Abstract

Erosion Control: Straw or PAM?

The purpose of this project was to determine which soil erosion control product, straw or polyacrylamides (PAM), worked best in a furrow irrigation system.

The experiments involved measuring the deposition left from the erosion of soil that had been treated with straw or polyacrylamides. This was done by using a stream table divided into three sections and filled with loose soil. Straw was used to cover one section while PAM another. Finally, water was run down each section. Measurements were made by collecting their soil deposits and comparing their total mass. The constants of the experiments were: the procedures used, the amount of water, the amounts of polyacrylamides, the amounts of soil, the tools used to measure the amount of straw and polyacrylamides, the time the water runs and the amount of water used, and finally, the containers used to measure the amount of runoff. The manipulated variable was the type of erosion control product. The responding variable was the soil runoff that was collected.

The result of my experiments confirmed my hypothesis that straw would be more effective than PAM at reducing soil runoff. In addition to reducing the breakdown of a furrow irrigation system, the information gained from this project could be used to prevent damage to newly seeded fields, or to help protect a home owner's backyard from the effects of erosion.

Title or Project

Description of the problem being investigated (Purpose)

Brief Description of Experiment

Hypothesis, Results, & Conclusions

Statement of how this information could be used.

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The experiments involved _____
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_____. This was done by
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_____. Measurements were made by _____
_____. The constants of the experiments were: _____
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_____.
The manipulated variable was _____
_____.

The result of my experiments _____ my hypothesis that straw would be more effective than PAM at reducing soil runoff.

The information gained from this project could be used _____
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The experiments involved _____

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_____. Measurements were made by_____

_____

_____.

The result of my experiments _____ my hypothesis that _____

_____

The information gained from this project could be used _____

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