Example Hybrid Maize Product Target

PRODUCT TARGET:
   Develop a medium maturity, white corn hybrid
   for dryland production in western South Africa
   that outperforms Hybrid X for grain yield and
   has good standability, a strong disease
   resistance package, and features Bt and R traits

Characteristic	Measurement Standard	Threshold Level / Range
White grain	Visual 1=white	1
High grain yield	Machine harvest; grain weight on a 12.5% moisture basis, expressed per unit of land	10% greater than Hybrid X
Tolerance to moisture stress	ASI (anthesis-silking interval) calculated as the difference between date of 50% pollen shed and date of 50% silk emergence. Compute the number of days from planting to anthesis and number of days from planting to silking from record of anthesis date and silking date.	-2≤ x ≤2
Stalk lodging	Estimated % affected plants per plot	≤5%
Root lodging	Estimated % affected plants per plot	≤5%
Gray leaf spot	1-9 disease scoring scale, 1=no infection, 2=very low infection, 3=low infection. Protocol for pathogen inoculation and disease screening.	Score ≤2
Common rust	1-9 disease scoring scale, 1=no infection, 2=very low infection, 3=low infection. Protocol for pathogen inoculation and disease screening.	Score ≤3
Diplodia ear rot (*Stenocarpella maydis*)	1-9 disease scoring scale, 1=no infection, 2=very low infection, 3=low infection. Protocol for pathogen inoculation and disease screening.	Score ≤2
Medium maturity	Growing degree days from planting to physiological maturity	110 – 115 day range (warm areas)
Bt event (YieldGard II)	MON89034 expression (or other licensed event)	Pre-determined level of Lepidopteran resistance
RR2 event (Roundup Ready 2)	MON88017 expression (or other licensed event)	Pre-determined level of glyphosate tolerance

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PLANT BREEDING E-LEARNING IN AFRICA