stress, or lack of fresh water. 6. Hens usually return to normal laying habits when the disruption-causing factor ends or is corrected. 7. Most hens are productive layers for two years before declining in production, but some continue to lay eggs for several years. 8. Hens will lay eggs whether or not they have ever seen a rooster. 9. Roosters are necessary only for fertilization of eggs.

**19. Watch video and answer the questions below. Then watch the part again and get ready with its English summary (Best chicken breeds for eggs: [https://www.youtube.com/watch?v=KUp3uDHMWxo&ab\\_channel=AgricultureAcademy](https://www.youtube.com/watch?v=KUp3uDHMWxo&ab_channel=AgricultureAcademy)).**

- a) What chicken breeds does the speaker mention?
- b) What breed would you choose to get funny colourful eggs?

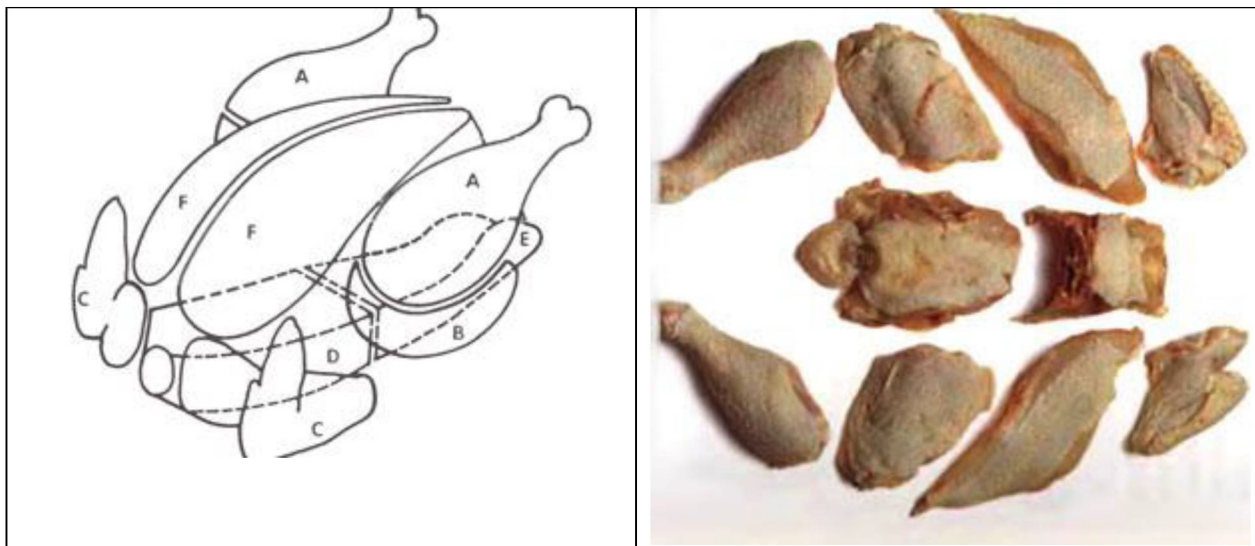
c) What was special about the hen, the speaker holds in her hands at 2.22?

d) Why does the speaker recommend to be careful about chicken sex?

\* *extra task.do the script of the first part of the video.*

\* *make sure you can describe the chicken breeds shown in the video.*

**20. Study the picture and match the letters with the words. Make sure you know their Ukrainian equivalent. Practice the simultaneous reading - interpreting of the text the text below.**



***Thigh, drumstick, winglet, drumette, breast, tenderloin, carcass.***

***Стегно, гомілка, крило, барабанна частина крила, грудка, філе, каркас.***

### **How to cut up a chicken.**

Buying a whole chicken, instead of individual parts, is often more economical. If you don't want to roast or grill a whole chicken at once, you need to cut it into individual parts before you cook it. Here are 7 steps for cutting a whole chicken into 8 pieces: 2 breast halves, 2 thighs, 2 drumsticks, and 2 wings.

Lay the bird on its back. Wiggle a wing to determine where the joint attaches to the breast. To separate the wing from the breast, use a sharp knife to cut through the ball joint where it meets the breast. Repeat with the other wing.

Pull a leg away from the body to see where it attaches. To remove the whole leg, first cut through the skin between the thigh and the breast.

Continue to pull on the leg and wiggle it a bit to determine where the thigh meets the socket in the back. Use a boning knife or paring knife to cut through that joint. Repeat with the other leg.

Place each leg skin-side down. With your hand and knife, bend the leg to feel for the ball joint. That's where the drumstick and thigh are connected. Then, look for the thin line of fat that runs along the ball joint. Cut through the line of fat to separate the thigh and drumstick. Wiggle the joint as needed so it's easy to cut. Repeat with the other leg.

To remove the backbone, start at the head end of the bird and cut through the rib cage on one side of the backbone with kitchen shears or a sharp knife. Repeat on the other side of the backbone to remove it completely. (Reserve the backbone and neck for chicken stock, if desired.)

Now cut the breast into two halves. Place the breast skin-side down. To protect your hand, fold a kitchen towel and place it on top of a heavy, sharp knife. Use your weight to cut through the breast bone and cartilage down the center of the breast.

**21. Read the text. Imagine your task is to interpret the report done on the basis of this text. Make an English question and answer discussion and interpret it into Ukrainian (work in a group of three). Use the definitions below to sound more sophisticated.**

### **COMMERCIAL POULTRY**

Over the years, traditional breeds have lost their commercial importance since they are not as efficient at producing meat and eggs. Crossbreeds and hybrid strains have been developed into the modern chickens used by today's industry. All meat and egg poultry raised commercially have been developed by an international primary breeder company. These birds have been selected to produce an extremely efficient hybrid line specific for the company's product lines.

#### **Egg Cycle**

In the modern *egg industry*, most laying hens are hybrid White Leghorns (white egg producers) or sex-linked hybrids that resemble New Hampshire Reds and Barred Plymouth Rocks (brown egg producers). Sex-linking is where a plumage trait, like slow feathering or a certain colour pattern, is linked to the sex chromosome so that there is a distinct physical difference between the sexes of day-old chicks. This saves time and money separating the females for egg production. Today's egg producing hens can produce over 300 eggs per year; this is over twice the average of 150 eggs per year in 1947.

#### **Primary Breeders**

The primary breeders and multiplier flocks are owned by an international breeder company.

Breeders are raised in a slatted floor house with automatic watering, feeding, and egg collection systems. The slatted floors allow the birds to actively function on a floor surface while allowing the manure to fall through the slats into a manure pit. This keeps the birds and eggs cleaner.

Males and females are allowed to mate naturally. Females begin producing eggs around 20 weeks of age and will lay efficiently until about 85 weeks of age. Both white-shelled and brown-shelled egg lines are produced depending on the desired egg market. The only difference is the colour of the egg shell and the breed

of bird that we use to produce the egg. *Brown egg birds are slightly less efficient at egg production per kg of feed than are white egg producers, mainly because the brown egg laying breeds are larger bodied and require more feed for body maintenance.*

### **Poultry Timeline**

It takes a female between 23 and 32 hours to produce a fertile egg. *The eggs are automatically collected daily, transported to the hatchery and stored at 13-18° C and 70% humidity until they are set in the incubator.* The eggs are held here for about three to seven days prior to placing in an incubator. One fertile hatching egg is worth \$.28 and weighs around 60g.

Further processing changes the product into something more convenient or useful in another form. Liquid and dried eggs (яичный порошок) are used in a wide array of consumer products. *Convenient pre-cooked egg products are also more common at food stores and restaurants.* This also adds more value to the final product.

### **Broiler Life Cycle**

The modern *broiler industry* has developed a hybrid that is unlike any other breed. The initial breeds used in modern broiler hybrids were Cornish and Plymouth Rocks. *Today's broiler can achieve a 2,25- kg market weight in five weeks. Forty years ago, it took 10 weeks to achieve a 1,81kg market weight. These advances are the result of scientific progress in genetic, nutritional, and environmental research.*

### **Primary Breeders**

The primary breeder flocks are owned by an international breeder company. These flocks produce highly efficient breeding lines (parent lines) that are sold to the integrated broiler companies. Chicks are hatched at the breeder's hatchery and then sold and delivered to the integrated companies' parent breeding farms.

### **Parent Stock Breeders**

Once the chicks arrive at the breeder growing farm, the birds are raised to 20 weeks of age under environmentally controlled conditions. Controlling the length of daylight is extremely important. Breeders do not receive more than 10 hours of light daily as they are growing so they are not prematurely stimulated to lay eggs. During the 20 weeks of the grow-out, each bird will eat 30-35 kg of feed and will grow to 6-8 kg. Once they reach 20 weeks of age, they are transported to the breeder farm.

The parent breeders are the birds that produce the fertile eggs that will become the broiler chickens that are harvested for meat. *Breeders are raised in open floor houses with automatic watering, feeding, and egg collection systems. Males and females are allowed to mate naturally.* Females begin producing eggs around 24 weeks of age and will lay efficiently for 40 weeks per cycle. An average broiler breeder female will lay 150-180 eggs in a year.



- **Crossbreeds** is an organism with purebred parents of two different breeds, varieties, or populations. In animal breeding, crossbreeds are crosses within a single species.
- **Hybrid** - crosses between different species.
- **Sex-linked hybrid**. Sex-links are crossbred chickens whose color at hatching is differentiated by sex, thus making chick sexing an easier process.
- **Primary breeder**. Their responsibility is to develop and reproduce strains of chicken that meet the requirements of chicken producer/processing companies.
- **Multiplier flock** means poultry used to produce fertile eggs to produce poultry for egg production and broiler flocks.
- **Manure** is organic matter that is used as organic fertilizer in agriculture. Most manure consists of animal feces.

\* **translate the sentences printed in italics in Ukrainian.**

\*\* **make the text review both in English and Ukrainian, your review should be as long as 500 words.**

## **22. Translate the sentences into Ukrainian.**

1. The function of the multiplier breeder is to multiply the parent flocks (four generation) which produce eggs for commercial growers. 2. «Parent breeder» means a bird belonging to a flock of poultry, comprising one or more generations of poultry, that is being maintained for the purpose of multiplying the parent flock or to produce commercial birds. 3. Chicks of a single breed that are similarly sex-linked are called autosex chickens, a term developed to differentiate between sex linkage in purebred chickens versus sex linkage in crossbreeds. 4. It is important to remember that the offspring are hybrids and will not breed true. 5. Hybrid chicken breeds are the result of cross breeding two or more heritage or purebred chicken breeds, usually to produce offspring that lays more eggs, produce more meat or other desirable traits like plumage colour, body shape or temperament. 6. Sex link chicks are basically chicks that can be sexed by their colors on the day they hatch. Most are made by crossing 2 different breeds with known characteristics to cause the coloring desired. Though they are usually bred for egg purposes, several make good meat chickens too. Most of the time if you switch the sexes from what is mentioned, the sex link will not breed through. 7. Black sex links are created by breeding a barred hen to a non barred rooster. Typical breeding is a Barred Plymouth Rock hen under a Rhode Island Red, or New Hampshire red rooster. In this cross, the hens do not receive a barring gene (the barring gene is only located on the male chromosome). 8. Hatchery stock New Hampshire Reds may

have a cross in them that throws it off too. Chicks from White Plymouth Rocks that carry the silver gene will be smoky gray in color, and will be all white as adults. Another advantage of the silver gene is their feathers won't turn yellow in the sun like White Rocks bred without it.

**23. Read the text and translate the English sentences into Ukrainian and Ukrainian into English.**

The objective of body weight control is to rear all of the birds to the target weight for age with good uniformity. Body weight targets are achieved by controlling feed allowances. *Розрахунки кількості корму при вирощуванні птиці на м'ясо базуються на показниках маси тіла та умовах утримання, тоді як у виробництві яєць порібно враховувати окрім цих двох факторів ще й несучість птиці.*

Feed amounts can only be determined if the body weight is measured accurately every week. To measure body weight, weigh between 60 and 100 birds per pen each week or 1% to 2% with a minimum of 50 birds to have a representative sample of the population. *На 7 і 14 день зважують пробну кількість птахів окремо або 10 птахів, зважених разом у сітці.* Thereafter, weigh birds individually at the same time on the same day of every week. Be sure the bird weights are taken on an "off day" or before feeding if everyday feeding is used.

Follow these simple procedures to ensure accuracy:

1. Ваги, що використовуються для вимірювання маси тіла, повинні містити 5 кг (11,02 фунтів) і бути точними до +/- 20 г (0,04 фунтів). Check regularly that the scales are properly calibrated. It is an advantage to have electronic balances with a printout facility.

2. Gather a good sample of birds in a catching pen and with preference take the sample in the middle of the house. If a large sample is taken use 3 spots in the house (front, middle and back of the house).

3. Зважте всіх птахів у загоні для лову, включаючи дрібних птахів (враховуйте помилки статевого відбору під час цієї операції). Record body weights using the following chart.

4. Calculate the average weight of all birds weighed.

5. Занесіть середню масу тіла на відповідний графік.

6. Decide on the feed amount for the following days.

7. During rearing, feed amounts should be maintained or increased. Тільки у надзвичайній ситуації можливе зменшення кількості корму.

8. After peak egg production feed amounts are normally reduced to control mature body weight and ensure persistency of egg production and fertility. Точний метод зменшення корму може варіюватися в залежності від поголів'я.

**\* read the sentences and compare your Ukrainian English translation with the given below. Discuss more possible variants.**

1. Only emergency situations require a decrease in the feed amount. 2. The precise method of feed reduction could vary from flock to flock. 3. Plot the average body weight on the appropriate chart. 4. Weigh every bird in the catching pen, including

small birds (cull sexing errors during this operation). 5. The scales used to measure body weight must have a capacity of 5 kg (11.02 lb) and be accurate to +/- 20 g (.04 lb). 6. At 7 and 14 days weigh a bulk sample of birds, or 10 birds weighed together in a bucket. 7. Feed amounts during rearing are based on body weight and maintenance, whereas in lay they are based on these two factors plus egg production and egg weight.

**24. Now, when you have study the texts and get ready to a big scientific conference. Follow the steps to organize it.**

- a) make a report on each topic discussed in the texts;**
- b) get ready with the questions to be asked after each report is delivered, questions should sound Ukrainian and English;**
- c) be ready to work as an interpreter both for those who report and ask, answers are supposed to be interpret as well.**
- d) prepare the review of the conference both in English and Ukrainian to be published on the website of your company. Make sure you've enumerated all the topics discussed, underline the hot interest of those who are present, signify the further development of the poultry industry. The report should be as long as 2000 words.**

**25. Imagine you have received a task to compose a copy write article about more popular chicken breeds for egg laying and meat purpose. You are allowed to use only information published in English to work create the Ukrainian article and vice versa. Make sure you write as many as 1000 words.**

## UNIT II. DUCKS. VARIETY TYPES. BREEDING RECOMMENDATIONS

**1. Do the follow reading interpretation of the text (let your desk mate read the text and you should interpret it into Ukrainian without lookin at the text).**

Duck raising both in Ukraine and in Europe, like raising chickens for meat, can be a **full-time specialized business** requiring efficiency. The growing commercial market for duck meat is linked with the increasing population. Duck meat generally **commands a good price**, well above the prices received for chicken. The meat is marketed as fresh, frozen and chilled products, either whole or in parts.

There are problems associated with keeping ducks for egg production on a large scale because of low egg numbers, **high feed consumption** and the need to house ducks in small numbers. The main egg-laying breeds of ducks can lay more and larger eggs than can hens, but ducks eat about 75% more feed.

For these reasons, most farmers concentrate on meat production. Ducks rearing is being promoted to small community farmers as a means of **sustainable livelihood development**.

There are also a few smaller family farms that have ducks grown for them on contract farms, as well as operators who are involved in all aspects of production, plucking and including direct sales.

**\* mind the word combinations printed in bold, guess the best variant of their translation.**

**2. Translate into English. Make your own sentences with the phrases and let your classmate translate them.**

Розвиток технологій, що забезпечують стабільне існування; диктувати високі ціні; засоби для стійкого існування; високі витрати корму; низький рівень споживання кормів; визначати ціну; повноцінний бізнес у певній сфері.

**3. Translate into Ukrainian.**

1. Now, for me, what started out as helping a friend for a couple of weeks had turned into a full-time business. 2. Even if you ultimately plan to run your business full-time, starting on a part-time basis can offer several advantages. 3. Prime location commands a good price for sellers in accordance to demand. 4. High feed consumption may be due to wastage caused by spillage from overfilled troughs. 5. A livelihood is sustainable when it can cope with and recover from stresses and shocks and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base. 6. This represents a serious obstacle to returns and sustainable livelihood. 7. Project on sustainable livelihood through energy enterprises technology choice and dissemination. 8. In 1972-1974, for example, the drop in the United States feed consumption was as large as the global production shortfall. 9. High



feed prices have, in turn, raised costs for зщгдекн production and resulted in an increase in both meat and egg prices.

#### 4. Translate into English.

1. Використання в раціоні макухи (sunflower cake) дозволяє на 30% знизити витрати корму і отримувати високі середньодобові прирости живої маси качки. 2. Вирощування качок для отримання яєць у великих масштабах не є рентабельним через низьку кількість яєць та високу витрату кормів, а також необхідність розміщення цієї птиці невеликими групами. 3. Вирощування качок на м'ясо може перетворитися на повноцінний бізнес, так як останім часом м'ясо цієї птиці користується все більшим попитом, що в свою чергу, зумовлює його високу ціну. 4. Останні роки все більше фермерів звертають свою увагу на качку як на птицю, що несе високоякісні яйця, які широко використовуються в кулінарії. 5. Птахівництво є стабільним бізнесом, який забезпечує як харчами так і роботою достаньо велику кількість місцевого населення.

