A wild Chilean population of coho salmon (Oncorhynchus kisutch (Walbaum, 1792)) was started using eggs imported from Oregon, U.S.A. A hatchery population was founded using eggs collected from this wild population, and a program of genetic improvement was initiated. Information on genetic variability of these populations are of interest in order to monitoring genetic changes along the application of the breeding plan. In this study we analyzed the genetic variability in two cohorts from different years of the population used to start with the breeding plan, using horizontal starch electrophoresis of proteins. 14 loci were resolved in one population and 27 in the other one. Two loci were variable: G3pd-3 and Pgm-1. No variability was detected in one cohort, while in the other one polymorphism and mean heterozygosity were \( P = 7.4\% \) and \( Hi = 0.004 \), respectively. Results show a clear reduction in polymorphism but not in heterozygosity with respect to information in the literature. This sugge