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**DISCUSSION LEADER|TextA|Unit 4**

**Name:罗浩**

Q1: Why is managed grazing mentioned in the text as agriculture that is generative adopted by growing group of farmers including Zeke. Which factors render most of farmers apt not to take the plunge to make the same choice?

Suggested answer: Managed grazing of pasture is one of the key technologies to get rid of the problems of resources and environment in the future. On the one hand, it can make the grassland have a "leisure" period to restore its vitality; On the other hand, it can also give full play to the advantages of plant overcompensation growth, improve vegetation and soil conditions, improve plant community structure, increase forage yield and grassland stocking rate, pursue the organic unity of ecological benefits and economic benefits, and make the maximum use of grassland without degradation. Besides, by shifting the farmers’ current focus from frantic pursuit of calories and commercial values to striking a balance between the future sustainability and instant tremendous economic effect, they are urgently demanded to carefully recalibrate expectations about the role of farming and food in life.

Q2: Given our nation’s current agricultural circumstances, what is deemed as the most feasible solutions with regard to a win-win for both profit of farmers and overall ecological situation.

Suggested answer: At present, agricultural technology and equipment cannot be effectively matched with China's agricultural modernization. Domestic agricultural science and technology and equipment exist problems such as large but not strong, many but not fine. In the decade of the new era, China's agricultural mechanization rate has been greatly improved in agricultural economy, but there is still a big gap compared with developed countries, especially the existing agricultural machinery function is relatively simple, homogenization is more common, resulting in its difficult to "actively" cope with the heterogeneous problems formed in various fields of agriculture. To accelerate the modernization of China's agriculture, we must respect the basic national conditions of China's huge population and relatively few resources per capita, and on this basis enhance the resilience of agricultural technology and equipment.

Summary of discussion: This discussion focuses on a more detailed analysis on American agriculture and shared prospect of global farming development. Notwithstanding immature concepts devised in favor of the mankind’s sufficient food supply, novel ideas do manifest a potential which would make a difference. It is indeed an urgence to tackle some environmental issues posed by inappropriate farming patterns.

Connector

**Name:罗浩**

With American professor alleging that we’re now facing a looming environmental crisis posed by excessive intensive agriculture. One may be inquisitive enough about comparisons between China and America in terms of agriculture.

Agriculture in both China and the United States is developing in the direction of intensification, mechanization, technology and sustainability. China's agricultural land is gradually concentrated in the new agricultural management main body through land transfer, and the American agricultural land is also gradually intensive management of farmers. The trend of land concentration has created conditions for the wide application of large machinery in agricultural production, and promoted the continuous improvement of agricultural mechanization. With the continuous development of science and technology, the role of science and technology in agriculture is becoming more and more significant, and the awareness of sustainable development and environmental protection in agriculture in China and the United States is also increasing. On the whole, whether it is the process of intensification, mechanization, technology or sustainability, the United States is in a relatively leading position and more mature than China. The agricultural experience of the United States is worth learning from and can provide an important reference for the rapid development of China's agriculture. Through learning, China can accelerate the pace of agricultural modernization, promote scientific and technological progress and sustainable development of agriculture, and achieve efficient, high-yield, high-quality and environmental protection of agricultural production. Therefore, it is of great significance to learn from the development experience of the United States to realize the rapid development of China's agriculture.

**Culture collector**

**Name：肖子航**

1. **hippies and the hippie movement**

The hippie movement was a countercultural movement in the 1960's and 1970's that originated on college campuses in the US and later spread to other countries such as Britain and Canada, It arose in part as opposition to US involvement in the Vietnam War (1955-1975) and as a protest against the mores of mainstream American life.

Hippies were members of the hippie movement. They advocated nonviolence and love, and developed their own distinctive lifestyle. They favored long hair and casual unconventional dress. They promoted the recreational use of hallucinogenic drugs. They often took up communal living arrangements, adopted vegetarian diets based on unprocessed foods, and practiced holistic medicine.

