**UNIVERSITE DJILALI BOUNAAMA KHEMIS MILIANA**

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**Département des Sciences Agronomiques**

**Cycle : M1 AHA**

**Matière: Anglais**

Agriculture is the largest consumer of freshwater by far and accounts for 70% of freshwater withdrawals from rivers, lakes and aquifers – up to more than 90% in some developing countries.

Rainfed agriculture covers 80% of the world’s cultivated land, and is responsible for about 60% of crop production. Today, irrigated agriculture covers 275 million hectares – about 20% of cultivated land – and accounts for 40% of global food production.

The latest projections available show an average increase of 0.6% a year in irrigated land from 1998 until 2030, compared with 1.5% over the 1950s-1990s. In the same period (1998-2030), because of continued increases in agricultural productivity, 36% more food will be produced with 13% more water.

Desalination is rarely used for agriculture (1%), but its use for high-value crops in greenhouses is gradually increasing. Desalination accounted for only 0.4% of water use in 2004, but production should double by 2025.

Agriculture represents the first, traditional life-supporting economic sector closelylinked to establish cultural and ethical values of land and water on which traditionalsocieties are built. Agricultural water use and ethics therefore forms a broadsubject that goes beyond producing food, maximizing productivity, improving wateruse efficiency and protecting the environment.

Water in agriculture is largely associated with irrigation. The green revolution andthe increase in global food production from the 1960s to the 1980s was to an importantextent based on the expansion in the world’s irrigated area, from 140 millionhectares to 240 million hectares. Over one third of the world’s food is now producedon the irrigated 17 percent of the world’s croplands.

1. Answer the following questions according to the text:
2. What are the different sources of the freshwater using in agriculture?
3. What is the rainfed agriculture?
4. What is the important goal of agricultural water use?
5. How much is the part of irrigated land in the world’s croplands?
6. Link each word with its definition: water cycle, desalination, virga
7. Wispy precipitation that evaporate before reaching the ground
8. Natural process where water changes state between liquid, solid and gas.
9. Several processes that remove some amount of salt and other minerals from saline water.
10. Find in the text words that are opposite to the following words (2pts)

Decrease, frequently, unrelated, less.

There are two main types of irrigation systems: low flow and high flow. Both can be utilized in one garden if needed. Low flow systems refer to micro spray, drip emitters, or drip lines. High flow systems are fixed spray, rotor, impact, bubbler, and soaker hose. Drip irrigation is preferable for most parts of the garden except lawns. Where appropriate, sprinklers can be used for lawns or low-growing groundcovers. Keep in mind; the irrigation system must be designed to prevent runoff, low head drainage, overspray, or other similar conditions where irrigation flows onto non-targeted areas, such as adjacent property, non-irrigated areas, hardscapes, roadways, or structures.

Low flow irrigation refers to emitters, drip lines, micro sprays, and mini rotors.

* Drip irrigation systems (also known as micro, low-flow, low-volume, and trickle) use drip emitters, inline emitters, miniature sprayers, and micro-sprays.
* Micro spray and mini rotors clog easily, and need frequent maintenance. Observe monthly, and make any necessary repairs or replacements to emitters.

Overhead Sprinklers: Matched-precipitation sprinkler heads guarantee that a half-circle head will deliver just as much water per square foot as a full-circle head spraying the same distance. Matched precipitation simply means all heads deliver a uniform amount of water across each square foot of an irrigated area. Every blade of grass gets no more and no less than the next.

**Comprehension questions**

1. Answer the following questions according to the text:
2. Propose title to this text;
3. What are the irrigation systems cited in this text;
4. Explain how each systems works;
5. What is the most efficient system you can use to irrigate the crops fields?
6. Give the opposites of the followings words: Low, emitters, hardly, difference.
7. Give the synonyms of the followings words: Used, yard, fixe, ground, grasses.

4- Translate these sentences into French: (2pts)

The permeability of a soil is the ability of water to move through it. It depends on the physical and chemical properties of the soil, notably particle size distribution, pore space, pore size and the continuity of the spaces.

5- Translate the following sentences into English: (2pts)

L’effet de serre additionnel dû à l’augmentation des concentrations de gaz à effet de serre dans l’atmosphère se traduit par une augmentation de la température moyenne de l’atmosphère terrestre.