WHITE HYBRID MAIZE

**PAN 3M-01 (Ultra Early)**
This hybrid is an ultra early maturity, most suitable for environments with short seasons. It was specifically bred to be a drought-escape hybrid. With longer seasons, farmers can produce it twice in a year.
- Widely adapted
- Very early flowering and very early maturing
- Flint-grained white hybrid
- Very good leaf disease tolerance, including Grey Leaf Spot, Northern Corn Leaf Blight, Maize Streak Virus and Phaeosphaeria Leaf Spot
- Single cobbing
- Excellent standability
- Days to maturity: 95-100 days
- Yield potential: 3-5 t/ha

**PAN 413 (Early)**
This is undoubtedly one of Africa’s most popular hybrids with its stable yield performance across a wide range of environments, including the dry regions of Botswana.
- Excellent drought tolerance
- Quick maturity with slow dry down
- Short and attractive plant
- Big cobs
- Double cobbing
- Yield potential: 6-8 t/ha
- Days to harvest: +/- 132 days
- Recommended for small-scale farmers under dryland production

**PAN 4M-23 (Early Medium)**
A new three-way cross hybrid that has common genetics with our most popular hybrid in Africa, PAN 53. PAN 4M-23 is specifically bred to tolerate high heat and poor rainfall and it is widely adapted.
- Good yield potential under low production environments
- Approximate days to flowering after planting: 64 days
- Days to physiological maturity: +/- 132 days
- Good leaf disease tolerance (NCLB, GLS, Rust, MSV)
- White semi-flint grain, good poundability
- Sweet grain for green mealies
- Good cob rot resistance
- Good husk cover

**PAN 6479 (Medium)**
One of PANNAR’s old stalwarts that farmers trust.
- Drought tolerant
- Medium maturity
- Semi-dent grains
- Good against foliar diseases
- Excellent germination
- Good staygreen and drought tolerance
- Good standability
- Suitable for small-scale and commercial production
- Double cobbing hybrid
- Aluminium sensitivity
- Sulfonylurea tolerance
- Yield potential: 6-9 t/ha

**PAN 6Q-245 (Medium)**
- Highly prolific hybrid with exceptional performance and stability
- Excellent germination and plant stand
- Good staygreen
- Average drought tolerance
- Excellent standability
- Good aluminium tolerance
- Sulfonylurea sensitivity
- Tolerance to Grey Leaf Spot
- Diplodia Cob Rot and Cob- and Tassel Smut Tolerance
- High risk to rust
- Average tolerance to NCLB
- Ideal in low rainfall areas

YELLOW HYBRID MAIZE

**PAN 3Q-240 (Ultra Early)**
The hybrid is well suited under irrigation and good management.
- Excellent germination
- Excellent standability
- Recommended plant population
- 80 000 plant per ha under irrigation
- 25 000 under dryland production
- Very early flowering and very early maturing
- Produces high-quality grain with reddish colour
- Fungicide application is recommended
- Good cob- and tassel smut tolerance
- Good Phaeosphaeria Leaf Spot and NCLB tolerance
- Sulfonylurea sensitive

**PAN 12 (Medium)**
The hybrid has been adopted by many farmers for production of green mealies due to its sweet taste. It is also popular for grain and silage production.
- A medium-maturity hybrid with a deep yellow flinty grain and a good yield potential
- Stable yield potential across many production regions
- Widely adaptable throughout Africa
- Multi-cobbing variety
- Excellent general ear- and leaf disease tolerance
- Days to maturity: 130-138 days
- Warning: Not tolerant to Nicosulfuron herbicide

**PAN 6616 (Medium)**
One of PANNAR’s old varieties that has proved itself for many years. Good for silage and grain production.
- Excellent germination
- Good drought tolerance
- Good staygreen
- Multi-cobbing
- Good tolerance to NCLB, Phaeosphaeria Leaf Spot and Rust
- Average tolerance to Grey Leaf Spot
- Good standability
- Aluminium tolerance
- Sulfonylurea sensitivity
- Recommended plant population: 10 000-20 000
- Kernel rows: 13-16

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### PANNAR MAIZE MANAGEMENT GUIDE

**Vegetative Growth Stages**

<table>
<thead>
<tr>
<th>Days after Emergence*</th>
<th>V0</th>
<th>V2</th>
<th>V5</th>
<th>V8</th>
<th>V10</th>
<th>V12</th>
<th>V14</th>
<th>VT</th>
<th>R1</th>
<th>R2 - R3</th>
<th>R3 - R4</th>
<th>R5 - R6</th>
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**Reproductive Development Stages**

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<th>V5</th>
<th>V8</th>
<th>V10</th>
<th>V12</th>
<th>V14</th>
<th>VT</th>
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<th>R3 - R4</th>
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</table>

*The number of days varies between different growth classes and environments.*

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**Absorption of Nutrients**

- **%K**
- **%P**
- **%N**

**Critical moisture requirement**

- Disease and stalk borer control important
- Top dressing
- Weed control

**Top dressing**

- **%K**
- **%P**
- **%N**

**Diseases and stalk borer control** important

**Vegetative Growth Stages**

- Germination and emergence.
- Planting depth 5-8 cm.
- Plant population established.
- Growth point 20-25 mm below surface.
- 5 Leaf – cob and tassel initiation.