#### 5. Read the text. Do the translation in writing.

*The Muscovy duck* belongs to the genus *Cairina* and originated in South America. It is a good multipurpose breed and has good flavour meat. It is a medium egg producer. The young are hardy and easy to rear. It is a good grazer and thus ideal for back-yard operations. The male Muscovy can become very large (4.5 to 5.5 kg) while the female is smaller (2.3 to 2.8 kg). Market age is 12 weeks.

Muscovy differs from other breeds in the following ways:

- It goes **broody** and will sit on and hatch eggs of other breeds as well as its own.
- It flies, and **perches** on roosts and trees.
- If already mated with members of its own breed, it will not mate with members of other breeds.
- Where cross-matings are successful, the **crossbred progeny** are infertile and are known as 'mules'.
- The **drake**, unlike in other breeds, has no curl feathers in his tail.
- Both male and female Muscovies 'hiss' rather than 'quack'.
- Muscovies are poor egg producers, and lay their eggs in clutches; that is, they may lay 20 or so eggs and go broody or pause before producing again.
  - Its eggs take 35 days to hatch, whereas eggs of other breeds take only 28 days.
- Its meat has a lower **fat content** than that of other ducks

*The Pekin duck* is ideal for commercial production due to its good egg producing capabilities and **hatchability**. It adapts well to confinement and is a good egg producer. The Pekin duck has a good **meat yield** and flavour. Market Age is 7weeks.

*The Mule* is the result of a cross between the Muscovy male and the Pekin female. It is faster growing than the Muscovy and produces a good **lean meat yield** with succulent flavour. This breed is however **sterile**. Market Age 8 weeks.

\* **guess the translation of the words printed in bold:**

Той, що не може дати виплодку; вміст жиру; вихід м'яса; спроможність насиджувати пташенят; селезень; помісний виплід, качка, яка збирається насиджувати яйця; сидіти на насісті, пісне м'ясо

## 6. Match the left column with the right one.

duckling	каченя
to be broody	яйце без зародка
to break th eggshell	жива маса
egg candler	племенна робота
ringed yolk/ blood ring	селезень, качур
to set ( a duck/ hen) on eggs	поголов'я качок
hatching	овоскоп
addle egg	відкладування яєць
growing birds	стадо
drake	молодняк
egg laying	вилуплюватися
to hatch	близькорідне схрещування
duck stock	кров'яне кільце
flock	збиратися насиджувати яйця
body weight, live weight	прокльовуватися
breeding programme	насиджувати
in-and-in breeding	садити на яйця

**7. Translate into English and get ready with the summary in English, make sure you have used not more that 500 words. Here are some words to be used in your work.**

### НАСИДЖУВАННЯ ЯЄЦЬ

Розведення качок за допомогою насиджування розпочинається восени з підбору пар, коли все поголов'я набрало оптимальну живу масу і було відібрано птицю для племінної роботи. При виборі племінних особин велику увагу слід приділяти їх походженню. Не можна допускати близькорідного схрещування. Качок можна підібрати з домашнього стада, а селезнів краще придбати в іншому місці. Молодняк, отриманий від таких пар, буде більш міцним і життєздатним.

На одного селезня залишають 5 качок. При виборі качура слід звернути увагу не лише на його продуктивність, але і на так звані риси характеру (наприклад, жвавність, спритність, напористість). Такі селезні будуть добре захищати своє стадо, охороняти його від чужинців та ворогів. У водоплавної птиці дуже добре розвинуте відчуття прив'язаності - партнер обирається іноді на все життя. Тому, якщо ваші качка і качур самі створили пару, не руйнуйте її: вони будуть хорошими «батьками», а їх виплодки - численними, міцними і здоровими. В жодному разі не можна залишати самця, якого клюють і не люблять самки. Такий селезень не зможе бути вожаком стада, а більшість яєць будуть непридатними для насиджування.

Качки мають миролюбний характер, тому їх можна не розділяти. Щоб качине стадо було дружним, взимку селезнів краще кормити окремо від качок. Навесні пташині сім'ї утримують окремо, а після появи каченят об'єднують в одне велике стадо. Зазвичай у качиному стаді є один головний селезень, а інший знаходиться на другому місці і добре уживається з вожаком, так що, на відміну від гусей, качки живуть досить мирно. Більше двох качурів у племінному стаді тримати немає необхідності.

З кінця лютого і початку березня розпочинається кладка яєць. Качки починають нестися у квітні і продовжують цей період до жовтня. Тому за сезон можна отримати декілька качиних виводків. Найзручніший час для того, щоб посадити качку на яйця, - квітень. Якщо качку посадити пізніше, то молодняк не встигне достатньо вирости і зміцніти до настання холодів.

Щоб виведення молодняку було дружним, усіх качок варто посадити на яйця одночасно, тому що запізнїлу качку з виводком вожак може не прийняти у стадо. Якщо виходить так, що одна сіла раніше, ніж інші, то її турбувати не можна. Просто покладіть під неї одне яйце, а коли інші гуски займуть свої місця на гніздах, замініть це яйце повноцінною кладкою. Може бути так, що у стаді знайдуться погані насиджувальниці, але вони, як правило, добре відкладають яйця. Підкладайте їх яйця в гнізда іншим качкам - найчастіше ті, що все насиджують яйця, добрі й непримхливі.

Качки деяких порід (наприклад, глиняної або сірої української) - дуже добрі несучки і насиджувальниці, вони з однаковим успіхом сидять як на своїх, так і на чужих яйцях, тому їм можна підкладати не лише качині, а й курячі та гусячі яйця. Не можна підкладати яйця під час насиджування, так як самка після появи перших пташенят може залишити гніздо. Всі яйця підкладають одночасно, щоб молодняк з'являвся один за одним протягом 1-2 діб. Під качку зазвичай підкладають 12-15 яєць.

Садити на гніздо краще ввечері, щоб качка за ніч звикла до гнізда. Напочатку висиджування самок не слід чіпати, огляд качиних яєць вперше проводять на 7-8 день. Роблять це обережно. При огляді на світло в яйцях без зародків немає темних плям. Якщо таке яйце (воно називається «бовтун») потрясти, то можна почути характерний звук. Яйця з замерзлими зародками можна визначити лише на овоскопі - в такому яйці проглядається кров'яне кільце або звивина. Ці яйця разом з «бовтунами» видаляються з гнізда.

Самок на гніздах не можна часто турбувати. Намагайтеся зробити так, щоб качок на гнізді не турбували інші птахи та домашні тварини. Двері до приміщення, де знаходяться гнізда, тримайте зачиненими, їжу для них залишайте раз на добу, але так, щоб її було достатньо. В цей час самок годують сухим зерновим кормом. Вони часто п'ють, тому слідкуйте за тим, щоб у поїлках завжди була вода.

Насиджування у качок триває 27-28 днів. Пильнуйте, щоб не пропустити момент прокльовування молодняку. Якщо пташеня не може самотійно звільнитися від шкаралупи і довго не виходить, можна обережно допомогти йому, відламуючи шкаралупу маленькими шматочками, починаючи з головної

частини. Обов'язково дайте каченят відпочити під качкою, а потім заберіть їх з гнізда. Всіх каченят збирають у ящик або картонну коробку, яку застеляють утеплювачем і ставлять у тепле місце. Оптимальна температура повітря для пташенят + 28+30 °С. Молодняк підпускають до качки тільки тоді, коли повністю завершиться виведення (до річі, можна підпускати до неї й молодняк, який вилупився в інкубаторі). Потім до качки з молодняком прилаштовується і самець.

## 8. Translate into Ukrainian

1. Inbreeding is the production of offspring from the mating or breeding of individuals or organisms that are closely related genetically. 2. Offspring of biologically related birds are subject to the possible effects of inbreeding, such as congenital birth defects. 3. A blood ring occurs during the incubation of chicken eggs when the chick begins to develop but then dies. 4. When there's a blood ring, rather than this pattern you'll see a dark line running around the circumference of the egg. 5. To candle your eggs, you can either use a special egg candling lamp or a simple flashlight. The benefit to the egg candler is the ease of use and it's quite a bit safer for the egg. The egg candler will cradle the egg for you so it's mostly hands free. They also tend to be brighter than your average flashlight. 6. A breeding program is the planned breeding of a group of animals or plants, usually involving at least several individuals and extending over several generations. 7. All domestic poultry, including waterfowl, should be maintained on a quality commercial type feed. Feed quality, the amount of feed consumed, and the rate of body weight gain are extremely important in determining the rate and number of eggs produced. 8. Since drakes are aggressive, they can often injure or even kill females. Thus, a large number of drakes is not necessary to maintain a quality breeding flock. A ratio of four to one or five to one hens to drakes should be adequate to maintain fertility.

## 9. Read the text about a duck's morphology. Mind the translation of words printed in bold. Rewrite the English text using your own words.

**Example: A duck has got an elongated and broad body, their kneck is quiet long, but not as long as a swan's one.**

The overall body plan of ducks is **elongated** and broad, and the ducks are also relatively long-necked, **albeit** not as long-necked as the geese and swans. The body shape of diving ducks varies somewhat from this in being more rounded. The **bill** is usually broad and contains serrated **pectens**, which are particularly well defined in the **filter-feeding species**. In the case of some fishing species the bill is long and strongly serrated. The **scaled legs** (ноги, вкриті лузкою) are strong and well developed, and generally set far back on the body, more so in the highly **aquatic species**. The wings are very strong and are generally short and pointed, and the flight of ducks requires fast continuous **strokes**, requiring in turn strong wing muscles. Three species of **steamer duck** are almost flightless, however. Many species of duck are temporarily flightless

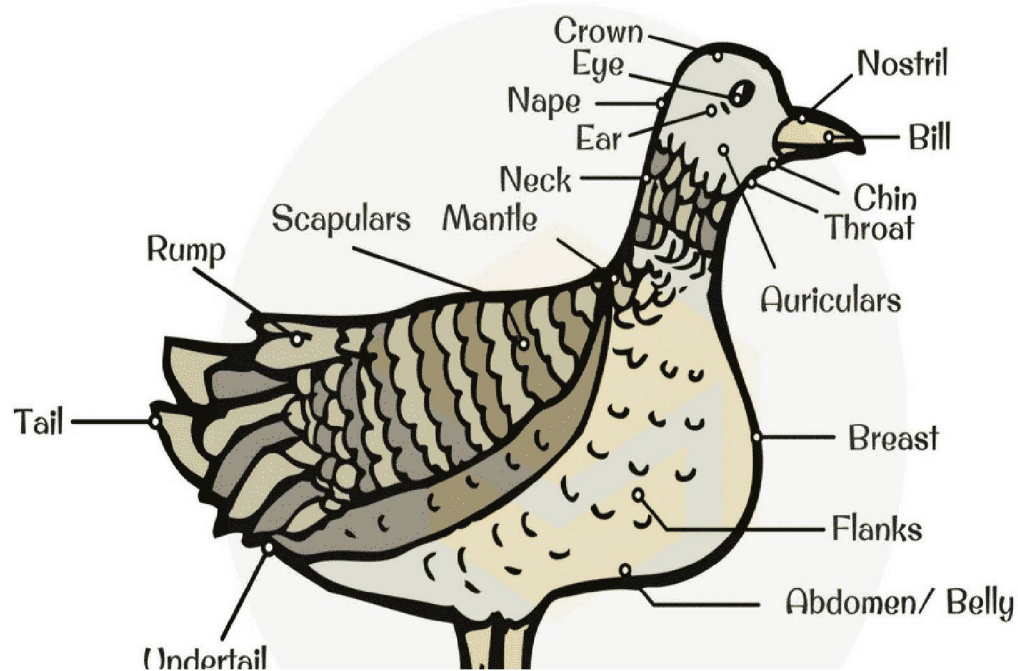


while moulting; they seek out protected **habitat** with good food supplies during this period. This moult typically precedes migration.

The drakes of northern species often have extravagant plumage, but that is **moulted** in summer to give a more female-like appearance, the "eclipse" plumage. Southern resident species typically show less **sexual dimorphism**, although there are exceptions such as the **paradise shelduck** of New Zealand, which is both strikingly sexually dimorphic and in which the female's plumage is brighter than that of the male. The plumage of **juvenile birds** generally resembles that.

a) Translate the parts of a duck's body.

## PARTS OF A DUCK



10. Translate the sentences from English into Ukrainian.

1. In the photo her face was slightly elongated. 2. Elongated means a bit longer and thinner than usual. 3. Charles's research was indeed published, albeit in a somewhat abbreviated form. 4. Reality is merely an illusion, albeit a very persistent one! 5. Inequalities between women and men persist in most dimensions of development, albeit to varying degrees across issues and among countries. 6. The representative of Ethiopia uttered the decline in global growth in 2020 had affected nearly all regions of the world, albeit to varying degrees. 7. A bird's bill, also called a beak, is a critical piece of its anatomy, not only for foraging, defense, singing, and other behaviors but also for birders to make a proper identification. 8. By knowing the basic parts of a bill and the bird's face and head immediately adjacent to the bill, birders can be better prepared to look for the subtle clues bills can reveal about every bird. 9. In ducks, pectens are placed on the sides of the bill and serve both as a strainer for food and a comb for preening. 10. Filter feeders are a sub-group of suspension feeding animals that feed by straining suspended matter and food particles from water, typically by passing the water over a specialized filtering structure. 11. Some birds, such as flamingos and

certain species of duck, are also filter feeder. 12. Aquatic species (superorder Microdrili) are smaller than earthworms (Megadrili) as the name suggest, and they have simple body walls and none of the specialized regions of the digestive tract found in the earthworms. 13. The dolphin's habitat is being rapidly degraded. 14. The grassland is an important habitat for many wild flowers. 15. A steamer duck is a sturdily built grayish duck which churns the water with its wings when fleeing danger, typically flightless and native to southern South America. 16. Waterfowl replace their old plumage with new feathers at least once a year during a process known as moulting (molding). 17. Paradise shelducks are a colorful, large bodied species of duck that differ in features depending on the sex. 18. Sexual dimorphism is the condition where the two sexes of the same species exhibit different characteristics beyond the differences in their sexual organs.

### **11. Read the text and give the English review of it.**

Качки – всеїдні птахи, які постійно шукають їжу. Але чи мають качки зуби, щоб жувати чи гризти різні горіхи, насіння, комах, зерна, фрукти, молюски та іншу їжу? Дуже важливим є розуміння того, як ця птиця харчується, тому спеціалісти знають не лише що, але і як їдять качки.

У качок немає зубів у тому розумінні, в якому їх мають інші тварини - тигри, вовки, акули, корови, свині чи люди.

Однак, качки мають витягнуту, сплюснуту форму **дзьоба**. Ця форма дзьоба у вигляді шпателя допомагає птахам розминати їжу. Вона нерівна і тому дещо схожа на зуби, оскільки сила, з якою вони розтирають жорстку їжу, нерівномірна, качки ретельно перетирають їжу перш ніж ковтнути. Ця форма дзьоба також допомагає качкам фільтрувати їжу з води або бруду. Загальний розмір дзьоба, а також кількість ущільнень, залежить від виду і допомагає визначити, яку їжу їдять качки. Ламелі – тонкі, гребінчасті або схожі на торочку структури по боках дзьоба качки. Вони знаходяться лише по його краях і виглядають як маленькі зуби. Ці структури застосовуються для фільтрації або проціджування їжі з бруду або води.

### **12. Read an extract from a rearch on waterfowl moulting done by Mark Baschuk, a biologist, and Dr. Stuart Slaterry, a research scientist with the Institute for Wetland and Waterfowl Research at DU Canada headquarters at Oak Hammock Marsh and summarize it both in Ukrainian and English. Mind the spelling in the extract – it's American.**

Feathers are vital to waterfowl in many ways beyond their essential role in flight. They provide insulation, flotation, and camouflage, and drakes use their brightly colored breeding plumage to attract mates. While feathers are remarkably durable, they eventually wear out over time.

Waterfowl replace their old plumage with new feathers at least once a year during a process known as molting. Whistling-ducks, geese, and swans undergo a

single annual molt, replacing all body, wing, and tail feathers shortly after the nesting season. Most ducks, however, undergo two molts a year. The first molt occurs shortly after nesting. Drakes trade their gaudy breeding plumage for drab brown feathers known as "basic" or "eclipse" plumage. The second molt occurs from fall to early winter. Only the birds' body feathers are replaced during this molt, in which drakes develop their brightly colored "alternate" or "nuptial" plumage. Of course, there are exceptions to these molting patterns in ducks. For example, drake ruddy ducks develop their alternate plumage in spring, while drake long-tailed ducks molt their body feathers three times a year.

The manner in which waterfowl molt their flight feathers, or primaries, is unique among birds. Most birds undergo a "sequential molt," in which their flight feathers are lost one at a time from the innermost primary feather to the tip of the wing. This allows many birds to retain their flight capabilities while molting. Waterfowl undergo a "simultaneous wing molt," losing all of their primary feathers at once, which renders them flightless for 20 to 40 days. Waterfowl are well adapted to survive during this flightless period because they inhabit wetlands, which provide food, shelter, and safety without the immediate need to fly. Molting geese continue to graze on land while flightless, but they never travel too far from water and are excellent runners.

