



MAIZE SILAGE CULTIVAR RECOMMENDATIONS FOR COOLER PRODUCTION AREAS

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Successful maize silage production is based on:

- Fertilizing the crop according to the soil analysis recommendations.
- Thorough land preparation.
- Optimum planting period.
- Cultivar selection.
- Control of weeds, insects and diseases.
- Correct harvesting time (moisture content 65 – 70%)

Cultivar selection is one of the most important agronomic activities that have to be undertaken if successful silage production is to be attained. Seed companies breed and distribute cultivars annually. However; their performance at various production localities is usually unknown. Reliable information regarding the suitability and production of cultivars in a particular production area is very valuable to farmers and seed companies.

A study was conducted at the Kokstad Research Station by the Agronomy Section of the KwaZulu-Natal Department of Agriculture and Rural Development to evaluate the performance of various maize cultivars for silage production. The trial was planted in rows spaced 0.75 m apart. The seeding rate was 66 000 seeds/hectare. The crop was grown under dry-land conditions and was fertilized for

optimum dry matter yields, based on soil analysis recommendations conducted by the Cedara Soil Analytical Laboratory. Weeds, insects and diseases were controlled throughout the growing season.

Due to yearly fluctuations within the environment (climatic conditions), individual cultivar performance may be affected and therefore cultivar recommendations should be based on multi-seasonal data (i.e. three or four season's data) for more reliable information. Many new cultivars were evaluated in the evaluation period (2012/13 – 2014/15) whilst older cultivars were omitted. Only eight cultivars were evaluated in all three seasons. The mean performance of the eight cultivars recorded over three seasons (2012/13 – 2014/15) is summarised in table 1.

Results obtained suggest that cultivars differ in their performance even though they were produced under same conditions. The difference in the performance could be due to environmental conditions that differ from year to year. This also shows that yields of each variety are genetically determined apart from management and environmental effects. The cultivars showed adaptability as they produced high yields regardless of environmental fluctuations during their period of evaluation. They could be ideal cultivars and recommended for Kokstad and surrounding areas.

TABLE 1 Mean yields of maize silage cultivars evaluated during 2012/2013, 2013/2014 and 2014/2015 seasons

Dry matter yield (kg/ha)				
Cultivar	(2013)	(2014)	(2015)	Mean
SC 608	25 302	20 558	24 354	23 405
LS 8529	25 888	21 088	22 699	23 225
SC 709	23 605	21 877	22 804	22 762
CAP 9004	21 427	15 597	25 312	20 779
LS 8537	13 662	23 833	24 699	20 731
PAN 4P-228	19 459	18 614	19 422	19 165
SC 506	17 234	15 647	22 495	18 549
CAP 9001	19 105	14 340	18 372	17 272

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