

and at the end of the assay. Tests conducted on varieties known to be susceptible or tolerant to nematodes proved the reliability of the method. We will search for nematode-tolerant hybrids among the ones selected for their general agronomic performance and fruit qualities using this newly developed method.

Ongoing research also aims at understanding the mechanisms leading to post-harvest internal browning (IB) induced by cold during fruit storage. The induction of polyphenoloxidase activities in response to cold storage is measured within leaves and fruits and correlations are searched for. A specific objective is to identify molecular probes for susceptibility to IB that could be used as an early selection tool within hybrid progenies.

CIRAD Pineapple Genebank Database Online

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As a result of years of collection and germplasm exchange, and of an EU-funded project in which institutions from Brazil, France and Venezuela collaborated, CIRAD has gathered hundreds of pineapple cultivars and species of the genus *Ananas* and a wide collection of over 600 accessions has been established in Martinique, FWI, at the CIRAD research centre. This collection includes a wide range of genotypes from many geographic origins, and is presently the most diverse in existence. All accessions in the genebank have been evaluated using common methods for the characterization and evaluation of pineapple germplasm. As a tool to promote information exchange and germplasm utilisation, CIRAD developed a database built on a standardised format. However, the database and its valuable information were not easily accessible to anyone. The development of a joint CIRAD-INRA (Institut National de la Recherche Agronomique) project to build a Tropical Plants Biological Resources Centre (CRB) of the French West Indies made it possible to develop a web portal and give open access to the database directly on the internet. This website makes it possible to get information on cultivated plants conserved by CIRAD and INRA in Guadeloupe and Martinique: sugarcane, bananas, yam, perennial fruit crops, flowers and pineapple. Eventually, the portal will be trilingual: French, English and Spanish. The Tropical Plants Biological Resources Centre of the French West Indies portal is currently accessible though not all features have been implemented. Access to the portal is at <http://collections.antilles.inra.fr/BRCPortal/initHome.do>.

Ethephon on Pineapple: News About Uses and Regulation

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Introduction

The use of ethephon in pineapple was proposed in the 1970s by CIRAD agronomists in Martinique and Côte d'Ivoire to reduce the time between the harvest of early ripe fruits and the harvest of the late ripe fruits in a pineapple field and to get a more homogeneous external colour of the fruits (Audinay, 1970; Poignant, 1971). Ethephon does not actually colour the fruit, it rather degreens the shell of the fruit by destruction of chlorophyll. The closer the fruit is to natural ripening, the more efficient is the degreening. If correctly applied at the right time, ethephon treatment does not reduce significantly the internal quality of the fruit. This technique drastically changed the management of the harvest because formerly the desired tonnage was harvested from many fields whereas with ethephon degreening the same tonnage could be obtained from only few fields. Few drawbacks to ethephon degreening have been identified as long as the application follows the recommendations (2 – 3 L ha⁻¹ when ~1% of fruits begin to colour naturally). One drawback is that sometimes fruits are relatively insensitive to the treatment, for example when high levels of nitrogen have been applied during vegetative growth. This has generally a consequence, the farmer applies higher doses of ethephon, earlier (as many as 3 to 4 weeks before natural ripening sometimes). The result is fruit with poor quality, with a shorter shelf life, withered crowns after cold storage and fruit more sensitive to Internal Browning. With the development of new varieties and also the general evolution of customer sensitivity to the use of pesticides in agriculture, one could expect some changes in the use of ethephon.