Building Seed Bridges to improve smallholder access to quality seed of new improved crop varieties

Limited smallholder farmer access to quality seed of a range of new improved varieties of key cash and subsistence crops presents a major bottleneck to food security in sub-Saharan Africa (SSA). Adoption rates of modern crop varieties for a number of crops that are strategic to smallholder livelihoods remains low in the region. This situation persists despite increased global public and private investment in the development of innovative improved crop cultivars with potential to address challenges faced by smallholders in SSA.

The Seeds2B initiative fosters the development of ‘seed bridges’ that facilitate the transfer of new better-yielding, adapted and market-appropriate crop varieties developed by public and private breeders based in Africa and globally to smallholders in SSA. By adding new commercially viable products to the portfolios of local seed enterprises, the Seeds2B Project helps smallholders serve new and existing markets with the best of locally grown produce.

The Syngenta Foundation for Sustainable Agriculture (SFSA) and the African Agricultural Technology Foundation (AATF) co-implement Seeds2B in SSA.

About AATF
The African Agricultural Technology Foundation (AATF) is a not-for-profit organisation that fosters public-private partnerships for the access and delivery of appropriate technologies for improved agricultural productivity in SSA.

About SFSA
The Syngenta Foundation for Sustainable Agriculture (SFSA) creates value for resource-poor small farmers in developing countries through innovation in sustainable agriculture and the activation of value chains.
This booklet provides brief descriptions of cultivars of field crops that have been nominated for release and vegetable crops recommended for marketing. When evaluated against local commercial checks during Seeds2B cultivar evaluation trials managed by AATF, the described cultivars displayed yield benefits in addition to preferred combinations of agronomic and/or stress response attributes. The described cultivars exhibit potential to improve food, nutrition and income security in sub-Saharan Africa (SSA).

The plant materials described in this booklet are available for testing as well as commercial uptake (seed production and/or marketing) by local seed enterprises in SSA through licenses issued by AATF. The licensing strategy aims to facilitate sustainable wide utilisation of commercially viable products by target smallholder farmers. Details on AATF’s licensing program are available in the commercialisation portal of AATFs website.

For more information on the content of this booklet and access to the plant materials described contact:

Edgar Wavomba
Coordinator, Seeds2B Project
African Agricultural Technology Foundation (AATF)
P.O. Box 30709, Nairobi, 00100, Kenya
Tel: +254-20 422 3788
E-mail: e.wavomba@aatf-africa.org
Tomato
# TOM01

**High yielding tomato hybrid**

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<th><strong>Key Features</strong></th>
<th>Details</th>
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<td>Trial seasons:</td>
<td>Two</td>
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</tr>
<tr>
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<td>China</td>
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**Special Features:**

- **Fruit yield:** 14 tonnes/ha (Compared to checks: 220% Khama, 180% Phindu)
- **Plant type:** Undetermined
- **50% flowering:** 26 days after transplanting
- **Fruit:** 67g average weight
- **Stress response:** Undetermined
TOM02

High yielding tomato hybrid with large fruits

- **Trial seasons:** Two
- **Trial locations:** One (In the highlands)
- **Marketing status:** Recommended for marketing trials
- **Licensing status:** Available for licensing to seed companies
- **Origin:** China

**Special Features:**
- **Fruit yield:** 10 tonnes/ha (Compared to checks: 159% Khama, 130% Phindu)
- **Plant type:** Undetermined
- **50% flowering:** 26 days after transplanting
- **Fruit:** Flat in longitudinal section with 106g average weight
- **Stress response:** Resistance to early and late blight, mosaic virus, tip blight and low temperature indicated by breeder
Very high yielding, dual purpose tomato hybrid

- **Trial seasons:** Two
- **Trial locations:** One (In the highlands)
- **Marketing status:** Recommended for marketing trials
- **Licensing status:** Available for licensing to seed companies
- **Origin:** China

**Special Features:**
- **Fruit yield:** 17 tonnes/ha (Compared to checks: 270% Khama, 220% Phindu)
- **Plant type:** Determinate
- **50% flowering:** 28 days after transplanting
- **Fruit:** Obvoid in longitudinal section with 55g average weight
- **Stress response:** Resistance to pressure indicated by Breeder
- **Segment:** Processing and fresh market
Very high yielding, dual purpose tomato hybrid

- **Trial seasons:** Two
- **Trial locations:** One (In the highlands)
- **Marketing status:** Recommended for marketing trials
- **Licensing status:** Available for licensing to seed companies
- **Origin:** China