1. **managed grazing:**

A farming method that recognizes and nurtures the interdependence between agriculture and the environment. In managed grazing systems, livestock are rotated through paddocks of high-quality grasses and legumes that are then allowed to rest and re-grow. Managed grazing works with natural relationships and biological processes to improve overall farm health and build productive capacity (rather than focusing on short-term gains and extractive methods).

1. **agricultural science:**

Agricultural sciences, sciences dealing with food and fiber production and processing. They include the technologies of soil cultivation, crop cultivation and harvesting, animal production, and the processing of plant and animal products for human consumption and use. See also agricultural technology.

1. **regenerative agriculture:**

Regenerative agriculture, [alternative](https://www.merriam-webster.com/dictionary/alternative) to modern industrial [agriculture](https://www.britannica.com/topic/agriculture) that prioritizes conserving and rehabilitating the land, tailoring specific practices to local [ecosystems](https://www.britannica.com/science/ecosystem) and [climates](https://www.britannica.com/science/climate-meteorology). As with [sustainable agriculture](https://www.britannica.com/technology/sustainable-agriculture), regenerative agriculture focuses on reducing the impact of production on the land, but regenerative farming goes further by also actively improving the health of the [soil](https://www.britannica.com/science/soil). According to an estimate by the [Food and Agriculture Organization](https://www.britannica.com/topic/Food-and-Agriculture-Organization) (FAO) of the [United Nations](https://www.britannica.com/topic/United-Nations), more than half of farmland around the world is degraded. Regenerative practices help protect farmers’ livelihoods, the global [food](https://www.britannica.com/topic/food) supply,  [biodiversity](https://www.britannica.com/science/biodiversity), and the health of the planet.

1. **processed food:**

Processed food refers to the food that adds various auxiliary raw materials (such as preservatives, pigments, flavorings, etc.) or adopts various technical treatments (such as heating, refrigeration, drying, etc.) through the processing, modulation, processing or transformation of raw materials, so that it has better taste, taste, shelf life and convenience of eating. Processed foods can be packaged ready-to-eat foods or foods that need to be processed or cooked again at home, such as frozen foods, canned foods, instant noodles, etc. In general, processed foods are easier to store, transport, and eat than unprocessed foods, but they may also contain more additives and ingredients that are not good for health.

1. **transportation ethanol:**

Ethanol for transportation refers to the use of ethanol as fuel to power transportation, especially for automobiles. Traditional ethanol fuel is usually produced from crops such as corn and sugar cane, and the production process requires a lot of energy, such as for farming, harvesting, transportation and processing. Therefore, if these energy costs are taken into account, the net energy obtained from ethanol combustion may be very limited compared to the use of regular petroleum gasoline, and may even be less than the energy consumed to produce and transport it.

1. **algal blooms:**

Algae are microscopic organisms that live in aquatic environments and use photosynthesis to produce energy from sunlight, just like plants. Algae can be found in all types of natural waters, including salt water, fresh water, and brackish water (a mix of salt and fresh water).

A harmful algal bloom (HAB) occurs when toxin-producing algae grow excessively in a body of water. The excessive algal growth, or algal bloom, becomes visible to the naked eye and can be green, blue-green, red, or brown, depending on the type of algae. HABs can damage the environment by depleting oxygen in the water, which can kill fish and other living creatures. HABs that bloom near the water surface can also block sunlight from reaching organisms deeper in the water.

1. **Nutrient-leaky:**

Nutrient-leaky generally refers to a situation in agriculture or ecosystems where nutrients (such as nitrogen, phosphorus, etc.) in the soil are lost or leaked into the surrounding environment due to soil erosion, water erosion, or improper soil management, and are not fully utilized by crops or vegetation. This phenomenon can cause several problems:

Water pollution: Lost nutrients may enter nearby water bodies, leading to eutrophication and algae growth, which can cause problems such as algal blooms and affect the health of water ecosystems.

Soil dilution: The loss of nutrients can lead to a decrease in the nutrient content of the soil, which can impoverish the soil and reduce the fertility and productivity of the soil.