**Cob development.**

- Active growth – leaves and cob development.
- Brace root development.
- 12 Leaf – cob size determined.

**Pollination.**

- 5-10 Days.
- Kernel development.
- Nutrients are transported to cob.

**Physiological maturity.**

- End of mass gain.
- Ready for harvest. 14% Moisture.
**SUGAR BEAN CULTIVAR**

- **PAN 148 (Red Speckled)**
  - Excellent germination
  - Yield potential 1-2.5 t/ha
  - Tolerance to diseases
  - Days to maturity: 100-120

**SUNFLOWER HYBRIDS**

- **PAN 7033 (Medium)**
  - **PANNAR’s versatile conventional sunflower hybrids are known for their excellent performance and wide adaptability.**
  - Champion with tolerance to Common Rust
  - A mainstay in the sunflower industry for over a decade
  - A stable hybrid with a good track record
  - A good choice in a package, suitable for all production regions
  - Slower drying. Recommended in areas with high Common Rust pressure

- **PAN 7160CLP (Medium)**
  - CLEARFIELD® PLUS for even better weed control. This hybrid is based on the PAN 7049 and PAN 7050 genetics.
  - This full season sunflower hybrid has the same good yield potential as the conventional hybrids
  - This hybrid has Common Rust tolerance
  - A three-way cross with very good stability

**RED SORGHUM HYBRIDS**

- **PAN 8944 (Ultra Early)**
  - A new early-maturing hybrid that will compliment PAN 8816 in Botswana. Well placed to be the best sorghum hybrid for Botswana's conditions.
  - Deep red seeded colour
  - Very good ET resistance
  - Very uniform
  - Semi-open panicle
  - Good exertion of panicle
  - Medium seed size
  - Good standability
  - Classified GL with good milling quality
  - Days to flower: 60-65
  - Days to maturity: 125-135

- **PAN 8816 (Medium)**
  - This is rated the best hybrid in the PANNAR sorghum hybrid package in South Africa. Excellent yield potential and stability.
  - Very uniform growth habit
  - Good standability
  - Attractive plant type
  - Large seeded grain, high bushel weight and good threshability
  - Classified GM; good malting quality
  - Well suited to ethanol production
  - Good general leaf disease tolerance
  - Good Head Smut tolerance.
  - Days to flower: 79-81
  - Days to harvest: 135-145

- **PAN 8625 (Medium)**
  - A speciality bitter sorghum.
  - Outstanding yield performance
  - Widely adapted
  - Bitter grain type; classified GH with good malting quality
  - Medium plant height with good standability
  - Good tolerance to Head Smut
  - Days to maturity 140-145
  - Plant height 120-130 cm

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**NB** For hybrids on the South African product list, please contact your local Area Sales Manager.

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For better yields, farmers choose the best seed.
**PANNAR SORGHUM MANAGEMENT GUIDE**

### Days After Planting

<table>
<thead>
<tr>
<th>Stage</th>
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<tbody>
<tr>
<td>Germination</td>
<td>-7</td>
</tr>
<tr>
<td>5 Leaf</td>
<td>0</td>
</tr>
<tr>
<td>Flag leaf</td>
<td>10</td>
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<tr>
<td>Flowering</td>
<td>25</td>
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<tr>
<td>Hard dough</td>
<td>35</td>
</tr>
<tr>
<td>3 Leaf</td>
<td>45</td>
</tr>
<tr>
<td>9 Leaf</td>
<td>55</td>
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<tr>
<td>Tillering</td>
<td>65</td>
</tr>
<tr>
<td>Soft dough</td>
<td>75</td>
</tr>
<tr>
<td>Physiological maturity</td>
<td>85</td>
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<tr>
<td></td>
<td>95</td>
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<td></td>
<td>115</td>
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<tr>
<td></td>
<td>120</td>
</tr>
</tbody>
</table>

**Vegetative Growth Stages**

**Reproductive Development Stages**

**Critical moisture requirement**

**Diseases biggest impact**

**Top dressing**

**Weed control**

**Damage due to drought**

**Water use**

**PANNAR SORGHUM MANAGEMENT GUIDE**

**PRACTICAL ON-FARM SOLUTIONS**
Visit your nearest agro-dealer or contact Caiphas Muyambo
caiwas.muyambo@pannar.co.za
Tel: +27 33 413 9529 | Mobile: +27 72 965 4934
www.pannar.com