Although wetlands provide the basic necessities for survival, flightless waterfowl are still vulnerable. As a result, ducks and geese have developed several physical and behavioral adaptations that increase their chances of survival. The drab coloration of eclipse plumage is one such adaptation, allowing drakes to escape detection more easily than they would in their bright nuptial plumage.

Molting waterfowl typically select wetlands that best suit their escape strategies. For example, dabbling ducks such as mallards, northern pintails, and blue-winged teal typically hide in dense vegetation when threatened, so these ducks gather to molt on large permanent wetlands with dense stands of bulrush or other emergent vegetation that provides ample cover. In contrast, molting diving ducks such as canvasbacks, lesser scaup, and redheads prefer large bodies of open water, where they can dive to escape threats.

In addition to providing security, wetlands selected by molting waterfowl must also have sufficient food resources to meet the birds' nutritional demands. Molting is the second most nutritionally costly process in the annual cycle of waterfowl, just behind the formation of eggs. Waterfowl feathers are composed of 86 percent amino acids (the building blocks of proteins), a considerably higher concentration than is found in the invertebrates and plants that the birds eat. As a result, waterfowl must consume large quantities of protein-rich food while molting. For example, an adult mallard ingests approximately 102 grams of protein to replace about 66 grams of body and tail feathers shed during the molt. This means that a mallard must consume an



average of about 3 grams of protein per day over a 30-day period, or about 31,000 medium-size invertebrates in total.

To meet the various biological requirements of the molt, many waterfowl undertake a "molt migration," which can span more than 800 miles. This migration occurs in summer, when large numbers of prairie-nesting waterfowl leave the breeding grounds and migrate to molting wetlands in the boreal forest and Arctic. Among ducks, drakes are the first to depart, sometime during incubation, often early in the process. Drakes typically are joined on molting wetlands by nonbreeding females and females whose early nesting attempts failed. Meanwhile, hens that successfully hatch a brood remain on the breeding grounds and molt on the same wetlands where they rear their young.

There are several hypotheses that may explain why waterfowl undertake molt migrations to the boreal forest and Arctic. One possibility is that the abundance of suitable, drought-resistant wetlands in the north provides molt migrants with greater access to food, which also tends to peak when these visitors arrive. In addition, with up to 24 hours of daylight in far northern latitudes, the birds have more time to forage, which might enable them to increase their daily nutritional intake.

Although waterfowl underwent molt migrations long before people arrived on the prairies and other southern breeding areas, many of the remote northern wetlands used by molting waterfowl remain pristine and largely undisturbed by people. Human disturbance can be extremely disruptive to flightless molting waterfowl, reducing foraging time, increasing energy expenditure, and potentially decreasing survival. As a result, we must ensure that land-use changes now occurring in the boreal forest and the Arctic do not negatively impact molting waterfowl and their fragile wetland habitats.

### **13. Watch the video on the duck breed. Control your understanding by answering the question**

**([https://www.youtube.com/watch?v=0OajkQhnWx8&ab\\_channel=DiscoverAgriculture](https://www.youtube.com/watch?v=0OajkQhnWx8&ab_channel=DiscoverAgriculture))**

**\*make your own notes and be ready to translate the video. Here you have some tips on translation.**

*The Muscovy duck – мускусна качка, The Pekin duck – пекінська качка, Khaki Campbell – хакі кемпбел, Indian Runner – індійський бігун, Buff – орпінгтонські качки, Welsh Harlequin – валійський арлекін, Magpie – качка сорока, Ancona – качка Анкона.*

Forager – той, що збирає; broody – птиця, хто насиджує яйця / квочка.

1. What are the most famous ducks according to the speaker?
2. Which breed can lay the most eggs per year?
3. Why are Khaki Campbell perfect for a variety of climates?
4. Under what condition do Khaki Campbell become quite heavy?
5. Which is the oldest breed mentioned in the video?



6. What for did they use Indian Runner in China?
7. Which breeds are known as dual purpose breed?
8. Where is the endangered breed originated from?
9. Which breed is believed to be very broody?
10. Which breed can lay eggs that range in colour?
11. Which breed is less noisy?
12. Which breed has the right size that protects them from being the prey of predators?
13. What factors are the most important when choosing the right breed for eggs?

**14. Now, when you have studied the texts and get ready to a big scientific conference. Follow the steps to organize it.**

- a) make a report on each topic discussed in the texts;**
  - b) get ready with the questions to be asked after each report is delivered, questions should sound both in Ukrainian and English;**
  - c) be ready to work as an interpreter both for those who report and ask, answers are supposed to be interpreted as well.**
  - d) prepare the review of the conference both in English and Ukrainian to be published on the website of your company. Make sure you've enumerated all the topics discussed, underline the hot interest of those who are present, signify the further development of the duck poultry industry. The report should be as long as 2000 words.**
- 12. Imagine you have received a task to compose an article about more popular duck breeds for egg laying and meat purpose. You are allowed to use only information published in English to work create the Ukrainian article and vice versa. Make sure you write as many as 1000 words.**

### UNIT III. GEESE. VARIETY TYPES. BREEDING RECOMMENDATIONS

#### 1. Read the text, note the meaning of the words printed in bold, translate the text.

It is generally accepted that geese, which are of the Family Anatidae and the Genus Anser, were one of the first animals **to be domesticated**. Their domestication probably took place in Egypt about 3 000 years ago, although some research suggests that it may have been even earlier. Despite this, geese have never **been exploited commercially** as much as chickens or even ducks have been.

Geese are found worldwide. They can adapt equally well to hot climates (as long as shade is provided) as to cold climates - as seen in their ability to withstand northern winters out of doors with the minimum of shelter. In spite of this broad adaptability, commercial goose production is only important in relatively few countries in Asia and Europe.

Domestic geese come in a wide range of colours, sizes and shapes. In general, domestic breeds are much larger than their wild ancestors although they have in many cases **retained their ability to fly**.

There are two main types of domestic geese. The first are thought to have their origins in Europe, descendants of the wild Greylag goose and the second are thought to have their origins in Asia, descendants of the wild Swan goose. Crosses between the domestic breeds which have originated from these two species of wild geese **are fertile** and in fact have resulted in a number of **recognised breeds**.

Over the centuries many countries, and even regions within countries, have developed their own breeds and types of geese. But although there is a large pool of genetic material available for the genetic improvement of the domestic goose, it appears to have been relatively under-utilised. In addition, there are also species of wild geese which could be domesticated or could at least contribute to the commercial goose germplasm. For example, from temperate climates, there is the Canada goose of North America and the American Swan goose of southern South America.

#### CHINESE

There are over 20 breeds of Anser cygnoides geese in China. The breed described here is the one **commonly known throughout Europe** and North America as the Chinese goose and readily identified by the knob at the base of its beak.

There are white and brown varieties but the white variety is by far the more popular. The declining popularity of the brown variety is probably due to the fact that when the birds are killed, the coloured pin-feathers produce a less attractive carcass than the white feathered variety.

#### CZECHOSLOVAKIAN WHITE

This goose is a white goose with orange shanks and an orange beak. It is also known as the Bohemian goose. It has a relatively small body size, with the males weighing 5.0 kg and the females 4.0 kg but its egg production, **averaging** 45 eggs with an egg weight of 140 g, is fairly good. This means it can be useful as a female line in the production of a crossbred commercial goose.

## EMBDEN

The Embden is a white goose with relatively **tight feathering**, an **erect stand**, orange shanks and an orange beak. Most strains of Embden can be sexed on the down colour of the **goslings**, as males are a lighter grey than females. This difference is evident until the goslings are two to three weeks of age. The breed has been relatively popular for many years in both Europe and North America. It is one of the larger breeds with males weighing up to 10.0 kg and females up to 9.0 kg. It has a moderate egg production producing 40 eggs per year with an egg size of 170 g. The Embden is suitable for heavy type meat production but is probably of more value when used as a male line in the production of a crossbred commercial goose.

## HUOYAN GOOSE

The Huoyan breed of geese originates from Changtu country in Liaoning province of China. It differs from the Chinese goose described previously in that it has a lighter body weight, and a very **high rate of lay** (Huoyan geese can lay more than 200 eggs per year). Huoyan geese have orange shanks and orange beaks, but there is considerable variation in feather colour.

In 1981 the Animal and Veterinary Research Institute of Tie Ling in China obtained 500 Huoyan geese and began a genetic selection programme focusing on egg production. These selected Huoyan geese begin to lay at approximately 240 days of age and produce between 90-210 eggs per laying period with 10 percent of the geese producing 210 eggs per laying period. Egg weight ranges from 120-210 g. The adult body weight of the males ranges from 4.0-4.5 kg and that of the females from 3.0-3.5 kg. The Huoyan goose is noted for its ability to make good use of rough **fodder** and for its resistance to cold.

## KUBAN

This breed was developed at the Kuban Agricultural Institute (southern Russia) by crossing Gorki and Chinese geese. The feather colour is brown which results in relatively dark **pin-feathers** and thus an unattractive carcass. These birds have orange shanks while their beaks and **knobs** are black to dark green. The adult body weight for the male is 5.2 kg and 4.8 kg for the female. The advantage of this breed is that they have a relatively high egg production of between 50-60 eggs with an average egg weight of 150 g. This makes the Kuban suitable for use as a female line in a crossbreeding programme provided it is used in such a way that the resulting commercial crossbreeds are essentially white and that the poor body **conformation** associated with the Kuban can be overcome.

**2. Translate the sentences into English. Look through the text in the ex.1. to find the possible interpretation of the sentences.**

1. Ці птахи мають помаранчеві ноги, у той час як дзьоби та нарост над ним може бути від чорного до темно-зеленого. 2. Хуоянські гуси починають нестися приблизно у віці 240 днів і дають від 90 до 210 яєць за період несучості, причому 10 відсотків гусей дають аж 210 яєць за цей період. 3. Незважаючи на це, гусей ніколи не розводили у комерційних масштабах, як курей або навіть качок. 4. Хуоянські гуси відомі своєю здатністю добре використовувати грубу їжу та стійкістю до холоду. 5. Ембденські гуси підходять для виробництва м'яса. 6.

Більшість різновидів ембденських гусей можна розрізнити на гусаків та гусок за кольором пуху гусенят, оскільки самці світлішого сірого кольору, ніж самки. 7. Зниження популярності коричневої породи, ймовірно, пов'язано з тим, що при виробництві м'яса, кольорові породи дають менш привабливу тушку. 8. Схрещення між домашніми породами, які походять від цих двох видів диких гусей, є плодовитими, вони дали початок низці визнаних порід. 9. Але хоча для генетичного вдосконалення домашньої гуски доступне велике різноманіття генетичного матеріалу, він, здається, був недостатньо використаний. 10. Незважаючи на хорошу здатність до адаптації, комерційне виробництво гусака має важливе значення лише у відносно невеликій кількості країн Азії та Європи.

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

1. The Pilgrim is a mediumsize goose that is good for marketing. A unique feature of this breed is that males and females may be distinguished by color. In day-old goslings the male is creamy white and the female gray. The adult male remains all white and has blue eyes; the adult female is gray and white and has dark hazel eyes. 2. The Buff has fair economic qualities as a market goose, but only a limited number have been raised for market. The color varies from dark buff on the back to a very light buff on the breast and from a light buff to almost white on the under part of the body. 3. The Sebastopol is a white ornamental goose which is very attractive because of its soft plume-like feathering. This breed has long, curved, profuse feathers on its back and sides and short, curled feathers on the lower part of the body. 4. The Egyptian is a long-legged, but very small goose, kept primarily for ornamental or exhibition purposes. Its coloring is mostly gray and black, with touches of white, reddish brown, and buff. 5. They are farmed for their meat, feathers and down and to produce fatty livers (goose meat is also notoriously fat). Ninety-four per cent of the 2.5 million tonnes of goose meat consumed annually worldwide is produced in China (from many different breeds), followed by the Ukraine, Egypt and Hungary. 5. Only 900 tonnes are produced in the US. 6. Global goose meat production was around 2.5 million tonnes in 2010, this accounts for 2.6 % of world poultry meat production. 6. China is believed to be the largest goose meat producer with an annual production of around 2.41 million tonnes in 2010. 7. Geese prefer to mate on water and the gander should be run with females for a month prior to the start of the breeding season. 8. Although this is thought to be due to their capacity to digest fibre in the diet, it is in fact their ability to extract protein from the herbage that they forage. 9. Geese were once used in the US for controlling weeds in several crops (asparagus, tobacco, beans, potatoes) and the water hyacinth from overtaking waterways. They also serve as guard dogs. 10. Geese are also farmed for their livers which are used to produce foie gras ([fwa:'gra:]). 11. The geese are mainly fed grain for about two weeks when the goslings are from nine to twenty weeks of age. 12. Force-feeding both geese and ducks is banned on welfare grounds in Australia and in many countries, particularly in the European Community.

**\* special attention is supposed to be paid to the translation of the Passive voice forms**

**4. Translate the word combinations and make your own sentences you practice their use.**

стабільні навички дбайливого господарювання; дрібні присадибні ділянки; нескладний та необтяжливий, але постійний догляд; обладнане приміщення; пасовища; початкові взноси; пасовищний сезон; паштет з гусячої печінки; цінний промисловий продукт; гусячий пух; собівартість гусятини; дрібно-середнє фермерське господарство; рентабельність; племінне розведення.

**5. Translate the word combinations and make your own sentences you practice their use.**

cattle run; solid skills of sustainable management; grazing season; equipped room; initial investment; goose down; the first cost of the goose meat; small and medium farming; profitability; breeding; essential industrial product; goose liver paste; small family garden; simple and light, but high care.

**6. Read the text and get ready with the English translation of the text. Get eady with the summary of the text. Make sure the summary is as long as 200 words.**

**Word combinations from ex. 4 and 5 would be quite useful.**

**РОЗВЕДЕННЯ ГУСЕЙ – ПРИБУТКОВА СПРАВА ДЛЯ ДОБРОГО ГОСПОДАРЯ**

Розведення гусей – прибуткова справа для доброго господаря. Гуси завжди були символом добробуту сільського господаря і це не просто так. Адже, гуси – птахи невибагливі, проте для успішного розведення вимагають від власника навичок дбайливого господарювання. Розведення гусей на дачі або дрібній присадибній ділянці навряд чи принесе великий дохід, оскільки гуси хоча і вимагають постійного догляду і добре обладнаного приміщення для утримання поруч з будинком. Якщо ж до гусей навідуватися лише час від часу, помітного доходу чекати не слід. У свою чергу, устаткування гусятника вимагає деяких початкових вкладень.

У цьому матеріалі розглянемо основні нюанси ведення бізнесу з розведення гусей, які перспективи існують в Україні, які вимоги до птахоферми, основи розведення гусей, та рентабельність такої справи. Що можна отримати від розведення гусей.

Питання: «чи вигідно розводити гусей?» взагалі кажучи, риторичне. Розведення гусей безумовно вигідно власнику хоча б невеликого, але рентабельного фермерського господарства у сільській місцевості, щоб, фігурально висловлюючись, «розправити крила». Гуси – птахи насамперед м'ясні. Несучість гусок невелика, та й гусячі яйця особливим попитом не користуються, тим більше що за смаком вони поступаються курячим та якихось особливих властивостей або якостей за ними не помічено. Але ось м'яса з гектара пасовища гуси приносять в налагодженому господарстві до і більше 2 тон на рік, а перший продукт можна отримати вже через 2 місяці після початку випасання.

Потрібно зазначити, що пасовищний сезон гусака триває від першої травички і аж до стійких морозів. Високим попитом користується делікатесний та цілющий продукт – гусяча печінка. Паштет з гусячої печінки (страсбурзький паштет, фуа гра) – дорогі ласощі. Існують навіть певні породи гусей, які розводяться та вирощуються виключно заради жирної та смачної печінки,



дотримуючись певних технологій їх відгодовування. Даний вид птахів має більшу тривалість життя у порівнянні з іншими, і хоч це не актуально в умовах проживання на птахівничому господарстві, цей показник суттєво впливає на здатність нести яйця, оскільки гуски, які дожили до віку 2-3 роки, приблизно на двадцять відсотків краще справляються з цим завданням, ніж більш молоді.

Також гуси дають цінний промисловий продукт – гусячий пух, який використовується у промисловості для утеплення одягу. Про можливих покупців пуху слід подумати ще на стадії планування гусячої ферми. Витрати на зберігання «гусячих» продуктів в цьому бізнесі мінімальні, адже продукція збирається поступово, в міру необхідності. Отже, відпадає потреба в морозильному обладнанні та відсутні збитки від прострочення термінів зберігання. Собівартість гусятини в дрібно-середньому фермерському господарстві виявляється нижче яловичини (правда, трохи вище свинини), а продажна ціна вище, вище, відповідно, і рентабельність. З бізнесом на розведенні гусей може впоратися навіть новачок, лише трохи навчившись та отримавши мінімальний досвід, оскільки гуси птахи невибагливі, швидко звикають до нового місця, до того ж у них відмінний імунітет, а значить на їх лікування не доведеться витратити зайві гроші.

Бізнес на гусах можна вести двома шляхами: вирощувати молодняк з метою отримання м'яса або ж займатися їх племінним розведенням. Першим шляхом зазвичай йдуть невеликі фермерські господарства, розраховуючи у майбутньому все ж почати розведення птахів, та й для цього бізнесу не потрібно великих витрат, а рентабельність досить висока. Другий шлях являє собою інкубацію яєць разом з продажем молодих особин. Більшість середніх і великих фермерських господарств намагаються поєднати обидва варіанти.

