'NARITA 21' is a high-yielding and disease-resistant hybrid that is related, through its female grandparent, to a group of cooking and beer bananas called East African highland bananas (EAHB). 'NARITA 21' is named after NARO and IITA, the institutes that jointly developed the NARITA hybrids\cite{1}.

Two crosses were performed to obtain 'NARITA 21'. The triploid EAHB cultivar 'Nakawere' was crossed with a wild source of disease resistance to produce a tetraploid. This tetraploid was then crossed with an improved diploid to produce the triploid hybrid 'NARITA 21' (see Breeding strategy below).

'NARITA 21' has been tested on station in Uganda\cite{2} and is being evaluated in a broader range of end-users environments (including farmers’ fields), to assess its potential for adoption by farmers and consumers\cite{3}. Its primary use is as a juice type.

Contents
- Breeding strategy
- Agronomic performance
- Reaction to diseases and pests
- References
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Breeding strategy

'BARITA 21' is a secondary triploid obtained by crossing a disease-resistant tetraploid (1201K-1) with an improved diploid (7197-2)\cite{4}.

The tetraploid female parent 1201K-1 was obtained by crossing the triploid EAHB cultivar

\textbf{Breeding strategy}

\begin{table}[h]
\centering
\begin{tabular}{ |c|c| }
\hline
\textbf{Breeding scheme for 'NARITA 21'} &  \\
\hline
\textbf{\textit{Nakawere}} (AAA), \textit{Musa acuminata} ssp. \textit{burmannica} (Calcutta 4), \textit{Long Tavoy}, 'Sinwobogi' (AA), 'Tjau Lagada' (AA), \textit{Musa acuminata} ssp. \textit{malaccensis} 'Guyod' (AA) and \textit{Pisang Jari Buaya} &  \\
\hline
\textbf{1201K-1} (AAA) &  \\
\hline
\textbf{SH3362} (AA) &  \\
\hline
\textbf{7197-2} (AA) &  \\
\hline
\textbf{17503S-3 ('NARITA 21')} (AAA) &  \\
\hline
\end{tabular}
\end{table}
‘Nakawere’ and Calcutta 4, a genebank accession of the diploid wild species *Musa acuminata ssp. burmannica*, which provided a copy of the so-called A genome. Calcutta 4 provided the resistance to black leaf streak.

The diploid male parent 7197-2 (whose code used to be preceded by TMBx, for tropical *Musa* bananas) had been derived from a cross between SH3362 (an hybrid developed by FHIA) and Long Tavoy, a genebank accession of a *Musa acuminata* subspecies. SH3362 had been obtained by crossing two improved diploids: SH3217 and SH3142.

SH3217 was the product of a cross between two improved diploids: SH2095 and SH2766, whereas SH3142 was the product of a cross between ‘Pisang Jari Buaya’ (AA).

The parents of SH2095 were the products of a cross between ‘Sinwobogi’ (AA) and ‘Tjau Lagada’ (AA) and of a cross between *Musa acuminata ssp. malaccensis* and ‘Guyod’ (AA), whereas the parents of SH2766 were ‘Tjau Lagada’ (AA) and the product of a cross between *Musa acuminata ssp. malaccensis* and ‘Guyod’ (AA).

**Agronomic performance**

The following agronomic data were collected during a preliminary yield trial carried out by IITA and NARO at Namulonge in Central Uganda:

<table>
<thead>
<tr>
<th>Traits</th>
<th>NARITA 21*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plant height at flowering (cm)</td>
<td>311.1</td>
</tr>
<tr>
<td>Pseudostem girth at flowering (cm)</td>
<td>50.7</td>
</tr>
<tr>
<td>Time from flowering to harvest (days)</td>
<td>158.1</td>
</tr>
<tr>
<td>Bunch weight (kg)</td>
<td>20.7</td>
</tr>
<tr>
<td>Number of hands</td>
<td>9.6</td>
</tr>
<tr>
<td>Number of fingers</td>
<td>154.7</td>
</tr>
<tr>
<td>Fruit circumference (cm)</td>
<td>13.1</td>
</tr>
<tr>
<td>Fruit length (cm)</td>
<td>18.3</td>
</tr>
<tr>
<td>Number of functional leaves at flowering</td>
<td>10.9</td>
</tr>
<tr>
<td>Number of functional leaves at harvest</td>
<td>4.7</td>
</tr>
<tr>
<td>Height of tallest sucker at flowering (cm)</td>
<td>176.4</td>
</tr>
<tr>
<td>Height of tallest sucker at harvest (cm)</td>
<td>349.0</td>
</tr>
<tr>
<td>Youngest leaf spotted at flowering</td>
<td>9.1</td>
</tr>
<tr>
<td>Youngest leaf spotted at harvest</td>
<td>3.5</td>
</tr>
<tr>
<td>Survival rate (%)</td>
<td>90</td>
</tr>
</tbody>
</table>

* Data are averages for 10 plants evaluated over three crop cycles.

**Reaction to diseases and pests**

The scores for number of functional leaves and youngest leaf spotted at flowering and harvest indicate good resistance to black leaf streak.
References

1. IITA press release on the first ever high-yielding matooke hybrids.
2. Preliminary results of NARITA hybrids trials show high yield potential to increase banana production.
3. Website of the Breeding Better Bananas project.

See also on this website

Photos of NARITA hybrids in Musarama
Articles on NARITA hybrids in Musalit
Musapedia pages on NARITA hybrids:
Kabana 6H
Kiwangaazi
M9
NARITA 1
NARITA 10
NARITA 11
NARITA 12
NARITA 13
NARITA 14
NARITA 15
NARITA 16
NARITA 17
NARITA 18
NARITA 19
NARITA 2
NARITA 20
NARITA 21
NARITA 22
NARITA 23
NARITA 24
NARITA 25
NARITA 26
NARITA 27
NARITA 3
NARITA 4
NARITA 5
NARITA 6
NARITA 7
NARITA 8
NARITA 9
Musapedia pages on improved materials:
BITA-2
BITA-3
BRS Platina
CRBP-39
FHIA-01
FHIA-02
FHIA-03
FHIA-17
FHIA-18
FHIA-20
FHIA-21
FHIA-23
FHIA-25
FLHORBAN 916
FLHORBAN 920
Formosana
GCTCV-105
GCTCV-119
GCTCV-218
Goldfinger
Kabana 6H
Kiwangaaazi
M9
NARITA 1
NARITA 10
NARITA 11
NARITA 12
NARITA 13
NARITA 14
NARITA 15
NARITA 16
NARITA 17
NARITA 18
NARITA 19
NARITA 2
NARITA 20
NARITA 21
NARITA 22
NARITA 23
NARITA 24
NARITA 25
NARITA 26
NARITA 27
NARITA 3
NARITA 4
NARITA 5
External links

To browse accession-level information on 'NARITA 21' in MGIS
Official website of Uganda's National Agricultural Research Organization, NARO and its banana research program

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