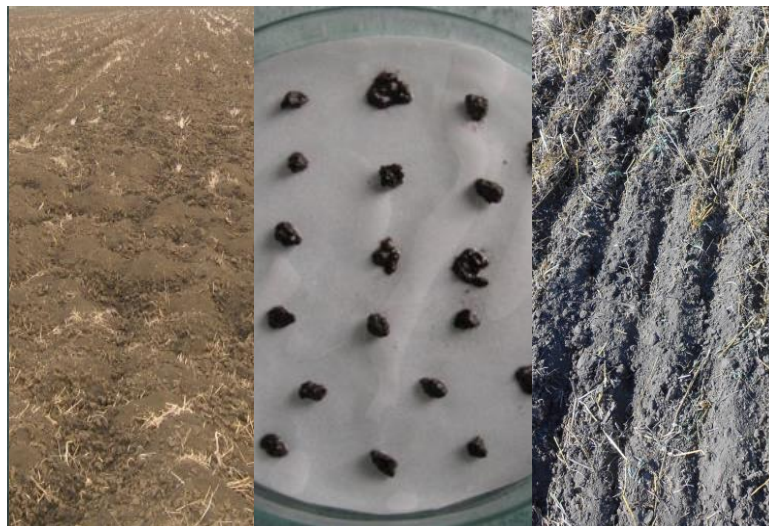




Field: General Agriculture, Agriproduction

TEST

EFFECT OF SOIL TILLAGE SYSTEMS ON SOME PHYSICAL PROPERTIES OF THE SOIL



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Test

1. What is soil structure?

- a) chaotic disposal of soil particles;
- b) the total mass and ratio of the soil units and aggregates, which have different sizes;
- c) soil particles having a specific form.

2. In which season the main soil tillage contributes to the formation of soil structure from an agronomic point of view?

- a) pre-winter soil tillage;
- b) early spring ploughing;
- c) no matter in which season is done.

3. What is bulk density?

- a) weight of soil units;
- b) number of soil particles in a certain volume;
- c) the weight of an unit volume of absolute dry soil in its undisturbed condition.

4. Which soil tillage leads to relatively stable bulk density in the cultivated soil horizon?

- a) disking;
- b) alternation of shallow and deep ploughing;
- c) no-tillage.

5. What is soil porosity?

- a) the number of pores in the soil;
- b) the channels formed by the roots of plants;
- c) the ratio between the total volume of pores in soil and the total volume of soil.

6. In which soil tillage the total porosity is lowest in the soil layer?

- a) no-tillage;
- b) disking;
- c) chisel ploughing.

7. Which factors are related with thermal regime of soil?

- a) availability of plant residues on the soil surface;
- b) the surface relief and the flow of thermal energy;
- c) used soil tillage.

8. After which soil tillage the temperature in the surface layer of the soil is lower, when the mean daily air temperatures are negative?

- a) ploughing;
- b) chisel ploughing;
- c) direct sowing and constant disking.

9. After which soil tillage the temperature amplitudes between the surface layer and the subsoil horizons increase, when the mean daily air temperatures are high?

- a) direct sowing;
- b) disking;
- c) ploughing and chisel plough.

10. Which factor has the highest and most direct effect on the water regime of soil, among all production processes and operations in the technology complex of growing agricultural crops?

- a) soil tillage;
- b) fertilization;
- c) sowing.

11. After which soil tillage the content of productive moisture in the soil at depth 0-30 cm is highest in cases of long drought, prior to sowing of wheat?

- a) no-tillage;
- b) disking;
- c) chisel ploughing.

12. After which soil tillage the content of productive moisture in the soil is highest, when spring rainfalls are abundant?

- a) ploughing;
- b) chisel ploughing;
- c) disking.

13. After which soil tillage the content of the soil moisture in the 0-30 cm layer is highest in cases of a longer drought during heading of wheat?

- a) intensive tillage;
- b) minimal and no-tillage;
- c) no differences.

14. Which factors affect capillary rise of water?

- a) gravity and non-capillary porosity of the soil;
- b) evaporation and the degree of compaction of the soil;
- c) meniscus forces and available system of capillary pores in the soil.

15. After which soil tillage the capillary rise of water is higher?

- a) no differences;
- b) minimal and no-tillage (disking, direct sowing);
- c) intensive tillage (ploughing).

Note: The correct answers are in red.