**7. Match the left column with the right one in the table 1 and 2. Use the pictures**

**a) and b) as prompts**

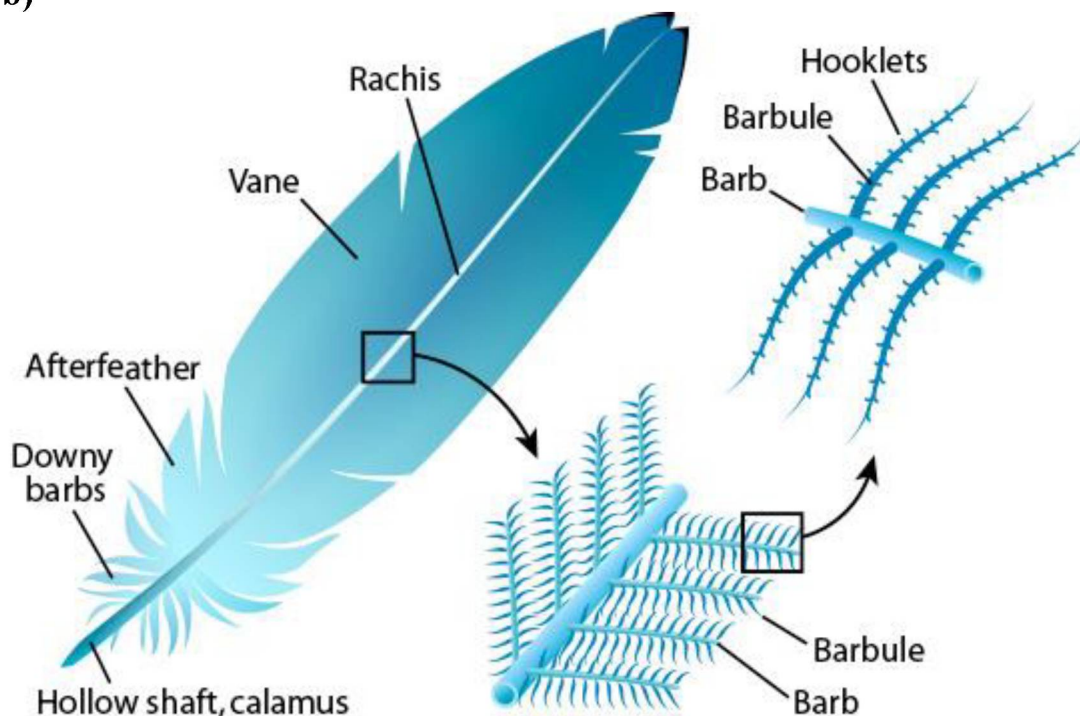
**a)**



1	Махове пір'я	a	bristle
2	пух	b	tail
3	хвостове пір'я	c	down
4	контурне пір'я	d	semiplume

5	пухове пір'я	e	filoplume
6	ниткоподібне пір'я	f	contour
7	щетиноподібне пір'я	g	wing

b)



1	стрижень	a	barbule
2	опахало	b	bard
3	очин	c	hollow shaft, calamus
4	ствол	d	downy bard
5	борідки	e	afterfeather
6	бородочки	f	vane
7	гачечки	g	rachis
8	пухова	h	hooklets

**7. Read and translate the text into English? Make sure you follow the author's style of delivering the information. Mind the Text II from the Text Box can be rather useful in your translation.**

### Що таке пух?

Пух – це частина оперення водоплавних птахів. Окрема пушинка є сукупністю волокон, що ростуть радіально з однієї точки. На кожному з волокон – велика кількість вусиків. Все це утворює пружну тривимірну форму.

Завдяки вусикам пушинки переплітаються одна з одною і формують структуру, що ефективно знерухоплює повітря і, як наслідок, забезпечує надзвичайно добру теплоізоляцію.

З огляду на те, що вага кожної пушинки надзвичайно мала, результативне співвідношення рівня теплоізоляції до ваги утеплювача у пуху є рекордним на сьогодні з-поміж усіх відомих утеплювачів на аудиторному ринку.

В той же час, пухові волокна надзвичайно витривалі. Вони здатні відновлювати свою форму навіть після тисяч зминань. Саме цим обумовлено тривале збереження теплоізоляційних властивостей у пухових виробів в порівнянні з синтетичними.

Однак, не все, що в пухово-перових сумішах відносять до пуху, виглядає так гарно. Відповідно до стандартів, за словом «Down» на етикетці вашого виробу можуть також ховатись ембріональний пух («nestling down») і пухове пір'я («plumule»). Ембріональний пух – це недорозвинутий пух, у якого, на відміну від «дорослого», на ворсинках відсутні вусики. Пухове пір'я – це пір'я, що було сформоване на ранніх тижнях життя птаха. Воно, як і пух, має тривимірну структуру і пухнасті волокна, і, як перо, – довгий стрижень, що лишається м'яким і гнучким. Ембріональний пух і пухове пір'я неможливо відокремити від чистого пуху машинним методом, тому вони завжди присутні в суміші. Їх недолік в порівнянні з чистим пухом – гірший показник співвідношення теплоізоляції до ваги.

Часом в статтях і описах можна зустріти словосполучення «пуховий кластер» («down cluster»). Варто знати, що це поняття, залежно від джерела, може мати різну сутність. В статтях і публікаціях пуховим кластером називають одну пушинку чистого пуху.

Натомість інститут IDFL (International Down and Feather Laboratory) в своїх сертифікатах використовує поняття пухового кластеру для опису складу пухово-перової суміші. За цих обставин до Down Cluster відносять суміш чистого пуху, ембріонального пуху і пухового пір'я.

### **Природне походження пуху**

Пух є лише у водоплавних птахів, таких, як гуска, качка, гага та ін. Наземні птахи, як от кури чи індички, пуху не мають.

Іноді недобросовісні виробники можуть додати у пухово-перову суміш водоплавних птахів незрілі пір'їнки наземних, аби здешевити її. Візуально вони нагадують гусячі та качині, але мають дуже малий показник пружності і неприємний запах від недостатньої очистки.

В сертифікатах лабораторій кількість пір'я наземних птахів у відсотках вказується у графі Landfowl. У випадку якісних сумішей там має стояти число близьке до нуля. Нуль – ще краще.

Інша крайність – дуже дешеві вироби з “курячого пуху” на китайських сайтах. Оскільки кури не мають пуху, скоріше за все ви отримаєте спальник чи пуховку набиті пір'ям, які і гріти не будуть, і носити їх буде неможливо через нестерпний запах.

### **Географічне походження пуху**

За даними IDFL, більше 99% всього пуху, що використовується в текстильній та аутдор-індустрії, є побічним продуктом харчової промисловості. Тобто, качині та гусячі ферми, на яких вирощують птахів, першочергово працюють саме з харчовими концернами, а пух та пір'я збирається під час заготовки м'яса. Чому так? Ідея пуху, як побічного продукту, не лише в тому, що це гуманніший спосіб його отримання, а й в тому, що вирощувати водоплавних



суто для пуху не вигідно. Адже, пух і перо складають лише 5% економічної вартості птаха.

Китай на сьогодні є основним споживачем та виробником качок та гусей. Тому не дивно, що за даними того ж IDFL близько 70% всього пуху у світі походить саме звідти.

З огляду на таку кількість, китайці можуть запропонувати величезний асортимент пухових сумішей за доброю ціною. Тому все більше виробників починають працювати саме з китайським пухом.

Водночас, приводом для вихваляння в аутдор-індустрії є пух зі східної Європи: з Польщі, Угорщини та України. Причиною для цього є вік птаха в момент забиття. Оскільки в Китаї качки та гуски – звична страва, то економічно вигідний вік вирощування птаха складає 14-16 тижнів. В Україні та Польщі птахи проживають 20-24 тижні. А доросліший птах матиме більші за розміром, пружніші і витриваліші пушинки, які дають найкращі результати по співвідношенню ізоляції до ваги і по терміну служби пухового виробу.

На третьому місці по кількісному виробництві пуху після Китаю і Європи йде Канада. Хоча канадський пух також знаний, як дуже якісний, об'єми його виробництва порівняно малі, тому в аутдор-сфері він зустрічається надзвичайно рідко.

Часто можна зустріти твердження, що пух від птахів, які живуть в північних регіонах – більший, тепліший і тому кращий. Це один з найбільших міфів про пух, яким часто користуються хитрі виробники, складаючи легенди про сибірських гусок. За даними виробників спорядження і швейцарського інституту IDFL географічне походження птаха ніяк не впливає на величину пушинок. Воно впливає на їх кількість. На величину впливає виключно розмір птаха і його вік. Тобто, якщо ви візьмемо двох гусок одного розміру і віку, одну з гарячих Гавайських островів, а іншу – з нестерпно холодного Сибіру (там взагалі гусок не так багато, щоб з них щось робити в великих кількостях), їх пух буде абсолютно однаковим. Лиш в другій його буде більше.

### **Шлях пуху від гуски чи качки до спальника**

Класичний процес перевтілення сировини включає в себе наступні етапи.

1. Вищипування. 99% пуху, добутого в світі, вищипують з мертвих птахів. Існує два види такого вищипування – мокре (тушку відмочують у гарячій воді, і збирають пір'я та пух спеціальною машинкою) та сухе (ручне, без використання води). Перший вид більше поширений, адже він швидкий, легкий та економічно вигідніший. А це важливо для харчової промисловості, де основна мета – позбутись пуху та пір'я з тушки. Другий спосіб, хоч і кращий для пуху, але не популярний зараз, адже є більш трудомістким і часозатратним. Приблизно 1% пуху в світі вищипують з живих птахів, що вважається абсолютно негуманним і засуджується всіма адекватними організаціями, які дотичні до цього явища. І жоден відомий виробник не стане використовувати пух, зібраний з живих птахів, щоб не нашкодити своєму авторитету.

2. Первинне сортування. Воно відбувається в спеціальних камерах з серією кабінок, де повітря продуває сировину знизу вгору. Більші кластери пуху мають

краще співвідношення ваги до площі, тому повітря заганає їх в дальні кабінки. Важчі складники падають раніше. В результаті вся маса розділяється на перо, дрібне перо, дрібне перо з пухом і пух. Найбільше пір'я (з крил та хвоста) відсортовується в сміття. Так само з сировини вакуумом частково забирається пил.

3. Чистка. Починається з миття, в процесі якого пух перуть у великих пральних машинах, щоб видалити бруд, жир та бактерії. Далі з пуху видаляють основну вологу в центрифугах і залишок вологи з допомогою гарячого повітря. Після чого сировину охолоджують і проганяють крізь барабан з дрібними отворами, де ще раз вакуумом забирають залишок пилу. І, врешті решт, сировину стерилізують хімічними засобами.

4. Вторинне сортування та змішування. На цьому етапі пух заново проганяється через машину з наддувом і кабінками. І тепер до дальніх комірок долітає пух з найбільшим показником Fill Power (FP) і найлегші пір'їнки. В ближчих лишається більше дрібного пір'я і пух з меншим FP. Після вторинного розподілення пуху його різні частини змішують для отримання потрібних характеристик FP і ціни.

5. Зберігання і перевезення спорядження до виробника. Тут я лиш уточню, що ці етапи також важливі, адже, як і всі інші, впливають на якість пуху. Бо пух – це натуральний матеріал, тому може гнити і розкладатись. Неправильна вологість чи температура зберігання легко зроблять з якісного пуху чи не найдорожче в світі сміття.

### **Гусячий пух vs качиний пух**

На це питання від різних джерел ми отримували різні відповіді і аргументи. Наше рішення – передати вам думку IDLF, адже цей інститут проводить експериментів в сотні разі більше, ніж кожен окремий виробник і, в результаті, має найбільше даних. І, врешті-решт, це абсолютно незаангажоване джерело.

Оскільки гуски до забиття проживають довший час, ніж качки, і гуски самі по собі більші за качок, то кластери гусячого пуху, як правило, більші і витриваліші за кластери качиноного. Відповідно, в більшості випадків, гусячий пух має довший термін експлуатації. Максимальні показники Fill Power у гусячого пуху вищі за показники качиноного. Також за качиним пухом частіше помічають проблеми неприємного запаху, ніж за гусячим, що, за однією з теорій, пов'язано з раціоном птахів.

За ціною качиний пух дешевший за гусячий, адже на сьогодні споживання гусей в світі падає, а качок – зростає.

В результаті, гусячий пух, як правило, є кращим продуктом, ніж качиний. «Як правило» – бо буває як надзвичайно добрий качиний пух, так і дуже поганий гусячий. І фінальний результат залежить від дотримання технології на етапах обробки пуху, які він проходить на шляху до вас. Тому, в ідеалі, варто протестувати вже конкретні кінцеві зразки з конкретних продуктів. Але це страшенно не рентабельно. Простіше покластись на статистику і детально вивчити решту характеристик пухового виробу.

**7. a) Watch the video about the young goslings hatching and be ready to interpret it ([https://www.youtube.com/watch?v=OgriYV80NKU&ab\\_channel=eHowPets](https://www.youtube.com/watch?v=OgriYV80NKU&ab_channel=eHowPets))**

1. Do hatched goslings need any water immediately?
2. Why do they supply their goslings with water as soon as they have hatched?
3. What type of food do they provide their baby birds?
4. What advantage if the food the speaker mentions when explain on the food choice?
5. In what time the goslings are supposed to be mature?
6. What is the peculiarity of the goose breed he introduces?

**b) Watch the video about the heritage geese varieties. You will watch the video just once, so make sure you do some notes to be able to speak on the topics.**

1. Roman geese: historic note, characteristics.
2. Chinese geese: types and peculiarities.
3. Embden geese: general characteristic.
4. Sebastopol geese. Compare what you've learned about this breed from the previous video.
5. Pomarenian geese. Types of their plumage.
6. Toulouse geese. Why do they belong to giant geese? What is the peculiarity of their breeding?

**8. Now, when you have study the texts and get ready to a big scientific conference. Follow the steps to organize it.**

**a) make a report on each topic discussed in the texts;**

**b) get ready with the questions to be asked after each report is delivered, questions should sound both in Ukrainian and English;**

**c) be ready to work as an interpreter both for those who report and ask, answers are supposed to be interpret as well.**

**d) prepare the review of the conference both in English and Ukrainian to be published on the website of your company. Make sure you've enumerated all the topics discussed, underline the hot interest of those who are present, signify the further development of the geese poultry industry. The report should be as long as 2000 words.**

**12. Imagine you have received a task to compose an article about more popular geese breeds for egg laying and meat purpose. You are allowed to use only information published in English to work create the Ukrainian article and vice versa. Make sure you write as many as 1000 words.**

## UNIT IV. TURKEY. VARIETY TYPES. BREEDING RECOMMENDATIONS

### 1. Look through the and do the tasks:

a) match the turkey breed names printed in italics with their Ukrainian equivalent:

широкогрудий білий, середній білий, широкогрудий бронзовий, наппагатсетський, бельтсвільський, білий голандський, чорний, червоний бурбонський, королівський пальмовий.

b) match the columns:

1	be slaughtered	a	вік, коли птиця має риночну кондіцію (можна забивати)
2	conformation (meatiness)	b	те, як виглядає тушка
3	whole carcass	c	індекс росту
4	detract	d	добре розвинутий
5	dressed appearance	e	економічно прийнятний варіант
6	fall out of favour	f	кормити, викормлювати
7	feed conversion	g	ціла тушка
8	growth rate	h	втрачати популярність
9	market age	i	бути забитим
10	plump	j	витрата кормів
11	rear	k	екстер'єр, м'ясність тушки
12	viable option	l	зменшувати переваги

c) look through the text again and think about the best English variant of the following sentences.

1. Вирощування середньої білої індички може бути не дуже вигідним для дрібного виробника, тому що реалізувати цю продукцію буде складно через малу кількість точок збуту. 2. Вона більш пристосована до вирощування у таких умовах, до то ж виростає більшою за велику білу індичку, яка є промисловою птицею. 3. Бронзові індики швидко ростуть, мають гарний екстер'єр (або м'ясність), добре засвоюють корма; однак темні колодочки його пір'я, які складно вибирати, погіршують зовнішній вигляд тушки. 4. Індичка середньої білої породи досягає ринкового віку раніше, ніж велика біла, до того ж розмір її м'ясистої тушки краще підходить для сучасних споживачів. 5. Широкогруда бронзова індичка - птах важкого типу, який чудово підходить для розведення у присадибній ділянці. 6. Для господарів, яких не дуже цікавить економічний зиск (наприклад: швидкий ріст, екстер'єр, ефективне засвоєння кормів, біле пір'я та

більший розмір тіла) прийнятними є ще кілька порід індиків і. 7. Індики важать через 18 тижнів приблизно 13 кг.

### Varieties of Turkey

Several domestic varieties have been developed from a wild turkey.

*The Large White* turkey is the most important for the commercial turkey industry. The *Medium White* turkey is popular in other countries and should be considered a **viable option** for consumption by consumers and production by turkey growers in the United States. The Medium White reaches **market age** earlier than the Large White and provides a **plump, whole carcass** that is the right size for modern families. The Medium White may be difficult for the **small-flock producer** to find because it is being developed by the commercial industry with few **outlets** for the small-flock producer.

*The Beltsville Small White* (sometimes called the Beltsville White) was popular at one time, but this bird has **fallen out of favor** and is now very difficult to find.

