



Field: Agriproduction

TEST

Energy generation from vegetable biomass



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Test

1. Which of the following renewable energies reduces our dependency on liquid fuels?

- a) carbon;
- b) solar power;
- c) biomass.

2. A process in which a material is heated in the absence of oxygen. Biomass is vaporized at extremely high temperatures creating a gaseous mixture:

- a) gasification;
- b) combustion;
- c) anaerobic digestion.

3. What five countries from European Union supply the 56.7% of the primary energy produced by biomass?

- a) France, Sweden, Germany, Finland and Poland;
- b) France, Sweden, Germany, Finland and Belgium;
- c) France, Sweden, Germany, Finland and Holland.

4. The following is an example of biomass:

- a) pine tree;
- b) pine tree, marble waste and manure;
- c) manure and honey.

5. Fossils fuels:

- a) decrease greenhouse gases;
- b) increase atmosphere CO₂;
- c) are renovable when burned.

6. Secondary biomass resources:

- a) result from the processing of primary biomass resources either physically, chemically or biologically;
- b) are post-consumer residue streams, including animal fats and greases, used vegetable oils, packaging waste and construction and demolition debris.
- c) are produced directly by photosynthesis and are taken directly from the land.

7. The main biomass categories considered are:

- a) Forestry and wood industry, industrial residues, animal waste and urban waste;
- b) forestry and wood industry, agricultural residues, animal waste and urban waste;
- c) forestry and wood industry, animal waste and urban waste.

8. Biomass energy potential is defined as:

- a) the amount of energy contained in biomass;
- b) energy needed for the combustion of biomass;
- c) energy released during the gasification process.

9. In the mathematical expression that we use to calculate the energy potential from vegetal residual biomass we need to know:

- a) potential energy;
- b) inferior calorific power;
- c) melting point.

10. Geographical Information Systems (GIS) is a:

- a) tool designed for capturing, storing, verifying, incorporating, manipulating, scrutinizing and displaying information associated with locations on the earth's surface;
- b) tool designed for the creation of maps and indicates the meteorological forecast;
- b) tool designed for to interpret the satellite images and obtain results on the relief.



11. Produced by heating biomass in the absence (or under reduction) of air, or pyrolysis.:

- a) marble waste;
- b) biofuel;
- c) biochar.

12. Cylinders of compressed sawdust, coming from wood chips and dry sawdust:

- a) briquettes;
- b) pellets;
- c) splitters.

13. Process used by plants to convert CO₂ and water into simple sugars:

- a) chemosynthesis,
- b) photosynthesis;
- c) diffusion.

14. Biomass energy production favors:

- a) soil erosion, water run-off, nutrient removal and losses of the soil;
- b) loss of natural biota, habitats and wildlife and increase atmosphere CO₂;
- c) the increase of the average temperature of the earth's surface.

15. Some socio-economic aspects and impacts associated with local bioenergy production are:

- a) decreased productivity
- b) decreased standard of living;
- c) regional development and rural diversification.

Note: The correct answers are in red.