Two strains of European corn borer, Ostrinia nubilalis, were examined under two different photoperiods. The larvae were fed corn when they first entered the Fifth instar. The purpose was to measure the digestion vs ingestion. The two photoperiods imitating summer and winter to see if they vary in efficiency of digested foods (ECD%). The results divulge the difference in variants and how they respond. The outcome relates the photoperiod and the strains showing the variability leading to the further development of pest management of the European corn borer, saving the industry resources by using the results to improve the efficiency of their practices.