During the early years of development of the commercial turkey industry, the *Broad-Breasted Bronze* was the most popular variety. The Bronze has a good **growth rate, conformation** (or **meatiness**), **feed conversion**, and most of the other qualities demanded by the turkey industry; however, it has dark pinfeathers that, if left on, might **detract** from the **dressed appearance**. This disadvantage led to the gradual replacement of the Bronze with white birds by the commercial turkey industry. However, the Broad-Breasted Bronze is a heavy-type bird that is still excellent for hobby flock producers, even though it may take extra time to remove the dark pinfeathers. It may be more available to these producers and may be a hardier bird than the commercial Large White.

There are several other types of turkeys available to producers who are not necessarily interested in economic traits (that is, fast growth, conformation, efficient feed consumption, white feathers, and larger body size). These varieties include *White Holland*, *Black*, *Royal Palm*, *Bourbon Red*, and *Narragansett*, all of which are beautiful birds and should be considered for **rearing**, especially by those interested in hobby flocks. Hens of the fast-growing, heavy roaster turkey species, such as the Large White and the Broad-Breasted Bronze, usually reach a live weight of about 15 pounds (6.8 kg) at 14 weeks of age; *toms* weigh approximately 30 pounds (13.6 kg) at 18 weeks. Your birds can be smaller or larger depending on the age at which they are **slaughtered**.

d) translate the text;

e) get ready with the summary of the text, both in English and Russian.

**2. Read the text. Think about the best way to render it with your own words. Do the task and compare your classmates' variants. Choose the best one.**



Turkeys are not as difficult to raise as many people think. However, they do require special care to get them off to a good start. Sometimes they are a little slow in learning to eat and drink. Turkeys should be isolated from chickens and other poultry to prevent many diseases. It is important that turkey *poults* (that is, young turkeys) be kept warm and dry during the first few weeks after hatching; this time is called the *brooding period*. If you start with good stock and provide good feed, housing, and husbandry, you can raise turkeys successfully.

However, before launching into production, even on a small scale, be aware of the costs. Day-old turkey poults are quite expensive, and they consume a considerable amount of feed; thus, the cost of producing full-grown market turkeys is quite high.

Before starting a flock, check local laws and *ordinances*. *Zoning regulations* in some areas prohibit keeping poultry of any kind. If you live close to neighbors, keep in mind that noise, odor, and possibly fly problems are associated with raising turkeys.

**Example:** *Some people think they may meet a range of difficulties in raising turkeys, but they are wrong.*

**\*Mind the meaning of the words in italics:** *ordinance* – постанова місцевого муніципалітету (США), *zoning regulations* – природоохоронні заходи, які встановлює певних регіонів, *poults* – пташенята домашньої птиці, *brooding period* – час, коли пташенята підростуть та зміцнюються (декілька перших тижнів).

**a) translate the text into English.**

### 3. Match the left column with the right one

1	обладнання для ковбасного виробництва	a	demand is outgrowing supply
2	споживчі властивості	b	sausage manufacturing equipment
3	пусконаладжувальні роботи	c	enter into contract
4	попит перевищує пропозицію	d	to recover the capital
5	замінник яловичини	e	start up activities
6	сировина для виробництва ковбас	f	sausage material
7	укладати договір	g	carve out a niche
8	зайняти нішу	h	rate of return
9	окупити інвестовані кошти	i	turkey flock
10	рентабельність	j	pullet factory
11	поголів'я індиків	k	beef analogue
12	виробництво індичого м'яса	l	consumer property

### 4. Translate the sentences into Ukrainian.

1. Turkey pullet factories in Ukraine are not as popular as chicken ones. 2. Turkey poultring is becoming more popular in both domestic and international markets, as the National Industrial Portal announces with reference to AgroPortal. 3. The changings in economic situation decreased the interest in turkeys breeding among the local farmers. 4. During the previous decade, the industrial turkey flock increased by 42 times and reached 391.9 thousand turkeys. 5. The economic grievances of recent years have also affected the turkey flock. 6. Agricultural enterprises had to encrease the poultry slaughtering, so that led to a decrease in flock, thus, it has increased meat production. 7. Timely go-to- market will allow the new manufacturer to carve out its niche easily and receive stable finalntial return. 8. They consider turkey meat as a dietary beef analogue, so it is a perfect meat material for about 150 types of sausages. 9. Small companies can do extremely well if they can fill a specific market niche.

## **5. Transalte into English.**

1. Попит на м'ясо домашньої птиці в Україні в чотири рази перевищує пропозицію. 2. Попит на індичатину стабільно росте на внутрішньому ринку як повідомляє Національний аграрний портал, з посиланням на AgroPortal. 3. Регіонами, які лідирують у розведенні індиків є Чернівецька, Київська, Сумська, Івано-Франківська та Дніпропетровська області. 4. Для ферми можна придбати одне з вже працюючих агропідприємств, можливо, з числа тих, що не працюють, і переобладнати його під свої потреби. 5. Підвищення вартості утримання птиці призвело до зниження рентабельності. 6. Добових індичат для вирощування зазвичай закупають в Польщі, бо саме ферми цієї країни пропонують гарне плем'я індика для м'ясного розведення. 7. Це дозволило повністю окупити інвестовані кошти менше ніж за 3,5 року. 8. Птахофабрикам довелося активізувати забій птиці, що призвело до зниження поголів'я індиків в Україні.

## **6. Translate into English**

Попит на індичатину в Україні втричі перевищує пропозицію, тому створення підприємства з вирощування індиків на території нашої країни є прибутковим інвестиційним проектом.

Виробництву індичого м'яса в Україні приділяється поки не так багато уваги, як курячого. Між тим, інтерес до індичатини росте як на внутрішньому, так і на міжнародному ринках, повідомляє Національний промисловий портал, з посиланням на AgroPortal.

Як зазначається, більшість індичого поголів'я в Україні традиційно утримували в індивідуальних домогосподарствах. Після 1991 року у зв'язку зі зміною економічної ситуації інтерес до розведення індиків у населення став падати, і кількість цієї птиці в нашій країні поступово зменшувалася. Разом із

тим, на початку 2000-х років почало зростати виробництво індичатини промисловим способом. За десятиліття до 2011 року поголів'я індиків на агропідприємствах зросло в 42 рази і досягло 391,9 тис. голів.

Регіонами-лідерами з розведення індичок є Чернівецька, Київська, Сумська, Івано-Франківська та Дніпропетровська області.

Економічні труднощі останніх років позначилися і на поголів'ї індиків. Підвищення вартості утримання птиці призвело до зниження рентабельності. Агропідприємствам довелося активізувати забій птиці, що стало причиною зниження поголів'я та збільшення виробництва м'яса за період 2013-2016 роки. Однак, навіть, за таких умов нинішній попит на індичатину на внутрішньому ринку становить 90-100 тис. тонн на рік, а внутрішнє виробництво — близько 30 тис. тонн.

Бізнес-план зі створення індичої ферми вже розроблений фахівцями Pro-Consulting. Згідно з ним, у разі створення господарства для одночасного вирощування на м'ясо 16,2 тис. голів птиці, їх подальшого забою та продажу готового продукту підприємство буде продавати продукцію з рентабельністю в 11,9%, що означає майже 12 центів чистого прибутку з кожного євро доходу. Це дозволить повністю окупити інвестовані кошти з урахуванням дисконту менше ніж за 3,5 року (39,3 місяця).

Для ферми необхідно придбати одне з вже наявних агропідприємств, можливо, з числа тих, що не працюють, і переобладнати його під свої потреби. Для проведення ремонтно-будівельних та пусконаладжувальних робіт необхідно укласти договори зі спеціалізованими компаніями і виробниками відповідного обладнання. Добових індичат для вирощування можна закуповувати в Польщі, а корми — купувати оптом у місцевих виробників.

Своєчасний вихід на ринок дозволить новому виробнику гарантовано зайняти на ньому свою нішу і отримувати стабільний прибуток від задоволення попиту на індиче м'ясо, що зростає.

Більше того, можливим є і організація переробки. Наприклад, у країнах Євросоюзу давно оцінили високі споживчі властивості цього м'яса. Там воно розглядається як дієтичний замітник яловичини і є сировиною для виробництва близько 150 видів ковбас. Україна в цій галузі поки відстає. Так, обладнання для ковбасного виробництва індичатини стало з'являтися у вітчизняних переробників тільки в останні 5 років.

**7. Read the text and match the indexed words with their meaning. Translate the information about the company. Make sure you follow the style – it is a advertising brochure.**

a) *advanced technologies*; b) *maize*; c) *artesian flowing well*; d) *full-cycle production*; e) *modified- atmosphere packining*; f) *soy beans*; g) *vacuum filling and sealing machine*; h) *half product slicer*; i) *to incubate eggs*; j) *watery flavour*; k) *wheat*; l) *turkey slaughtering processing and half product of meat and by-products*.

1. Виробництвом м'яса індички під ТМ «Смачний індик» займається Акціонерне Товариство «М'ясо птиці», що розташоване у Васильківському районі Київської області. Це сучасне, повністю інтегроване підприємство було створено у 1965 році.

Підприємство здійснює **повний цикл виробництва**<sup>1</sup>— вирощування індиків, переробку та упаковку готової продукції. Виробництво ТМ «Смачний індик» здійснюється в повністю закритому режимі, що дозволяє уникнути контакту птиці із зовнішнім середовищем і є гарантією безпеки виробництва.

2. Вирощування індички і виробництво м'яса протікає в декілька етапів. Підприємство закуповує добових пташенят у компаній, які **інкубують яйця**<sup>2</sup>, та працюють за **передовими технологіями**<sup>3</sup>, в таких країнах, як Угорщина, Польща та ін. Індичата ростуть в пташниках обладнаних новітніми технологіями.

3. У годівлі індички ТМ «Смачний індик» використовуються якісні корми українського виробництва без генетичних модифікацій та стимуляторів росту. Основні інгредієнти — **кукурудза**<sup>4</sup>, **пшениця**<sup>5</sup>, **соя**<sup>6</sup>, вирощені у Вінницькій і Полтавській областях. Терміни вирощування птиці становлять від 90 до 140 діб. За вказаний період організм птиці природним способом досягає фізичної зрілості. Це означає правильне формування білка (його вміст на рівні 29% в білому м'ясі та жиру менше 1%). Таким чином, м'ясо індички зберігає хороші смакові якості і не має **присмаку водянистості**<sup>7</sup>.

4. У 2008 р. ТМ «Смачний індик» ввела в експлуатацію **артезіанську свердловину**<sup>8</sup>, глибина якої 190 м. Таким чином, птахофабрика використовує у відгодівлі птахів високомінералізовану воду з мінімальним вмістом забруднювачів, що підвищує якість продукції.

5. ТМ «Смачний індик» використовує власний забійний цех і цех переробки. Цех переробки оснащений сучасним обладнанням західних виробників (**вакуумна машина**<sup>9</sup>, **слайсер з нарізки напівфабрикатів**<sup>10</sup>, **обладнання для фасування продукції в модифікованому газовому середовищі**<sup>11</sup>).

6. На підприємстві впроваджена система контролю за принципами НАССР. За результатами проведених аудитів міжнародний орган сертифікації — Компанія БЮРО VERITAS (BUREAU VERITAS) визнала рівень виробництва з **«Первинної переробки та виробництва напівфабрикатів з**

м'яса та субпродуктів індика<sup>12</sup>» як такий, що відповідає вимогам системи управління безпечністю продукції та 15 травня 2014 року надала ТМ «Інделіка» міжнародний сертифікат на виробництво за схемою стандарту FSSC — 22000.

## **8. Read the cool fact about turkey. Have you heard about it? Do the writing translation of the text into Ukrainian.**

### **Synchronous Hatching**

A turkey hen lays one clutch of eggs per year, these clutches can as small as four to as large as 17 eggs per nest (that's a big clutch and that's **cool fact #1**)! The hen lays only one egg each day, so if she lays 14 eggs it takes two full weeks to lay the entire clutch. So even though egg 14 arrived two weeks after egg number one, they will all hatch at the same time, often within an hour of one another; it's called "synchronous hatching" (**cool fact #2**)!

The hen doesn't incubate the eggs (sitting on them to keep them warm) until she's laid them all. Hens travel in a females-only flock, but they become more solitary and secretive in May when it comes to nesting. She'll hang out with the flock and feed until she needs to lay an egg. Then she might hop over a nearby stone wall or move to some such remote place where she's hidden her clutch on the ground. She lays the next egg, then gets up and returns to the flock.

But they keep a close eye on their nest. If someone or something gets too close, the hen will make an alarm call and make a big display of fleeing, this draws the intruder's attention away from the location of the nest. So cold eggs in a turkey ground nest are uncovered and unheated. But unlike un-fertilized chicken eggs in your fridge, the embryos in these eggs will begin to develop once the hen starts incubating them. And four weeks later the eggs hatch.

### **Altricial v Precocial**

But what walks out of those eggs aren't chicks. Newly hatched turkeys are called poults, and here's the difference. "Chicks" are hatchlings that are not yet mobile. Most birds, like songbirds and raptors, nest in trees. When their eggs hatch, the chicks are "altricial." They are featherless and blind, squawking for food and warmth.

Poults, on the other hand are "precocial," ready to run (**cool fact #3**). Turkeys and other ground nesters hatch-out with fuzzy feathers, open eyes and they soon can run. This is useful because turkey flocks often cover a lot of ground in a day while foraging, and the poults have to keep up with mother hen as she leads them thorough her territory in search of food and while avoiding predators.

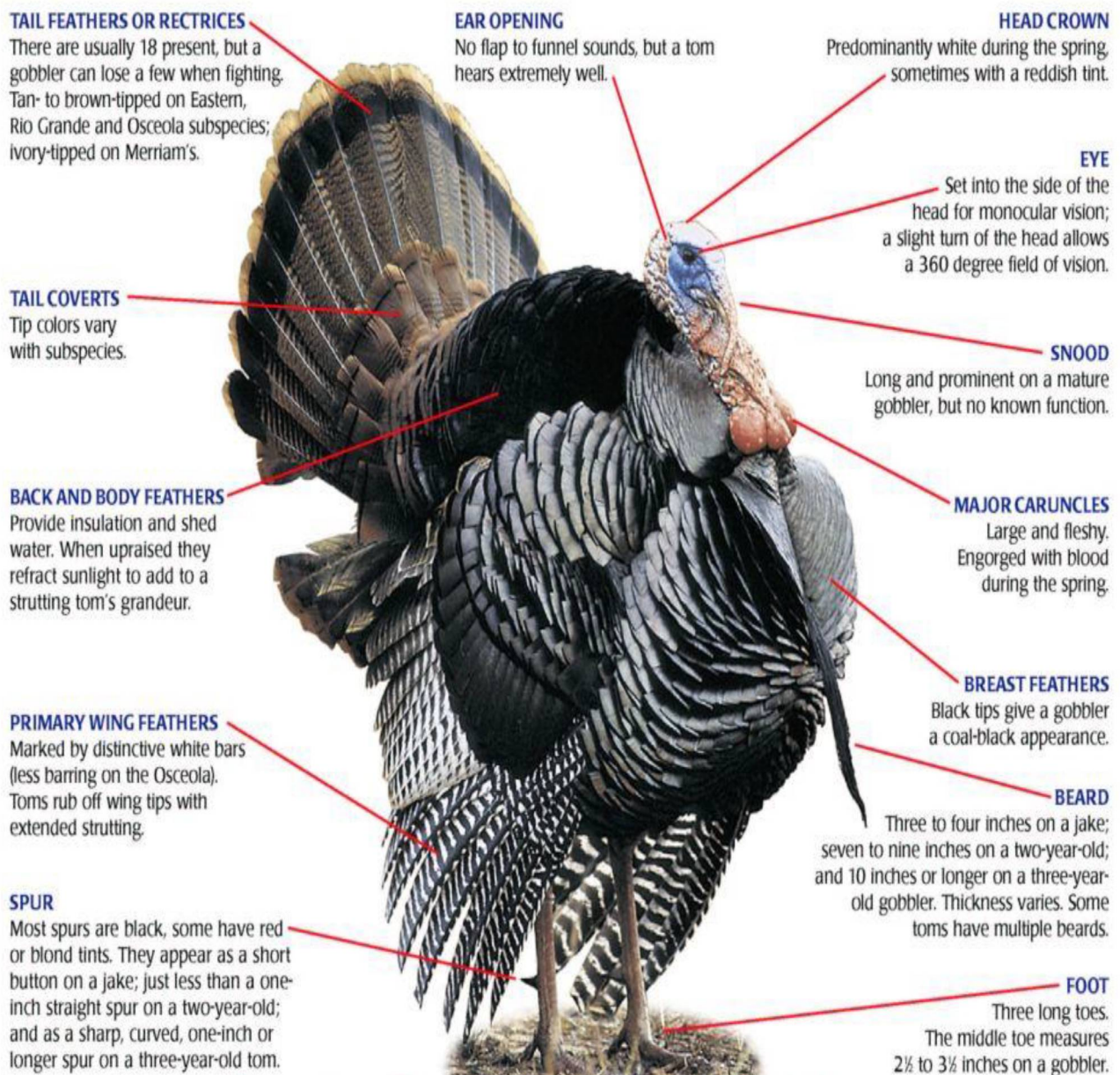
Where are all the male turkeys during all of this? After the mating season, "Toms" and younger "Jakes" retreat to a separate males-only flock, wandering around



separate from the hens. By late summer females with fully grown poultts feed in open fields on crickets, grasshoppers, ticks and weed seeds.

