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The Best Way To Grow Tomato And Pepper Plants: Hydroponics With River Water Or Tap Water

Hydroponics is the way to farm in the future. Each plant has its own nutrient source, so they do not compete for space and water. This allows the plants to grow very large at an incredibly fast rate. This experiment was designed to see if river water affected the growth of pepper and tomato plants in comparison to tap water (control). The hypothesis was that river water would not grow as well as the control, because the river water will grow algae that take away nutrients. The other reason is that there are many more ppm (parts per million) of sediment that will impede growth. A home built hydroponics system using 2-liter soda bottles was made to house the plants. The plants were grown in a southeast-facing window with supplemental light. The water was changed and the nutrient solution was added every 10 days. The pH was checked and adjusted to keep the pH between 6 and 7. There were also comparable plants grown in soil to prove how well plants grow in hydroponics. The plants were grown for 85 days. To assess the difference, plant height was measured. There was no difference in height between the river water and tap water for both the pepper and tomato plants. This information is helpful for gardeners. It enables those with limited water supply to obtain river water for growing plants. It also demonstrates that tap water that has been treated and purified is just as good for the plants.