

Genetic Modification (GM)

The majority of soybeans produced/grown in South Africa is genetically modified, an estimated 95% of the area planted to soybeans in South Africa was GM. These soybeans have tolerance to herbicides (chemical products used to destroy weeds, but not the crop plants). Globally, GM soybeans occupy approximately 80% of the total soybean area planted.

The SAGL screened 15 of the crop samples to test for the presence of CP4 EPSPS (Roundup Ready®).

The crop quality samples received by the SAGL are composite samples per class and grade, made up of individual deliveries to grain silos.

SAGL used the EnviroLogix QuickComb kit for bulk soybeans to quantitatively determine the presence of genetically modified soybeans.

All the screened samples tested positive for the presence of the CP4 EPSPS (RR1/RR2) protein.

The sensitivity of the measurements using the above-mentioned kit is 0.25%, i.e. one Roundup Ready soybean in 400 conventional soybeans. The limit of detection (LOD) for measurements of the CP4 EPSPS protein is 0.125%. The highest measurement that can be quantified is 3%. Values higher than 3% is reported as >3.0%.

Region	Class and grade	CP4 EPSPS, %
11	COSB	>3.0
14	SB1	>3.0
20	SB1	>3.0
21	COSB	>3.0
25	SB1	>3.0
26	SB1	>3.0
28	SB1	>3.0
29	SB1	>3.0
30	SB1	>3.0
31	SB1	>3.0
32	SB1	>3.0
33	SB1	>3.0
34	SB1	>3.0
35	SB1	>3.0
36	SB1	>3.0
Average of samples		>3.0
Number of samples		15