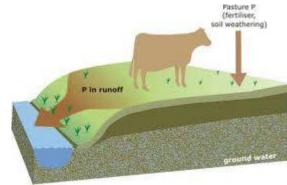


Phosphorous Cycle

Created: Friday, 17 June 2011 07:23 | Published: Friday, 17 June 2011 07:23 | Written by Super User | Print

The Quick Nutrient Cycle



Phosphorous cycle is the simplest of all biogeochemical cycles. Phosphate

is the only form of phosphorous and there are 4 oxygen atoms in the phosphorous. It is a heavier molecule. And it remains as a part of an organism. It is available as a form of rock and dissolved in water form too.

This phosphorous is absorbed by water in many ways. Cell membrane is made up of phosphorous and we can know that how this component is important for the life!

You know about DNA, RNA & ATP. Can you guess the relationship between the DNA, RNA & ATP and phosphorous? How they are related with phosphorous? They all are made up of Phosphorous only. DNA & RNA have phosphorous as their back bone and ATP is Adenosine Triphosphate you know!

Heterotrophs are always depends on autotrophs. So they easily get phosphorous from the plant products they eat. Even the fungi too can get the phosphorous from plant roots by symbiotic relationships.

Animal's bones, teeth and shells have phosphorous as a component. After the death of animals or plants the phosphate in their body will return to soil or water by the decomposition process and this process is done by the decomposers. So, automatically it will be taken up by another plant and go with the same cycle.

The process:



Weathering:

Removal of phosphate or break down of phosphate from rock is known asweathering. It is mostly done by rainfall.

The phosphorous cycle will be a continuous process. Phosphorous rich mines are targeted by humans. This <u>mining</u> of phosphate and using phosphate as fertilizer induces the phosphorous cycle. Phosphate applications to plants will reach human body through eating and it will be released to land again through human faces.

Eutrophication

Abundant amount of phosphorous will induce the growth of algae in the water with will results with over growth of the organism. Then the algae can use up all the oxygen in the water and kill other aquatic life. This is known as <u>eutrophication</u>.

Marine Birds Role in Phosphorous Cycle

Marine birds play an important role in phosphorous cycle. They eat the fish which has more phosphorous in its body. When the birds defecate, the phosphorous will be released to land. So, the marine phosphorous has now reached land. Their guano contains high levels of phosphorous and in this way marine birds return phosphorous from the ocean to the land. The guano is often mined and may form the basis of the economy in some areas.

Phosphorous is insedimentary rock and not in the atmosphere. This way they are different from other nutrient cycles.

Because of soil erosion and the runoff of streams detach phosphorus from phosphate rock. This helps the plants to get phosphorous from soil.

Simply you can remember

Rock from phosphorous? soil? plants? animals? Land (because of the death of organism)

Want to know more about the uses of Phosphorous Cycle? Click here to schedule live online session with e Tutor!

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Reference Links:

- http://en.wikipedia.org/wiki/Phosphorus_cycle http://www.elmhurst.edu/~chm/vchembook/308phosphorus.html
- http://www.lenntech.com/phosphorus-cycle.htm
- http://www.youtube.com/watch?v=m0ICjcPd_Gw

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