Based on the information that a locoweed weevil (Cleonidius trivittatus) was capable of causing mortality on Purple Locoweed (Astragalus mollisimus) this study was designed to determine if locally collected grubs from Purple Locoweed would survive on a diet of only White Locoweed (Oxytropis sericea). Obtained prepared diets from New Mexico State University. There were twenty-eight diet cups that consisted of a diet made up entirely of (Oxytropis sericea). There were Locoweed grubs collected from infested Locoweed plants located near Capulin, New Mexico. Each cup of diet then had two grubs placed into them. Observations were recorded daily: survival, maturity, and mortality rates were recorded daily in each cup. There were fifty-six Locoweed grubs tested. All were placed into one type of diet. The diet being a local Locoweed (Oxytropis sericea). All fifty-six grubs died in this experiment. One-hundred percent mortality rate was recorded. The Hypothesis was not supported as the experiment had a one-hundred percent mortality rate. The actual reason that all of the grubs died is not known. There are many variables that may have caused the death rate; however, it is unknown what reason is the actual cause.