



WHITE OPEN POLLINATED MAIZE

NELSON'S CHOICE QPM (PBR)



Quality Protein Maize

This variety has higher yields and up to twice as much usable protein. Consumption of QPM maize can lower risk for malnutrition disorders such as Kwashiorkor.

Quality protein maize grain contains enhanced levels of essential amino acids lysine and tryptophan, along with other characteristics that make more of its protein useful to humans or farm animals.

It has 90% of the nutritive value of milk, and can stem or reverse protein malnutrition.

Resource-poor farmers who cannot afford supplements can use QPM in pig or poultry feeds to increase the animal's growth and productivity.

This QPM variety is indistinguishable from normal maize in appearance and mil and store just as well.

Cobs per plant and ranked yield for the different cultivars at both site

Cultivar	Cobs/plant			Yield		
	Kokstad Sprayed	Cedara		Kokstad Sprayed	Cedara	
		Sprayed	Unsprayed	Sprayed	Sprayed	Un-sprayed
	(number)			(kg/ha)		
Nelsons Choice	1.06	1.05	1.05	9 002 (28)	8 262 (27)	8 543 (23)
Nelsons Choice QPM	1.26	1.06	1.01	9 326 (26)	8 155 (28)	7 839 (28)

Recommended for regions:

- 1 Western Region
- 2 Temperate Eastern Region
- 3 Cold Eastern Region
- 4 KwaZulu-Natal Region

QPM - Quality Protein Maize

Maize comprises a significant proportion of diets amongst people in southern Africa. Annual consumption rates are in the order of 100 kg/person. Although maize is a good source of energy, it is deficient in two essential amino acids, lysine and tryptophan, and therefore has low quality protein. Thus, diets predominated by normal maize without supplementing with other protein sources may lead to protein malnutrition. Severe protein deficiency in children may cause kwashiorkor, a disease sometimes called "weaning disease" when infants are weaned onto maize-based diets without supplementation with high quality protein sources. Many rural and urban poor people cannot afford high quality protein diets and subsist mostly on maize and vegetables.



Quality Protein Maize (QPM), developed by normal maize breeding procedures, contains nearly twice the amount of lysine and tryptophan than normal maize. Therefore, QPM may help to reduce malnutrition, improve body immunity and overall health in people that are constrained by economic and environmental factors to access expensive sources of protein such as meat, fish, eggs, milk and legumes. QPM has nearly 90% the nutritional value of skim milk, and so the inclusion of QPM in daily food will contribute to improved health. It has been estimated by researchers that children consuming about 100 g of QPM per day would receive sufficient lysine for healthy growth.

Quality Protein Maize also has promise in monogastric animal diets. Numerous studies have shown that poultry and pigs had greater growth rates when fed QPM than normal maize. Consequently, it is expected that rural small-holder pig and poultry producers would significantly benefit from the use of QPM, especially where access to high quality protein supplements is lacking.