NARITA hybrids are high-yielding and disease-resistant hybrids that are related to a group of cooking and juice bananas called East African highland bananas (EAHB). They are the result of over 20 years of joint breeding efforts between the institutes after which they are named: the National Agricultural Research Organization (NARO) of Uganda and the International Institute of Tropical Agriculture (IITA)\(^1\). IITA initiated the collaboration with NARO in the 1990s using some of the banana hybrids it had developed at its Onne field station in Nigeria\(^2\). The NARITAs were developed in Uganda, at the National Agricultural Research Laboratories Kawanda and the IITA Sendusu research station.

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Breeding strategy

The NARITAs are secondary triploid (3x) hybrids\(^3\). They were generally obtained by crossing a female fertile EAHB cultivar (3x)\(^4\) with a diploid (2x) source of resistance, more often than not Calcutta 4, a genebank accession of the wild species Musa acuminata ssp. burmannica which provided resistance to black leaf streak. The selected tetraploid

Breeders Michael Batte from IITA (left)
and Robooni Tumuhimbise from NARO (right) hybrids resulting from that cross were then crossed with improved diploids (2x) to produce secondary triploids from which individual NARITA hybrids were selected.

The genebank accessions used in the crosses came from the NARO field collection in Kawanda and the IITA field collection in Sendusu, Uganda. Some of the improved diploids are the products of previous breeding efforts by IITA at its Onne field station in Nigeria (the 7197-2, 8075-7, 9128-3 and 9719-7 hybrids, which used to be preceded by TMBx, for tropical Musa bananas[2]) and by FHIA (the Honduran Agricultural Research Foundation) at its La Lima field station in Honduras (the SH2095, SH2766, SH3142, SH3217 and SH3362 hybrids, with SH standing for selected hybrids[5]).

Synonyms

Some of the NARITA hybrids have been released under different names or have been given a local name by farmers.

Synonyms of NARITA 7: M9, KABANA 6H, 'Kiwangaazi'[6]

Evaluation

Of the 27 NARITA hybrids, 25 have been evaluated over three crop cycles at the IITA Sendusu research station in Uganda[7]. Their agronomic performance was compared to the one of the local check, the EAHB cultivar Mbwazirume. Their potential for adoption by farmers and consumers is being evaluated in a broader range of environments in Tanzania and Uganda as part of a project co-funded by the Bill and Melinda Gates Foundation, the CGIAR Research program on Roots, Tubers and Bananas, IITA and Bioversity International[8][9].

To evaluate the hybrids, the project incorporates two participatory varietal selection approaches: mother-baby evaluation trials and 'stand alone' baby trials to promote adoption beyond the populations participating in the mother-baby trials. In the first instance, the hybrids are evaluated in researcher-managed trials (mother trials) that farmers visit several times during the growing cycle and after harvest. Farmers then select 3 to 5 hybrids to test in their fields (baby trials) where they can compare the performance of the hybrids to the one of their local cultivars.

In the ‘stand-alone’ baby trials to be set up in Uganda, each farmer receives a randomly assigned combination of three hybrids to rank. This approach, which relies on social networks to spread the information on the performance of the hybrids, allows more villages to be involved, with fewer farmers per village.
References

8. IITA press release on the launch of the project to boost banana production in East and Central Africa (20 May 2015)

See also on this website

Photos of NARITA hybrids in Musarama
Articles on NARITA hybrids in Musalit
Musapedia pages on NARITA hybrids:
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
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
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
Further reading

Special edition of InfoMus@: A virtual tour of NARITA hybrids

External links

Website of the Breeding Better Bananas project.
To browse accession-level information on 'NARITA hybrids' in MGIS
Official website of Uganda’s National Agricultural Research Organization, NARO and its banana research program

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The original document is available at http://www.promusa.org/NARITA+hybrids