



MINISTÉRIO DA EDUCAÇÃO
UNIVERSIDADE FEDERAL DO PIAUÍ – EDITAL 08/2012

Realização:



EXAME DE PROFICIÊNCIA DE LEITURA EM LÍNGUA ESTRANGEIRA

DATA: 27/05/2012

HORÁRIO: das 8 às 11 horas

CADERNO DE PROVA

Idioma:

INGLÊS

Área de Pesquisa:

(2) CIÊNCIAS EXATAS E DA TERRA, ENGENHARIAS

LEIA ATENTAMENTE AS INSTRUÇÕES

- Esta prova é constituída de um texto técnico-científico em língua estrangeira, seguido de 5 (cinco) questões abertas relativas ao texto apresentado.
- É permitido o uso de dicionário impresso, sendo vedados troca ou empréstimo durante a realização do Exame.
- As respostas deverão ser redigidas em português e transcritas para a **Folha de Respostas**, utilizando caneta esferográfica, **tinta preta** ou **azul, escrita grossa**.
- A Folha de Respostas** será o único documento válido para correção, não devendo, portanto, conter rasuras.
- Será eliminado o candidato que se identificar em outro espaço além daquele reservado na capa da **Folha de Respostas** e/ou redigir as respostas com lápis grafite (ou lapiseira).
- Nenhum candidato poderá entregar o Caderno de Prova e a Folha de Respostas antes de transcorridos 60 minutos do início do Exame.
- Em nenhuma hipótese, haverá substituição da **Folha de Respostas**.
- Ao encerrar a prova, o candidato entregará, obrigatoriamente, ao fiscal da sala, o Caderno de Prova e a Folha de Respostas devidamente assinada no espaço reservado para esse fim.

Principles and Characteristics of Sustainable Soils

What are some features of good soil? Any farmer will tell you that a good soil:

- drains well and warms up quickly in the spring
- does not crust after planting
- soaks up heavy rains with little runoff
- stores moisture for drought periods
- has few clods and no hardpan
- resists erosion and nutrient loss
- supports high populations of soil organisms
- does not require increasing fertilizer for high yields
- has that rich, earthy smell
- produces healthy, high quality crops

All these criteria indicate a soil that functions effectively today and will continue to produce long into the future. Creating soils with these characteristics can be accomplished by utilizing management practices that optimize the processes found in native soils.

Sustainable: *the ability to keep in existence; maintain or prolong; to provide sustenance for.*

How does soil in its native condition function? How do forests and native grasslands produce plants and animals in the complete absence of fertilizer and tillage? What are the principles by which these soils function? The answers to these questions assure that the soil will be productive and profitable now and for future generations. A good thing happens when the soil's natural productivity is managed in a sustainable way; the reliance on purchased inputs declines, while land value and income generation increases year by year. Some of the things we spend money on can be done by the natural process itself for little or nothing. It's an upward spiral of continued success. To understand this better, let's start with the basics.

The Living Soil: Texture and Structure

Soils are made up of four components: minerals, air, water, and organic matter. In most soils minerals represent around 45% of the total volume, water and air about 25% each, and organic matter from 2% to 5%. The mineral portion consists of three distinct particle sizes classified as sand, silt or clay. Sand is the largest size particle that can be considered soil. Sand is largely the mineral quartz, though other minerals are also present. Since quartz contains no plant nutrients, sand is the lowest contributor to soil fertility of the three soil particle sizes. Furthermore, sand cannot hold nutrients—they leach out easily with rainfall. That is why sandy soils are not as productive as loams and need to be spoon-fed fertilizer. Silt particles are much smaller than sand but, like sand, silt is mostly quartz.

The smallest of all the soil particles is clay. Clays are quite different from sand or silt and contain appreciable amounts of plant nutrients. Clay has a large surface area resulting from the plate-like shape of the individual particles. The textural designation of a soil is derived from the relative portions of sand, silt, and clay. A sandy loam, for example, has much more sand and much less clay than does a clay loam. A loam soil is a mixture of sand, silt and clay. Most soils are some type of loam. They are more accurately described by the words the preface the word loam, such as: sandy loam or clay loam. Another soil characteristic—soil structure—is different from soil texture. Structure refers to the combination or "aggregation" of sand, silt and clay particles into larger secondary clusters. If you grab a handful of soil, good structure is apparent when the sand, silt, and clay particles are aggregated into granules or crumbs.

QUESTÃO 03 – Quais são os componentes dos solos e em quais porcentagens estão presentes na maioria dos solos?

QUESTÃO 04 - A areia é a maior partícula presente no solo, entretanto, é o menor contribuinte à sua fertilidade. Justifique essa afirmação.

QUESTÃO 05 - Descreva os componentes orgânicos vivos e os componentes orgânicos mortos presentes nos solos.
