Directing The Wind

In this experiment, the objective was to test the best placement of the trees in a windbreak for the best protection of buildings and homes. The project showed what species of trees was the best to use to aid people and their surroundings and which row should hold which tree. To test this, the scientist used a display model and places deciduous trees, pine trees, and shrubs, in three rows with their normal spacing scaled down to their size. The scientist changed the arrangement of the trees in the rows to see which arrangement reduced the wind the most. Using a fan, the scientist blew air to see how each windbreak preformed. A wind gauge was used to test the wind at different points on the model. The scientist test six arrangements of the trees to see which one worked the best to reduce the wind. The following results were collected: Control = 7.26 mph (North) Shrub, Pine, Deciduous = 2.155 mph Pine, Shrub, Deciduous = 2.035 mph Pine, Deciduous, Shrub = 1.05 mph Deciduous, Pine, Shrub = 1.095 mph Shrub, Deciduous, Pine = 1.12 mph Deciduous, Shrub, Pine = 2.315 mph. After concluding this project, the best result was the windbreak with the pines to the north, the deciduous trees in the middle, and the shrubs to the south. Out of the other combinations, this windbreak proved to be the overall best at stopping the wind at ground level, mid section, and above the trees.