

Table II. Comparison of growth rates and relative resistance levels to four different "Serine-type" PSII herbicides in seven mutants with different amino acid substitutions at the D1 residue Ala<sub>251</sub>. Growth rates = ln2 / doubling time. Increasing resistance levels are indicated by + to ++++.

QB

Atrazine

Bromacil

DCMU

Metribuzin

D1 251 R group	HL growth rate	Herbicide resistance based on I <sub>50</sub>			
$\text{CH}_3\text{-CH}_2\text{-CH(CH}_3\text{)-}$ Ile	.146	+	+	-	+++
$\text{CH}_3\text{-CH(CH}_3\text{)-}$ Val	.143	+	+	-	+++
$\text{CH}_3\text{-CH(CH}_3\text{)-CH}_2\text{-}$ Leu	.066	+	++	+/-	++++
$\text{CH}_3\text{-}$ Ala	.212	-	-	-	-
$\text{HS-CH}_2\text{-}$ Cys	.217	-	-	-	-
Pro	.217	-	-	-	-
$\text{HO-CH}_2\text{-}$ Ser	.217	-	-	-	-
$\text{H-}$ Gly	.211	-	-	-	-