pyrophosphorylase sequences of the small subunit of rice endosperm and the large subunits of wheat endosperm and maize endosperm (Sh2).

2.5 Cloning of the ADPglucose Pyrophosphorylase Gene

cDNA cloning of the ADPglucose pyrophosphorylase from several plants was initiated. cDNA clones of the small subunit of ADPglucose pyrophosphorylase gene from rice endosperm [Anderson et al., 1989], spinach leaf [Preiss et al., 1989] and potato tuber [Anderson et al., 1990; Muller-Rober et al., 1990] have been isolated. Genomic clone of the small subunit of ADPglucose pyrophosphorylase gene from rice endosperm was also isolated [Anderson et al., 1991]. And cDNA clones of the large subunit ADPglucose pyrophosphorylase gene have been isolated from maize endosperm [Bhave et al., 1990] and potato tuber [Muller-Rober et al., 1990]. cDNA clones have been isolated from wheat leaf and endosperm [Olive et al., 1989]. Most of these clones have been sequenced, and sequence from the small subunit of different plant shows approximately 90% of similarity at the DNA level. The similarity at the amino acid level is even greater [Preiss et al., 1992]. At the DNA level, the similarity between two different subunits is lower than 50% but the similarity at the aligned amino acid level is around 65% [Bhave et al., 1990; Preiss et al., 1992]. These results support the idea that during evolution there was a gene duplication in the higher