In autumn during acorn and beechnut crop years, mixed flocks of males and females combine while feeding in forests as they fatten for the winter months. In winter, flocks roost in tall white pines or in dense hemlocks and fly down to scratch in snow to reach buried seeds or visit backyard birdfeeders. By late March, Toms begin to strut and gobble to attract female hens once more.

**9. Look through the table. Consult the dictionary to find the Ukrainian equivalents for the terms discussed. Get ready to explain the difference between the hens and gobblers**



***Know the Difference Between Hens & Gobblers***

It's easy to distinguish a gobbler from a hen by differences in their size, color, heads, and other characteristics.

**10. Watch the video by B. Allen Smith about Heritage turkey breeds try to do the simultaneous translation. Answer the questions ([https://www.youtube.com/watch?v=zIViuzOZtA&ab\\_channel=P.AllenSmith](https://www.youtube.com/watch?v=zIViuzOZtA&ab_channel=P.AllenSmith)).**

- a) Why is November the Turkey month?
- b) How many colour types of turkey does he present?
- c) What breed is believed to be the closest to the wild turkey?
- d) What is the main purpose of the Fine Garden project?
- e) Where were Chocolate Turkeys popular in past?
- f) Explain the aim of the word combination “Genetic Repository”.
- g) Describe the Bourbon Red Turkey.
- h) What are the Narragansette Turkey named after?
- i) What are the recommendation to prevent the cooked turkey to be a bit of the tough side?
- j) What if the function of the Heritage Poultry Conservancy?

**10. Now, when you have study the texts and get ready to a big scientific conference. Follow the steps to organize it.**

- a) make a report on each topic discussed in the texts;**
- b) get ready with the questions to be asked after each report is delivered, questions should sound both in Ukrainian and English;**
- c) be ready to work as an interpreter both for those who report and ask, answers are supposed to be interpret as well.**
- d) prepare the review of the conference both in English and Ukrainian to be published on the website of your company. Make sure you’ve enumerated all the topics discussed, underline the hot interest of those who are present, signify the further development of the geese poultry industry. The report should be as long as 2000 words.**

**12. Imagine you have received a task to compose an article about more popular geese breeds for egg laying and meat purpose. You are allowed to use only information published in English to work create the Ukrainian article and vice versa. Make sure you write as many as 1000 words.**

## Glossary

abdomen/ belly живіт

addle egg – яйце без зародка, «бовтун»

age at first egg – вік (птиці) при відкладанні першого яйця

air cell - повітряна камера

barred - зозулястий

beak – клюв

bill - клюв conformation (meatiness)

body weight – жива маса

boneless wings – філе з крилець

breast - грудка

breast tenders - філе курячої грудки

breed – порода

breeding programme – племінна робота

brooding period – час, коли пташенята підростуть та зміцнюють (декілька перших тижнів).

broody – птаха, яка насиджує яйця (квочка)

buff - палевий

cage flock - поголів'я птиці у клітках

carcass - каркас

chalaza - канатик

chin - підборіддя

claw - кіготь

cloaca - клоака

comb - гребінь

crop – зоб

crown - вінець

cuticula - підшкаралупова оболонка

deli meats - м'ясні делікатеси

detract - зменшувати переваги

disease control - протиепідемічне забезпечення

domestic – домашній

down - пух

drake – селезень, качур, гусак

spur - шпора

jake – молодий птах

gobbler - індик

snood – сережка (мясистий придаток над дзьобом у індики)

major caruncle – головний корал (нарост на голові у індики)

dressed appearance - вигляд тушки  
drumette – плічова частина крила птаха, барабанна частина  
drumstick - гомілка  
duck stock/ flock – поголів'я качок  
ear lobe – мочка вуха  
egg candler - овоскоп  
egg laying – кладка яєць  
egg shell - шкаралупа  
essential nutrients - незамінні поживні речовини  
fall out of favour - втрачати популярність  
feed conversion - витрата кормів  
feeding high-energy diet - дієта з високим вмістом вуглеводів  
flank – грудна клітина  
flock – стадо, поголів'я  
fluff – пух  
fodder – грубий корм для тварин  
forager – той, що збирає  
fowl – домашня птиця  
frozen pre-cooked meals - заморожені м'ясні полуфабрикати  
gander – гусак  
genetic improvement - генетичне вдосконалення  
germinal disc - зародковий диск  
gizzard – другий шлунок  
ground turkey meat - заморожене м'ясо індички  
growing birds – молодняк  
growth rate - індекс росту  
hackles – довге пір'я на шиї  
hatch – насиджувати яйця, вилуплятися  
hatching – вилуплення з яйця  
heart - серце  
hock – голяшка, коліне сухожилля  
in-and-in breeding - близькорідне схрещування  
intestine - кишківник  
kidney – нирки  
knob – нарост над дзьобом  
lay - відкладати яйця  
layer - несущка,  
liquid pasteurized eggs - пастеризовані фасовані яйця  
live weight – жива маса  
liver - печінка  
lung - легені



mainstay – основа  
managing the birds - утримання птахів  
mantle - мантия  
market age - вік, коли птицю можна забивати  
mate - схрещувати  
meat-type chicken - кури м'ясних порід  
moult – линяти, линька  
nape - потилиця  
oesophagus - стравохід  
offspring - виплід, виплодок  
ordinance – постанова місцевого муніципалітету (США)  
origine – походження  
ovary - яєчник  
oviduct - яйцевідвід  
partridge – строкатий  
pectens – ламелі (тонкі, гребінчасті або схлжі на торочку структури з боків дзьоба качки)  
pin-feather – колодочка (зародок пір'я)  
plumage – колір оперення  
plump – відкормлювати;  
plump добре розвинутий, м'ясистий  
poultry - птахівництво  
poultry eggs - промислове яйце домашньої птиці  
poultry industry – птахівництво  
rear - кормити, вигодовувати  
ringed yolk – кров'яне кільце, звивина.  
rump – гузка  
scapular - лопатка  
shank – лапа/нога  
shell – шкаралупа  
silver penciled – попелястий  
spine - хребет  
spleen - селезінка  
tenderloin - філе  
thick albumen - щільний білок  
thigh - стегно  
thin albumen - рідкий білок  
throat - горло  
to break th eggshell - проклюнутися  
to set (a duck/ hen) on eggs – саджати на яйця  
toe – пальці на ногах



trachea - трахея

undertail – пір'я навколо хвоста

vent – клоачний отвір

viable option - економічно прийнятний варіант

vitelline membrane - оболонка жовтка

waterfowl – водоплаваючі птахи

wattles – сережки у півня

whole and cut-up chicken - ціла тушка курки та поріzana

whole carcass - ціла тушка

winglet - крило

yolk - жовток

zoning regulations – природоохоронні заходи, які встановлені для певних регіонів

poults – пташенята домашньої птиці

## USEFUL PHRASES

### 1. **In order to**

Example: "In order to understand X, we need first to understand Y."

### 2. **In other words**

Example: "Frogs are amphibians. In other words, they live on the land and in the water."

### 3. **To put it another way**

Example: "Plants rely on photosynthesis. To put it another way, they will die without the sun."

### 4. **That is to say**

Example: "Whales are mammals. That is to say, they must breathe air."

### 5. **To that end**

Example: "Zoologists have long sought to understand how animals communicate with each other. To that end, a new study has been launched that looks at elephant sounds and their possible meanings."

### 6. **Moreover**

Example: "Moreover, the results of a recent piece of research provide compelling evidence in support of..."

### 7. **Furthermore**

Example: "Furthermore, there is evidence to suggest that..."

### 8. **What's more**

Example: "What's more, this isn't the only evidence that supports this hypothesis."

### 9. **Likewise**

Example: "Scholar A believes X. Likewise, Scholar B argues compellingly in favour of this point of view."

### 10. **Similarly**

Example: "Audiences at the time reacted with shock to Beethoven's new work, because it was very different to what they were used to. Similarly, we have a tendency to react with surprise to the unfamiliar."

### 11. **Another key thing to remember**

Example: "As a Romantic, Blake was a proponent of a closer relationship between humans and nature. Another key point to remember is that Blake was writing during the Industrial Revolution, which had a major impact on the world around him."

### 12. **As well as**

Example: "Scholar A argued that this was due to X, as well as Y."

### 13. **Not only... but also**

Example: “Not only did Edmund Hillary have the honour of being the first to reach the summit of Everest, but he was also appointed Knight Commander of the Order of the British Empire.”

**14. Coupled with**

Example: “Coupled with the literary evidence, the statistics paint a compelling view of...”

**15. Firstly, secondly, thirdly...**

Example: “There are many points in support of this view. Firstly, X. Secondly, Y. And thirdly, Z.

**16. Not to mention/to say nothing of**

Example: “The war caused unprecedented suffering to millions of people, not to mention its impact on the country’s economy.”

**17. However**

Example: “Scholar A thinks this. However, Scholar B reached a different conclusion.”

**18. On the other hand**

Example: “The historical evidence appears to suggest a clear-cut situation. On the other hand, the archaeological evidence presents a somewhat less straightforward picture of what happened that day.”

**19. Having said that**

Example: “The historians are unanimous in telling us X, an agreement that suggests that this version of events must be an accurate account. Having said that, the archaeology tells a different story.”

**20. By contrast/in comparison**

Example: “Scholar A’s opinion, then, is based on insufficient evidence. By contrast, Scholar B’s opinion seems more plausible.”

**21. Then again**

Example: “Writer A asserts that this was the reason for what happened. Then again, it’s possible that he was being paid to say this.”

**22. That said**

Example: “The evidence ostensibly appears to point to this conclusion. That said, much of the evidence is unreliable at best.”

**23. Yet**

Example: “Much of scholarship has focused on this evidence. Yet not everyone agrees that this is the most important aspect of the situation.”

**24. Despite this**

Example: “The sample size was small, but the results were important despite this.”

**25. With this in mind**

Example: “We’ve seen that the methods used in the 19th century study did not always live up to the rigorous standards expected in scientific research today, which makes it difficult to draw definite conclusions. With this in mind, let’s look at a more recent study to see how the results compare.”

**26. Provided that**

Example: “We may use this as evidence to support our argument, provided that we bear in mind the limitations of the methods used to obtain it.”

**27. In view of/in light of**

Example: “In light of the evidence from the 2013 study, we have a better understanding of...”

**28. Nonetheless**

Example: “The study had its limitations, but it was nonetheless groundbreaking for its day.”

**29. Nevertheless**

Example: “The study was flawed, but it was important nevertheless.”

**30. Notwithstanding**

Example: “Notwithstanding the limitations of the methodology used, it was an important study in the development of how we view the workings of the human mind.

**31. For instance**

Example: “Some birds migrate to avoid harsher winter climates. Swallows, for instance, leave the UK in early winter and fly south...”

**32. To give an illustration**

Example: “To give an illustration of what I mean, let’s look at the case of...”

**33. Significantly**

Example: “Significantly, Tacitus omits to tell us the kind of gossip prevalent in Suetonius’ accounts of the same period.”

**34. Notably**

Example: “Actual figures are notably absent from Scholar A’s analysis.”

**35. Importantly**

Example: “Importantly, Scholar A was being employed by X when he wrote this work, and was presumably therefore under pressure to portray the situation more favourably than he perhaps might otherwise have done.”

**36. In conclusion**

Example: “In conclusion, the evidence points almost exclusively to Argument A.”

**37. Above all**

Example: “Above all, it seems pertinent to remember that...”

**38. Persuasive**

Example: “Scholar A’s point – that Constanze Mozart was motivated by financial gain – seems to me to be the most persuasive argument for her actions following Mozart’s death.”

**39. Compelling**

Example: “The most compelling argument is presented by Scholar A.”

**40. All things considered**

Example: “All things considered, it seems reasonable to assume that...”



## TEXT BOX FOR INDIVIDUAL WORK

### TEXT I

#### ADVANCES IN POULTRY NUTRITION

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**ABSTRACT** - Nutritional advances as discussed in these proceedings embrace historical perspective as well as futuristic perspectives. Indeed, we must have a clear understanding of the past to identify key “advances” that will mold the future of poultry nutrition. Early nutrition research is discussed with reference to in ovo nutrition and nutritional needs up to day seven post-hatch. In addition, the nutrition of the hen is key in early nutrition of chicks. Key advances that have impacted diet formulation are energy and nutrient liberating enzymes, and the use of L-threonine. Key nutritional mechanisms that have been elucidated the past two decades include nutrition in immunity and gut health. Advances in nutritional specifications for specific genetic strains of broilers and the use of models to tie nutrition into production objectives are clear advances that will only flourish in the future.

**Key Words:** immunity, L-threonine, gut health, nutrition “in ovo”, nutrition up to seven days post hatch, nutrient liberating enzymes

**Introduction.** These proceedings accompany a presentation on Advances of poultry nutrition. It is not the intention of these published proceedings to review all aspects of “advances in poultry nutrition”, but to address key advances that should spearhead future research in poultry nutrition for the sustainability of poultry production in an environmentally friendly manner. Advances in nutrition arise when investigators pool knowledge of biochemical and physiological mechanisms to understand a response or interrelationship. Knowledge of the functionality of nutrients within cells in poultry has been carried out since the 1930’s. Advances in poultry nutrition have gone from the “discovery” mode in a relatively inefficient model to an “investigative” mode in an extremely efficient model used for the production of nutritious meat. In a review article by Coates (1962) he points to the pros and cons of using poultry as an experimental model. Interestingly, he points to the variability of the bird, which is due to lack of inbreeding, as the most problematic research con with poultry as compared to more genetically uniform research models. Clearly this is not the case at present. As the research of the past (1930’s though 1960’s) used chicks as a research model, usually metabolism trials with birds reared on wire, to discover and elucidate mechanisms for numerous vitamins, research of the present is more geared

toward improving the efficiency of commercial poultry by increasing feed utilization and increasing desired carcass attributes.

**Early nutrition.** The genetic potential of the bird is dictated by early nutrition. What is early nutrition? Many markets around the globe dictate a carcass from a bird processed at 42 days. In this scenario, the bird has spent 33% of its life in the egg. Recent research has addressed in ovo feeding and concluded that impacts on subsequent broiler growth should be studied further. Furthermore, research has shown that the nutritional consumption of the hen further dictates the ability of the bird to meet its' genetic potential. Glycogen supply during the hatching process and early growth are improved via in ovo feeding. Moreover, feeding hens diets varying in a myriad of nutrients impacts early chick development and carcass development (Kidd et al. 2003).

**Improving the efficiency of utilization and using nutrition to maintain a good environment.** The efficiency of poultry production usually is not the reason discussions of greenhouse gases, nitrogen release from poultry farms, nutrient runoff into ground or surface waters arise. Environmental challenges are a key issue for poultry companies globally. The advances in nutritional strategies to minimize nutrient output and improve on-farm nutrient balance have been substantial. It must be pointed out that nutritional interventions will not solve environmental issues, but future nutritional research will be paramount to mimic productions situations and rear poultry in an environmentally friendly manner. Below are two areas of nutrition (enzymes and amino acids) that allow for better meeting the birds' needs.

**Energy and nutrient liberating enzymes.** Although enzymes have been researched for some time, their commercial applicability has been limited to the past two decades. The initial inclusion of enzymes occurred in diets that utilized wheat, barley, or triticale, as their efficacy was to increase nutrient digestion by removing non-starch polysaccharides. The inclusion of phytase has allowed nutritionists to closer meet the phosphorus requirement while decreasing phosphorus excretion of poultry. However, research on the efficacy of phytase products is not conclusive. Selle and Ravindran (2007) reviewed the literature and concluded that the efficacy of phytase products is not yet known. Not only will a better understanding of the efficacy of phytase products better allow closer meeting the birds' phosphorus needs, but also allowing in potential energy sparing effects. Enzymes that release energy (e.g., non-starch poly saccharide enzymes, amylases, phytases, and proteases) will be of value as poultry companies continue to compete for energy sources with other industries.

**Amino acid supply.** Research within the last 15 years has established that threonine should be expressed relative to 0.63 to 0.70% of dietary lysine, of which mostly depends on gender, strain, diet, and age (Kidd, 2002). Although the ideal protein concept utilizes the threonine to lysine ratio, research in the past decade has been

instrumental in demonstrating the importance of adequate threonine to assure good carcass yields as mediated by threonine supply allowing for proper function of lysine and methionine. Further, threonine's importance for mucin has been instrumental in Brazil to adapt threonine needs for broilers fed all vegetable based diets. Of most importance now is the assessment of limiting amino acids after threonine and how they impact broiler performance in practical settings. In addition to valine and isoleucine, more research is needed with glycine and possibly other non-essential amino acids or combinations of non-essential amino acids that limit the practical reduction in dietary crude protein. The next crystalline amino acid to be manufactured for poultry diets will revolutionize amino acid supply for poultry.

**Nutritional interactions Nutrition and gut health.** In the former cited paper by Coats (1962) it was stated that “one of the broader problems at present concerning nutritionists is the relation of the microbial population of the alimentary tract to the nutrition of the host.” Hence, for half a century we have discussed the same issue. Now that fewer anti-microbial products are being developed and some feeding programs are restricted in the use of antimicrobials, a better understanding of intestinal microbiology is warranted. Research with in ovo feeding has shown improvements in intestinal development (Tako et al., 2005), which translates into improved growth rate and efficiency. As previously discussed, enzymes have the potential to alter gut microflora.