**Special Features:**

- **Fruit yield:** 20 tonnes/ha (Compared to checks: 303% Khama, 248% Phindu)
- **Plant type:** Determinate
- **50% flowering:** 28 days after transplanting
- **Fruit:** Ellipsoid in longitudinal section with 48g average weight
- **Stress response:** Resistance to cracking and pressure indicated by Breeder
- **Segment:** Processing and fresh market
High yielding, dual purpose use tomato hybrid

- **Trial seasons:** Two
- **Trial locations:** One (In the highlands)
- **Marketing status:** Recommended for marketing trials
- **Licensing status:** Available for licensing to seed companies
- **Origin:** China

**Special Features:**

- **Fruit yield:** 11 tonnes/ha (Compared to checks: 166% Khama, 135% Phindu)
- **Plant type:** Determinate
- **50% flowering:** 25 days after transplanting
- **Fruit:** Rectangular in longitudinal section with 40g average weight
- **Stress response:** Resistance to cracking, pressure, Verticillium wilt (race 1 & 2) and tolerance to viruses indicated by Breeder
- **Segment:** Processing and fresh market
**TOM12**

Very high yielding tomato hybrid

- **Trial seasons:** Two
- **Trial locations:** One (In the highlands)
- **Marketing status:** Recommended for marketing trials
- **Licensing status:** Available for licensing to seed companies
- **Origin:** India

**Special Features:**

- **Fruit yield:** 19 tonnes/ha (Compared to checks: 289% Khama, 236% Phindu)
- **Plant type:** Determinate
- **50% flowering:** 27 days after transplanting
- **Fruit:** Flat in longitudinal section with 55g average weight
- **Stress response:** Tolerance to Bacterial Wilt, Foliar diseases, Tomato yellow leaf curl virus, Tomato Mosaic Virus and Nematode indicated by breeder
TOM13

<table>
<thead>
<tr>
<th>High yielding tomato hybrid</th>
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<tbody>
<tr>
<td><strong>Trial seasons:</strong> Two</td>
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<td><strong>Trial locations:</strong> One (In the highlands)</td>
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<td><strong>Marketing status:</strong> Recommended for marketing trials</td>
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<td><strong>Licensing status:</strong> Available for licensing to seed companies</td>
</tr>
<tr>
<td><strong>Origin:</strong> India</td>
</tr>
</tbody>
</table>

**Special Features:**
- **Fruit yield:** 13 tonnes/ha (Compared to checks: 205% Khama, 167% Phindu)
- **Plant type:** Determinate
- **50% flowering:** 24 days after transplanting
- **Fruit:** Ox-heart in longitudinal section with 52g average weight
- **Stress response:** Tolerance to Tomato yellow leaf curl virus, Tomato Mosaic Virus and Nematode indicated by breeder
High yielding tomato hybrid

**Trial seasons:** Two

**Trial locations:** One (In the highlands)

**Marketing status:** Recommended for marketing trials

**Licensing status:** Available for licensing to seed companies

**Origin:** India

**Special Features:**
- **Fruit yield:** 9 tonnes/ha (Compared to checks: 142% Khama, 116% Phindu)
- **Plant type:** Undetermined
- **50% flowering:** 25 days after transplanting
- **Fruit:** Rectangular in longitudinal section with 57g average weight
- **Stress response:** Undetermined
**TOM16**

**Very high yielding tomato hybrid**

**Trial seasons:** Two

**Trial locations:** One (In the highlands)

**Marketing status:** Recommended for marketing trials

**Licensing status:** Available for licensing to seed companies

**Origin:** India

**Special Features:**
- **Fruit yield:** 17 tonnes/ha (Compared to checks: 258% Khama, 211% Phindu)
- **Plant type:** Undetermined
- **50% flowering:** 28 days after transplanting
- **Fruit:** Rectangular in longitudinal section with 65g average weight
- **Stress response:** Undetermined
High yielding tomato hybrid

- **Trial seasons:** Two
- **Trial locations:** One (In the highlands)
- **Marketing status:** Recommended for marketing trials
- **Licensing status:** Available for licensing to seed companies
- **Origin:** India

**Special Features:**
- **Fruit yield:** 13 tonnes/ha (Compared to checks: 202% Khama, 165% Phindu)
- **Plant type:** Undetermined
- **50% flowering:** 27 days after transplanting
- **Fruit:** Round in longitudinal section with 55g average weight
- **Stress response:** Undetermined