Economic losses: Lost nutrients not only represent underutilized resources, but can also lead to reduced crop yields, resulting in economic losses.

1. **obesity epidemic:**

Obesity is a chronic complex disease defined by excessive fat deposits that can impair health. Obesity can lead to increased risk of type 2 diabetes and heart disease, it can affect bone health and reproduction, it increases the risk of certain cancers. Obesity influences the quality of living, such as sleeping or moving.

**Word Master**  by 谢弘华

1.gauge

n.测量仪器；宽度，厚度；

e.g. The fuel gauge had gone on the blink.

v. 估计; 测量

e.g. He tried to gauge her mood.

2.haul

v. 拖

e.g. A crane had to be used to haul the car out of the stream.

n. 拖;距离,得分

e.g. Our camp is only a short haul from here.

3.manifest

v. 显示

e.g. The same alarm is manifest everywhere.

n. 清单

e.g. Refactoring the manifest file.

adj. 明显的

e.g. it seemed manifest that she must give the matter up.

4.mount

v. 组织;爬;上升;上演

e.g. The death toll continues to mount.

n. 山;坐骑;底座;

e.g. Mount Marcy is the highest mountain in the Adirondacks.

5.accrue

v. (利益,成本)归属于;自然增加

e.g. the profits of the system accrue mainly to the suppliers of seed

6.get ahead

成功;发迹

e.g. She studied hard to get ahead in her career.

7.found

v. 基于...;建立

e.g. His new-found optimism dissolved.

8.embed

v.使...嵌入

e.g. The professor asked the students to embed quotations into their essays to support their arguments.

9.compensate

v.酬劳;补偿

e.g. The company offered to compensate the employees for working overtime by providing extra vacation days.

10.nurture

v.养育

e.g. Parents nurture their children with love, care, and guidance to help them grow into happy and healthy adults.

**Passage Person**

Name：黎水润

1. This farm transformation is part of a movement toward agriculture that produces for our needs and wants, while simultaneously building the capacity of future generations to do the same.

**Translation**：这种农场转型是农业运动的一部分，不仅满足我们需求，并且自动建立起未来一代的能力去周而复始农业的变革。

**Paraphrase:** And our current agriculture trend, defined by exceedingly fast digital pace and technology begins at and deteriorates from development of society, is the right time to pick up the old approach.

**Reason**: It uses detailed depiction or supplementary demonstration to define current agriculture trend, which seems smooth and useful.

**Imitation:** Our previous agriculture situation, defined by old tools and out-dated methods where farmers buries themselves in heads on the ground, has now been reversed thoroughly.

**2，Transitioning to this type of agriculture requires us to re-envision what we want and expect from our working lands, from the people who manage them, and from the**

**landscapes in which they are embedded.**

**Translation：**过渡到这种类型的农业需要我们重新构想我们想要什么对我们的工作土地、管理它们的人以及它们所嵌入的景观的期望。

**Paraphrase:**Instead of making agriculture low efficient , let’s give farmers the resources and time to allow new ideas and views to collide, blend and soaked.

**Reason**:It uses metaphoric techniques to describe a complex process where ideas and views undergo a chemical reaction, which vividly illustrate the topic.

**Imitation:**By adding new ingredients and personal perspectives to the incomplete essay, we learn more about agriculture seasoned with my own way of development.

3，In this version of agriculture, farmers are compensated for building and storing carbon and nutrients in soils, providing habitat for wildlife, contributing to bucolic landscapes, and perhaps, reducing their yield.

**Translation：在这种农业中，农民在土壤中建造和储存碳和养分，为野生动物，为田园风光做出贡献，并且，也许可以减少土地的产量。**

**Paraphrase:**And by letting farmers immerse in the new way unlike traditional one, we citizens are able to have more environmental benefits.

**Reason:**This sentence uses postpositive attributive followed by various nouns, and resort to some authentic expressions like steep in.

**Imitation:**By letting farmers steep in better ways to produce, we produce technicians and engineers capable of deep learning and innovation.