**Nutrition and the immune response.** There has been a tremendous amount of research addressing nutrition and the immune response, especially the last 20 years. Kidd (2004) reviewed the responses and stated that numerous nutritional deficiencies and excesses impact the birds' ability to respond to infection. A better understanding of how to optimize antibody titers to antigens in poultry nutrition of concern and downplay innate responses to ubiquitous stimuli is needed.

**Using poultry nutritional models to optimize “poultry company complex” efficiency.** We have gone through an era of using least cost models to predict ingredient choices and formulate complete broiler feed to an era of extrapolating broiler performance as affected by feed as a predictor of a profitable broiler complex. Indeed, there are a number of models being introduced that aid in the prediction of poultry performance. It must be pointed out that the models are only as good as the data used to establish them. One example of such model is the Holo-Analysis which accumulates published research data for specified variables and fits results into an empirical model (Rosen, 2006). Companies must create data bases to compare their performance to historical trends, other companies, and the literature.

**Genetics and nutritional genetics.** When discussing the efficiency of poultry production both nutrition and genetic selection come to mind. It must be pointed out that the bulk (80-90%) of the improvements in broiler growth are attributable to genetic selection (Havenstein et al., 2003). Hence, leaving nutrition and management making

up the remaining 10-20%. However, Havenstein et al. (2003) demonstrated further improvements with the Ross 308 broiler versus the Athens-Canadian Randombred Cross of 1957 when birds were fed “modern” 2001 diets. Genetic selection, nutritional programs, and management systems that are efficient have shaped the broiler industry today. In the U.S., we have seen an 87% increase in poultry products from 1978 to 2002 relative to beef and pork products. Future nutritional advances should consider broiler strain. Feed intake and growth patterns of modern broilers, however, vary. It is clear that research must continue in the area of nutritional responses to varying dietary considerations. Hence, predicted growth or yields for Ross crosses versus Cobb crosses are indeed different. A decade of research at Mississippi State University was carried out to better understand amino acids needs of Ross strains. In this research, performance efficiency and yields were assessed, sometimes in relation to economic conditions of poultry meat products. For example, Kidd et al. (2005) assessed amino acids needs of Ross 708 broilers and determined the critical need for early amino acid supply, in addition to validating the response economically. Dozier et al. (2008) further assessed the decade of work and established models to predict amino acid needs of Ross birds to maximize feed conversion and meat yields. Understanding which genes are turned on given a specific diet or nutritional profile may allow poultry nutritionists to uncover key fundamental problems in poultry production: how do I get more energy from soybean meal or how can I decrease crude protein beyond the norm and maintain equal growth? Corzo et al. (2009) is working towards elucidating intestinal amino acid transporter regulation as affected by diet. His initial research has determined that a reduction in some dietary amino acids upregulates some amino acid transporters. This work points to the importance of dietary amino acid supply on protein absorption and expression (Corzo et al., 2009). Determining strain specific effects of protein supply on transporter expression is warranted. Furthermore, Dr. Ferket recently provided a webinar for Watt Poultry (Ferket, 2009) and he indicated that in ovo feeding can dictate gene expression. Further, it may be that some of the nutritional impacts of breeders on chicks is mediated through gene expression, rather than a nutrient responses per se.

## TEXT 2

### “DOWN & FEATHER TRIVIA”

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1. WHAT IS DOWN? A single unit of down is called a cluster. It is a 3-dimensional spherical plume comprised of a quill point (with no quill shaft) and many thousand filaments which radiate from it. A down cluster has the overall appearance of a ripe dandelion pod.

2. WHAT IS THE SOURCE? Down comes from the underbody of waterfowl such as geese and ducks. Landfowl such as chickens and turkeys do not produce down. Down clusters grow under the outer protective layer of feathers, and are most numerous on the breast area.

3. WHAT IS A FEATHER? Feather, the principal covering of birds, is of flat, two dimensional construction. It has a hard, tubular quill shaft from one end to the other. Feathers have a series of softer fibers on each side of the quill shaft.

4. WHAT'S THE DIFFERENCE BETWEEN DOWN AND FEATHER First of all, they are two completely different structures. A down cluster has an identity all its own. It is not a young small feather, and will never develop into a feather. A down cluster has a quill point but no quill shaft. Although a down is lighter than a feather, its three dimensional structure allows it to trap more air and therefore has more "loft" or insulation.

5. HOW CAN DOWN BE SO LIGHT, YET INSULATE SO WELL? Because of its three dimensional structure and ability to "loft", each down cluster traps more air for its weight than any synthetic. Every ounce of good down has about 2 million fluffy filaments that interlock and overlap to form a protective layer of non-conducting still air that keep warmth in and cold out. Because of its resilience, you can scrunch it up or flatten it out. All it takes is a good shake for it to fluff up and bounce back to the form that keeps you cozy and warm.

6. HOW IS THE BEST DOWN CHOSEN? Down is washed, chemically cleaned and separated into different grades by blowing. The air currents in a sorting machine send the best down drifting up to the highest bin, to be graded as the finest quality. Down of lesser quality and feathers then fall into the lower bins.

7. WHICH BIRDS PROVIDE THE BEST DOWN? Generally speaking, the best down is formed by the biggest clusters. And the biggest clusters come from the larger, more mature birds. Geese are normal larger birds and usually provide the best quality down. Large, mature ducks provide good quality down too, but under a microscope, goose down plumes tend to be stronger, last longer, and have more filling.

8. WHAT IS EIDERDOWN? The world's most expensive down is a duck. The eider sea duck from Iceland has the most desired down of all. Because the wild Eider Duck is a protected bird, farms in Iceland remove small amounts of down from the nests while the bird is molting.

9. DOES CLIMATE AFFECT THE QUALITY OF THE DOWN? The age of the bird is really the determining factor. Climate does, however, affect quantity. A bird harvested in cold weather will yield a greater amount of down. But quality depends simply on the maturity of the bird.

10. DOES COLOR HAVE ANY RELATION TO QUALITY? None at all. As stated previously, quality is determined mainly by the age of the bird. White down is prized because it can be put into light colored coverings without showing through. However, duckling down is pure white, and beautiful, but has very low filling power. Conversely, the down of the mature Canada goose is dark grey, and the prized down of the eider sea duck is almost black.

11. WHY IS MOST DOWN IMPORTED? The production of down depends solely on the dietary habits of an area. For instance, North Americans are relatively small consumers of duck and geese, so they harvest a proportionately small amount of down. In many Asian countries, ducks and geese provide a good portion of the meat supply. At the moment, China produces over 70% of the world's down supply. Down is a by-product of the meat industry, and its production depends not on climate or locality, but on the eating habits of local people.

12. IF DOWN IS SO SUPERIOR, WHY ARE SO MANY SYNTHETICS BEING MANUFACTURED? The highest compliment is to be copied, and companies have tried for years to create "synthetic down". So far, no one has created an acceptable synthetic down. In fact, the term "synthetic down" is illegal in Europe and is unacceptable by the USA state bedding regulators. The manufacturers of synthetic fibers have invested large sums in product development and in later marketing of the products. Also, the supply of down and feathers is not large enough for the demand in insulated bedding and apparel.

13. WHY IS DOWN SUPERIOR TO SYNTHETICS AS AN INSULATOR? Down gives approximately 3 times the warmth per ounce compared to synthetics. Also, its ability to loft, or fill the space it occupies is greater, longer lasting, and more uniform. Synthetics mat and lump together, in time, leaving empty, cold spots, while down continually re-lofts and molds itself to the body.

14. WHY IS DOWN MORE COMFORTABLE THAN SYNTHETICS? Down has the ability to mold itself to the body while synthetics remain rigid. It also has the marvelous ability to breathe and wick away perspiration, so the user doesn't experience the clamminess which often occurs with synthetics.

15. HOW LONG CAN I EXPECT MY DOWN PRODUCT TO LAST? With the proper care and cleaning, your down product will remain functional longer than you will. You'll definitely get your money's worth

16. WHAT HAPPENS TO DOWN IF IT GETS WET? Try and submerge your down product for a wash, and you'll see it's not easy to get down completely wet. So



even if the user gets caught in the rain, the natural oils in the plumes tend to repel water, and the product will usually look a lot wetter than it really is. Getting wet does not hurt down, as long as it's properly dried within a reasonable length of time.

17. HOW DO I CLEAN MY DOWN PRODUCT? Down can either be washed or dry cleaned. The important thing is that it be very clean when the process is over. If the filaments are contaminated with suspended dirt, or dirty dry cleaning solvent, they will not re-loft properly and the down will lose much of its insulating ability. Some say down should be washed, in mild soap only. There are special soaps on the market for this purpose. If machine washed, care must be taken to dry the down product carefully.

18. HOW DO I STORE MY DOWN? For practical purposes and mobility, you can compress your down product tightly and stuff it into a pack sack. But, down products should not be compressed for extreme long periods of time. They should be stored in a dry, ventilated area. Sleeping bags or comforters should be stored in a loose, breathable bag, and a garment should be properly hung. After storing in a tight stuff bag, the down product should be shaken out well and allowed a short period of time to re-loft before being put to use. Many consumers place down products in a tumble dryer for 30-40 minutes on a regular basis. This helps restore loft if down has not been properly stored or if a down product has a mild smell.

19. WHY IS DOWN SO EXPENSIVE? Down is freely traded on the open market and its prices are governed by supply and demand. Since 1975, prices have risen four fold, because more and more people are coming to appreciate the tremendous advantages of this unique natural product. Eiderdown is the most expensive product. Eiderdown is collected in very small amounts from nests of birds while they are molting. Eiderdown sells for over \$1,000 per pound. An Eiderdown comforter in Japan can sell for over \$25,000

### **TEXT 3**

#### **POULTRY HEALTH & DIAGNOSTICS**

Animal health and human health are closely interlinked – more than sixty percent of the pathogens that cause diseases in humans originate from domestic or wild animals. In addition, both animals and humans are affected by, and affect, the environment in which they exist. Zoonotic pathogens may be transmitted to humans via food, through direct contact between animals and humans, or by other routes. Further an unprecedented increase of movement of people and commodities worldwide, the increasing interactions of humans with the environment, deforestation, climate change and variability, urbanisation, the intensification of animal production in response to growing global demands for proteins of animal origin such as milk, eggs and meat, economic development, and the international trade in exotic pets are just

some of the factors that have provided greater opportunity for transmission of pathogens between animal species and human.

The OIE seeks to strengthen activities aimed at consolidating the “One health” concept: it works in partnership with other world organisations to prevent, control and eradicate diseases existing at the interface between animals, humans and environment. It is therefore important to have a strategy which focuses on eradication at the animal source through the following key actions: early detection; early warning; rapid confirmation of suspects; rapid response; and rapid and transparent notification. It is therefore necessary to have a manual which outlines a harmonized approach to disease diagnosis by describing internationally agreed laboratory diagnostic techniques.

Poultry vaccines are widely applied to prevent and control contagious poultry diseases. Their use in poultry production is aimed at avoiding or minimising the emergence of clinical disease at farm level, thus increasing production. Vaccines and vaccination programmes vary broadly in regard to several local factors (e.g. type of production, local pattern of disease, costs and potential losses) and are generally managed by the poultry industry. In the last decade, the financial losses caused by the major epidemic diseases of poultry (avian influenza and Newcastle disease) have been enormous for both the commercial and the public sectors.

Thus, vaccination should also be applied in the framework of poultry disease eradication programmes at national or regional levels under the official supervision of public Veterinary Services.

## **TEXT 4**

### **POULTRY-HOUSE EQUIPMENT**

A poultry house is not complete without the accessory equipments or features that make it suitable for the particular kind of production for which it is intended. Pieces of equipment that are built in as a part of the house should be simple, few in number, adequate in size, removable for cleaning, and conveniently and systematically placed in the house; so that their care will take a minimum of labor.

The desirable qualities of a nest are that it be roomy, easily cleaned and sprayed, dark, cool and well ventilated, and conveniently located. Dark nests are preferred because the hens like seclusion for laying. Dark nests also reduce the likelihood of egg eating. Some arrangement for shutting the fowls out at night prevents them from roosting in the nests and fouling them. This they are prone to do, especially at molting time, in order to escape being crowded by other birds in the perch.

Lindley and Whitaker (1996) stated that, nests are banked in lines along outside wall or on either side of a center alley for convenient manual egg collection; the nest is available for 4-5 birds. Nesheim et al. (1979) mentioned that, some poultrymen like the “community” type of nest, which is really a covered box about two feet wide and

six feet long, community-type nest has an egg conveyor located along the front, the system can be extended to complete loop in a 350-foot house. Charles et al. (1994) reported that, nesting systems are fabricated from litter, plastic, plastic turf and various mechanized systems are available.

Battaglia (2001) says that, the objective of debeaking is to prevent cannibalism for the life of the flock. To do this, enough of the beak must be removed to prevent regrowth to its normal length during the lifetime of the bird. The mechanical debeaker is a machine that cuts off and cauterizes a portion of the beak.

It consists of a cutting blade that is heated to cherry-red color, a support bar on which the beak is held, and a foot pedal that operates the blade. Depressing the foot pedal brings the red-hot blade down through the beak. Debeaking of baby chicks is made easier by a guide plate which takes the place of the beak support. The guide plate is equipped with holes of three different sizes, the choice of which depends upon how big the chick is and how much of the beak you wish to remove. The chick's beak is inserted into the hole and the hot cutting blade moves down immediately behind the guide plate, cutting off the end of the beak. Another attachment that makes chick debeaking semi-automatic is a power unit that attaches to the debeaker. The power unit is activated by pressing a bar on the front of debeaker, which moves the blade down behind the guide plate and through the beak. The power unit automatically holds the cutting blade in adown position for two seconds for cauterize the cut face of the beak, the blade than returns to its starting position.

Lindley and Whitaker (1996) indicates that, cage systems may be classified by the number of levels of cages and the method manure elimination from cage area to in-house storage. With the advent of controlled environment housing, cage designs continued to be improved. Three- and four-tier systems and now five-tier systems become popular providing significant increases in bird density within a house. Six tiers require special elevated people-movers to manage the top levels. The most common cage sizes are 400 mm (16 in.) or 600 mm (24 in.) across the front and 450 mm (20 in.) deep. The 410'510 mm (16'20 in.) will house six birds (53.3 in.2/bird), and the 610'510 mm (24'20 in.) will house nine birds (53.3 in.2/bird). The European battery cage is usually 50'50 cm (19.7'19.7 in.) and will normally house seven birds (55.4 in.2/bird). Manure elimination is performed using slanted manure collection boards between levels to prevent manure from entering lower cages causing dirty eggs. Manure was scraped from manure boards from the aisle on a hanging system or with mechanical scraper on floor stand systems. The next innovation was the slant back cage, where the backs of the cages were slanted toward the front of the cage. A plastic curtain on the slant back, extending to within 25 to 50 mm (1 to 2 in.) of the cage above, eliminating the heed for manure board and a mechanical scraper between levels of cages. Four-tier systems should be equipped with a bump rail located 410 to 610 mm (16 to 24 in.)

above the aisle and above the bottom egg tray toward the aisle to protect the bottom egg tray from physical damage.

Charles et al. (1994) specified that, the current recommendations for cage floors are to be flexible floors of moderate slope better than rigid steep slope floors, if welded wire steep slopes are used, they should have a horizontal collecting cradle, that to minimize shell damage. The principal design constraints based on allowing 450 cm<sup>2</sup>/bird and 10 cm/bird feeder and a belt scraper as a manure handling system.

## **TEXT 5**

### **Introduction**

Poultry refers to birds such as chickens, turkeys, ducks, pheasants, geese, ostrich, emu, quail, and related species that are used for commercial production of meat. Many breeds of these species exist in the wild, but in commercial production many different breeds have been replaced by crossing several breeds with different desirable characteristics to produce a single breed or to develop hybrid lines with optimal meat yield and production efficiency. The focus of this report will be to review the classic and current species of poultry possessing desirable eating characteristics, and the nutritive value of poultry meat. The meat from almost all birds is commercially available. This review focuses on chickens, turkeys, ducks, geese, but includes ratites, which are flightless birds with rudimentary wings and without a sternum.

