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Where is the grass really greener?

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A study of sunlight and maple tree growth

The sun's rays hit the earth at a certain angle that causes more sunlight to radiate from the south than the north. Do maple trees' respond to this difference in sunlight availability by growing more branches on their south-facing sides?

MEASURE TREES

Each tree analyzed in this study was measured around its trunk to gather information on its size

COUNT BRANCHES

Every branch and bud was counted on all of the trees, split up into north and south sides

MEASURE SLOPE

The angle and direction of the slope that each tree was growing on was also measured

Results

Younger trees allocate more energy to grow a greater number of branches and buds on their south-facing sides

While only one prediction proved true in this study, these findings can be used to **increase the efficiency of agricultural operations** with the proper orientation of trees to **allow full southern exposure**

Predictions:

There will be more tree branches and buds on the south sides of all trees.

Younger trees will grow larger if situated on a slope that does not face south.

Younger trees will grow more branches and buds if situated on a slope that does not face south

Location:

Ross biological reserve, north-central Indiana