### **Chickens**

Domestication of chickens began with red jungle fowl, which were raised in different regions of India and China around 1000 BC. However, the birth of the modern chicken industry in the United States began in the early 1900's, when chicken production was characterized by small backyard flocks that were maintained to produce eggs for food or sold locally. The aged hens or roosters from the home flocks were cooked in pressure cookers and eaten only for a Sunday dinner or holiday meal. In the early to mid 1900's, there was no organized system for processing poultry, which made it impossible for poultry meat to be available for retail sale at grocery stores, but live birds could be purchased and processed at home. As the twentieth century progressed, large markets for poultry meat developed in the Northeast and the poultry industry became a year-round enterprise with broiler (i.e., young meattype chicken) production becoming concentrated in the southeast due to its warm climate, economical labor, and access to grain via rail and barge transportation. As the demand for white/breast meat increased in the 1950's, the chicken industry began to undergo vertical integration to bring control of the hatcheries, feed mills, growth facilities, and

processing plants under a single corporate structure. Concurrently, the poultry companies ceased using dual-purpose (meat and eggs) breeds of chickens, and they began to breed and produce chickens specifically for meat production. In the early days of the meat-chicken production industry, it was common to grow dual purpose breeds or to mate a dual purpose rooster such as a Rhode Island Red with a Barred Plymouth Rock hen to produce male progeny that were barred like their mothers and female progeny that were non-barred like their fathers. The cockerel (young male chickens) could then be separated and raised for meat production and the pullets (young female chickens) could be kept as egg producers. However, to improve production, companies stopped using dual-purpose birds and developed separate lines of chickens to produce either meat or eggs. The meat chicken or broiler industry has traditionally used crosses between White Plymouth Rock and Cornish birds. Both breeds have a large body size, but Cornish birds tend to grow faster than White Plymouth Rocks. Although most commercial broilers originated from crosses between White Plymouth Rock and Cornish chickens, the broilers of the 1950's are very different from modern day broilers. A commercial broiler chicken from a 2001 genetic background takes approximately 42 days to reach a body weight of 2.6 kg, a carcass weight of 2 kg, and a Pectoralis thoracicus (breast muscle) percentage of body weight of approximately 15.8%. In comparison, a commercial broiler from a 1957 genetic stock reaches a bodyweight of 1.8 kg, a carcass weight of 1.2 kg, and a P. thoracicus percentage of body weight of approximately 8.6% at 84 days of age. The most economically important chicken and turkey muscle is the P. thoracicus, which is composed of predominantly white (or fast twitch) muscle cells to market weight, it has increased the total size of the chicken, and it has increased the size of the P. thoracicus relative to body weight. Overall, modern selection techniques have profoundly changed the size of the chicken breast muscle. Chicken has grown to be a popular meat product because the increases in production efficiency have led chicken to become a low-cost, tasty alternative to traditional red meats, such as beef and pork. Chicken has become a low-cost product because modern selection and production techniques have reduced the time it takes to produce a broiler chicken to approximately six weeks. More importantly, it is possible to manage large numbers of chickens on a single farm, lending poultry production to be very efficient and making it possible for the poultry industry to easily become vertically integrated. Almost every chicken produced in the United States comes from contract growers who enter into partnerships with major poultry companies and whom may supply the chicks that are grown on the farm. Therefore, the large corporation can determine the type and number of chickens grown, the feed provided to the animals, and all aspects of production. Subsequently, the same company buys the chickens from the growers, processes the chickens, and distributes the final product to the retailers. The vertical integration of chicken production almost

eliminates the costly possibility of either an oversupply or shortage of chickens for the processor, and provides the opportunity for an efficient operation. Chicken consumption in the United States was approximately 9.9 kg per person (carcass weight) in 1955, while in 2009 it was approximately 42 kg per person (carcass weight). The increase in chicken consumption has not only occurred because of its relatively low cost, but also because chicken meat tends to have consistent quality. Chicken tends to have few inherent tenderness issues because the vast majority of chickens grown in the United States and most other countries for fresh consumption are harvested at a young age (6 weeks) when the animals have low connective tissue levels. Furthermore, the normal rapid pH decline and rapid onset of rigor mortis (4 hour) and subsequent ageing in poultry has made meat quality defects such as cold-shortening or thaw rigor negligible issues. In particular onset of cold shortening occurs at a much lower temperature (2 C) than for red meats, but rigor at elevated temperatures (if there is no stimulation) can still toughen meat. Electrical stimulation can be used and in fact can both enable early portioning without shortening and toughening thus enhancing tenderness, but is not commonly used. Meat quality problems in poultry tend to be related to a pink color in the normally white breast muscle or a pink color in processed meat products. Similarly, hemorrhaging during slaughter and bruising during processing also tends to be a quality problem. A **pale soft exudative (PSE)** condition has been described in chicken and turkey meat, but the biological basis for the PSE condition in poultry is not as well understood as PSE pork. The advent of new chicken products (chicken bologna, chicken nuggets, chicken hotdogs, chicken wings) throughout the 1980's and the 1990's that are not only tasty, but convenient to prepare has fueled an increase in poultry consumption. The new chicken convenience foods have been successfully marketed for consumption at home and for consumption in the growing fast-food industry. However, one of the greatest reasons for the growth in chicken consumption may be the perception by health conscious consumers that chicken is a low-fat high protein source of healthy nutrition.

### **Turkey.**

Domestication of the turkey may have begun with the Mayas in Mexico and Central America, and there are two different sub-species of turkeys found in the wild. One subspecies is found in Mexico/Central America while the other is found native to the United States. The variety found in the United States is large, has a characteristic bronze plumage, and it is likely that the commercial lineage of domestic turkeys arose from the turkeys native to the United States. The current standard breeds of turkeys are the Broad Breasted Bronze, White Holland, Narragansett, Black, Bourbon, Royal Palm, and Slate. The White Holland was the only commercial white turkey during the early twentieth century. Much of the success of the modern turkey industry lies with the Broad Breasted Bronze whose rapid growth rate made it an exceptional animal for



turkey meat production. Modern turkey production uses a large white breed, which was likely developed from the Broad Breasted Bronze and the White Holland breeds. Modern turkey production/consumption has undergone as great or greater increase than chicken production over the last 50 years, and the turkey industry has also undergone vertical integration. Similar to chickens, modern selection techniques have greatly changed the turkey over the last half of the twentieth century. In the late 1950's, tom turkeys were marketed at about 10.5 kg to 11.3 kg live weight. However, it took nearly 25 weeks for a tom turkey to reach approximately 11.3 kg in 1960, it took, it took approximately 21 weeks to reach the same weight in 1974 and only approximately 28 weeks to reach 15.8 kg. In 2011, an achievable performance goal for a tom turkey to reach 11.3 kg of live weight was 13 weeks of age, and a 22 week-old tom turkey to reach 22 kg of live weight. Therefore, modern selection has significantly altered the quantity, proportionality, and muscularity of turkeys, and rate of turkey muscle development. Overall, turkey carcasses have a high muscle to bone ratio, the breast meat accounts for approximately 29% of the carcass weight, and there is a high dressing percentage (>75% live weight). However, selection for rapid growth has caused some problems for modern turkeys because the size of the breast muscle precludes mating and focal myopathy, which is a pathological muscle condition characterized by enlarged muscle cells, in the breast muscle has been reported to be associated with the rapid growth of these fascinating birds. In concert with the improvement in the turkey production efficiency were also increases in turkey meat consumption. Up until the late 1970's, turkey consumption was heavily concentrated at holiday festivals with very little consumption during the remainder of the year. However, due to aggressive marketing programs and the advent of new products, turkey has become a year-round meat product that American consumers enjoy on a daily basis. Per capita United States turkey consumption was approximately 2.25 kg in 1955, but it rose to nearly 8 kg in the late 1990's, and the 2008 per capita consumption was approximately 8 kg and consumption has remained flat. The growth of the turkey industry can be tied to the relatively low-cost of turkey meat, the advent of new turkey products (turkey bacon, turkey bologna, turkey hotdogs, sliced turkey breast, turkey ham), and the perception by health conscious consumers that turkey is a healthy food. Furthermore, turkey meat is low in fat, high in protein and versatile.

### **Ducks**

Wild Mallard ducks are generally regarded as the ancestor of all breeds of domestic ducks. The Pekin is likely the most popular breed of duck that is used in commercial production. The Pekin undergoes early maturity, is hardy, and develops a good carcass. Pekin ducks originated in China during ancient times, and they were first imported into America after a lengthy sea voyage from Peking China in 1874. A young duck or duckling (usually under 8 weeks of age) has dark, tender meat, and weighs

about 1.6 to 2.25 kg. The duck industry in the United States was initially concentrated on Long Island, New York to supply the New York City market. However, the duck production industry in the United States has shifted from its original Long Island base to be concentrated in the mid-western United States, and the duck industry now enjoys a nation-wide market in the United States. The single largest company producing ducks in the United States has facilities in California, Wisconsin, Indiana, and Michigan producing 14 million ducks per year. Overall, the duck industry in the United States is still much smaller than the chicken or turkey industries. It produces approximately 24 million ducks annually compared to approximately 8 billion chicken, and approximately 275 million turkeys. Similarly, the average American only consumes approximately 0.15 kg of duck per year making duck much less popular with American consumers than other poultry meat species. The largest duck producing nation is China (2.6 million metric tons), followed by France, Thailand, Vietnam, and the United States (50,000 metric tons). Although it appears that duck meat is consumed on a world-wide basis, it tends to be less popular world-wide than chicken or turkey meat. The appeal of duck meat to American consumers tends to be in affluent specialty markets for people who prefer the taste of duck to turkey or chicken. Duckling is an international mealtime favorite, and it is best known for the elegant dishes prepared in elite restaurants, such as Peking Duck and Duck à l'Orange. However, there are a number of delicious duck recipes that are easy to prepare at home, such as Bar-B-Q duckling, roast duckling, and duckling pasta. Duck breast meat does not appear as white as turkey or chicken meat, and it is marketed as a “red” meat. Duck meat is nutritionally similar to other poultry meats, except that it appears that skinless duck meat has a higher fat content than skinless chicken or turkey meat. A potential reason for the limited growth of the duck industry may be that duck tends to be much more expensive than chicken or turkey, or it may simply be related to the high cost of duck compared to all other foods. Similarly, the convenience foods, such as chicken nuggets, sliced turkey breast, chicken hotdogs, and turkey burgers, have not been produced or successfully marketed by the duck industry.

### **Geese**

The popular geese breeds are the Embden, Toulouse, African, Chinese, Pilgrim, Egyptian, and Diepholz. The development of modern geese breeds has not followed the same path as modern chickens or turkeys because goose production has not achieved the same corporate scale as the chicken or the turkey industry. Therefore, few industrialized breeding programs have been implemented for geese. The number of geese in Europe has dropped steadily since the introduction of modern poultry production techniques during the early twentieth century. Any increases in geese production have occurred in less developed countries where geese can free range, live independently, and produce culturally acceptable, tasty meat. A major country

producing goose meat is China. The barriers to geese playing a role in large-scale agriculture are the relatively poor reproduction rate, their slow growth rate compared to chickens and turkeys, and the lack of corporate marketing. Nutritionally, skinless goose meat is similar to other poultry meat species, but it contains a higher caloric fat and iron content than skinless chicken or turkey meat. Overall, goose meat is a highly nutritious product that is an excellent source of protein for people in developing countries or consumers in more developed countries who enjoy its taste.

### **Ratite**

The United States ratite (ostrich, emu, and rhea) industry began in the early 1980's as an almost totally breeder-production system. Bird prices were very high and the ratite market quickly reached a saturation point. The present ratite industry has shifted from a breeder based industry to be a product based industry (meat, hide, oil, feathers), but the limited infrastructure of ratite processing facilities has been a major barrier to the development of the industry. There are limited statistics available for ratite production, but there are likely between 50,000 and 100,000 ostriches and 50,000 to 100,000 emus in the United States. In Canada, there were only 11 ostrich, emus, or rhea harvested in 1993, whereas in 1997, there were 13,000 birds harvested. Therefore, some growth has occurred in the North American ratite industry during the 1990's, but there has not been a strong demand for ratite meat by North American consumers. Subsequently, there has been a steady decline in the number of Canadian farms producing Ostrich and Emu's as well as a steady decline in total Canadian ostrich/emu numbers between 1996 and 2006 suggesting that the ratite industry has failed to develop in North America. The ostrich is indigenous to Africa, and it has been raised domestically in Africa since the 1800's. Ostriches stand up to 3 m high and can weigh 180 kg. Normally, ostrich's are processed at about 10 to 14 months of age. Emus originated in Australia, and they are smaller than ostrich's standing about 1.5 m high and weighing about 54 kg. Lastly, rheas are indigenous to South America, and they stand about 1.5 m high and weigh approximately 27–36 kg at maturity. All three species have organized associations to support the marketing of their products. The current market for ratite has been primarily for specialty meats, focusing on customers who wish to enjoy a tasty, low fat alternative to traditional red meat products.

Consumer taste panels have only found slight differences in palatability attributes between ostrich steaks and Choice beef top loin steaks; however, the slight differences in palatability did not significantly affect overall acceptability of ostrich steaks. Ostrich meat is very high in protein, but low in lipid content. The nutrient composition of ostrich meat is similar to other poultry meats, but the sensory attributes are similar to traditional red meat. Overall, it has been difficult to introduce new meat products to American consumers, and demand for ratite meat failed to be firmly established. Any future success of the ratite meat industry in the United States may

depend on an effective distribution, marketing, and promotion strategy that has been characteristic of the broiler and turkey industries.

### **Game Birds**

The United States game bird industry raises millions of birds to stock land for recreational hunting, sale to restaurants, and sale directly to consumers. Wild game legally hunted in the United States cannot be sold to consumers, but the game can be harvested for personal consumption. Wild-game that is raised on farms and processed under appropriate regulations can be sold to the consumers. In general, a large portion of the game bird industry is focused on hobbyists raising home flocks, and also on raising game birds to stock hunting grounds. Therefore, game birds, such as pheasants and Bobwhite quail, can be marketed as day-oldchicks for the small flock hobbyist, as young mature birds to stock hunting lands, and as meat for restaurants or the home consumer. In the United States, up to 10 million pheasants, and 37 million quail are raised for consumption. Pheasants reach approximately 1.2 kg by approximately 16 weeks of age. A major obstacle to pheasant production is cannibalism, which is prevented by beak trimming, and the pheasants need their wings clipped to prevent flight. Quail are raised in similar conditions to broiler chickens, but they are very small birds making each require little floor space, and they reach market age by approximately 7 weeks of age with a carcass of 0.2 kg. Overall, the poultry industry provides a variety of tasty products, such as ratite, duck, quail, and pheasant for consumers who wish to explore the exotic meats, but these speciality products are vastly overshadowed by the larger scale production and consumption of lower cost broiler and turkey meat.

## TIPS ON WRITING REVIEWS AND SUMMARIES

*A **summary** gives the facts -- an overview of the characters and the story. A **review** can, and usually should, contain a **summary**, but the job of a reviewer **is** to add his or her voice; a reviewer judges the qualities, makes connections to other media and experiences, and makes recommendations.*

### **Summary writing**

The purpose of any summary is to present to the reader a clear, objective picture of the basic text. Your summary is supposed to restate only the main points of a text or a lecture without giving any examples or details, such as dates, numbers or statistics.

#### **Tips on writing a summary of an article:**

- Make sure you mention the main ideas of the article.
- Underline the most important details that can support the main ideas.
- Write your summary in your own words; avoid copying phrases and sentences from the article unless they're direct quotations.
- Express the underlying meaning of the article, not just the superficial details.
- You should create your summary about one third of the length of the original article.

#### **Your summary includes:**

##### **Introduction Paragraph**

- An introductory sentence of your summary which includes the author's name and the title of the article.
- Close the paragraph with a thesis statement that underlines the main idea of the article.

##### **Body Paragraph**

The number of paragraphs in your summary depends on the length of the article you work with.

For a **one-paragraph summary**, write for every supporting point in a separate sentence. Give 1-2 explanations for each supporting point.

For a **multi-paragraph summary**, discuss each supporting point in a separate paragraph.

- Open each body paragraph with a topic sentence.
- Each paragraph focuses on a separate idea and just the most important details from the article.
- Put the ideas into your own words to avoid copying phrases and sentences from the article.
- Use transitional words and phrases to connect ideas.

##### **Concluding Paragraph**

Summarize the main idea and the underlying meaning of the article.

## **REVIEW WRITING**

The purpose of a review is to gain an understanding of the existing **research** and debates relevant to a particular topic or area of your study, and to present that knowledge in the form of a written report. Conducting a review helps you to build your knowledge in your field.

### **Step 1.** Title your writing.

The title of your review should hint on its focus. A title can be descriptive, declarative or interrogative.

### **Step 2.** Cite the article.

This should be placed under the title. Remember to use the specified citation style (APA, ASA, Chicago / Turabian, MLA). The main body of your review should start right after this citation, without skipping a line: *Smith, John, and Jane Doe. "Studies in pop rocks and Coke." Weird Science 12 (2009)*

### **Step 3.** Generalize the information about the article.

Mentioning the title of the article under review, its author(s), as well as the title of the journal and the year of publication.

*For example: The article, "Studies in pop rocks and Coke" was written by pop-art enthusiasts John Smith and Jane Doe.*

### **Step 4.** Write the introduction

The introduction is the utmost laconic gist of the article under review. Here, you can state the author's thesis. If the thesis is not stated in the article, it is up to you to figure it out yourself. The introduction may also include the article main theme and the author's main idea.

Narrate impersonally and sound formally, avoid the first person presentation.

Usually, the introduction comprises about 10-15% of your review, but not more than 25%

The introduction is summed up by your own thesis where you briefly mention the article strongest point and main drawback.

*For example, "The authors do draw a clear correlation between pop and coke, but the evidence about rock is clearly misinterpreted."*

### **Step 5.** Overview the article

Explain the article's main claim, main points, and research results in your own words. Demonstrate the evidences that support the argument in the article. Mention the conclusions drawn by the author. Drop one or two direct quotes

### **Step 6.** Work out the main body of your review

Check with your summary and describe how well the topic is covered in the article. You are supposed to talk about every main point separately. If you have spotted any bias, you should mention it. Finally, you pass the judgment about the author's



contribution to the understanding of the subject-matter. You agree or disagree with the author and ground your opinion. The main body of your review is closed by suggesting your reader what exactly they can bring out from reading the article.

Remember to stick to the point and make sure that there is no unrelated information. Your judgments should be backed by other writings on the topic.

Make sure that your summary of the article is logically connected to the section where you assess it. Remember that each bit of your opinion that you introduce should be backed up by indisputable evidence.

**Step 7. Write your conclusion**

The conclusion is one paragraph long and takes no more than 10%. You briefly restate the main points and judge on how well-written and important the article is. You can also make a suggestion as to the direction for further research on the topic.

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