

International Cocoa Quarantine Centre, Reading (ICQC, R) Newsletter



The University of Reading

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Welcome to the first edition of the International Cocoa Quarantine Centre Newsletter and also the new name for the facility at The University of Reading. The Newsletter will be distributed every six months in order to keep the cocoa community informed of the availability of material, recent imports of new clones and particular research developments associated with ICQC, R. We believe that this facility for cocoa quarantine performs a vital function for the global cocoa industry as a building block towards the creation of improved cocoa planting material that is so desperately needed for future generations of cocoa farmers to help them drive towards sustainable cocoa cultivation.

Clones Available in the ICQC, R Collection

There are currently over 330 clones available in the ICQC, R collection. See

Table 1. Recent releases of clones from quarantine which are now available for export

Clone	Reading Accession number	Donor Genebank
ARF 25	RUQ 1252	CATIE, Costa Rica
ARF 30	RUQ 1243	CATIE, Costa Rica
GU 241/V	RUQ 1071	CIRAD, France
ICS 84	RUQ 1275	CIRAD, France
ML 102	RUQ 1265	CATIE, Costa Rica
NA 807*	RUQ 1239	ICG, Trinidad
NA 916*	RUQ 1334	ICG, Trinidad
PA 289 [PER]	RUQ 952	ICG, Trinidad
PMCT 93	RUQ 1249	CATIE, Costa Rica
SCA 9*	RUQ 1064	ICG, Trinidad
SPEC 41/6-18*	RUQ 1325	ICG, Trinidad
VENC 4/4 [FRA]	RUQ 1166	CIRAD, France

*CFC Collection clones

www.icqd.reading.ac.uk/new_index.htm for the full list. Additionally, over 100 clones are passing through quarantine and will be available during the course of the next two years. Recent releases of clones from quarantine are listed in Table 1.

The main focus for imports into the ICQC, R has been the CFC/IPGRI/ICCO Collection of 115 elite genotypes. Most of these clones have now been established at Reading and are either passing through the quarantine process or else are available for budwood export.

Imports scheduled for the coming year will include cocoa clones identified at the Cocoa Research Unit, Trinidad as having a degree of resistance to Witches Broom disease and Black Pod and also clones from the collections made in Ecuador by Chalmers and Allen.



The propagation compartment at ICQC, R

Tackling Mis-Labeling at ICQC, R

A small number of the clones at ICQC, R are now known to be off-types, *i.e.* they are not genetically identical to the clone originally assigned this name. Off-types can arise through mislabelling and/or misidentification errors made at any stage of the clone's history from its original collection through to field genebanks, national and international genebanks and quarantine centres. As part of an international effort to reduce mis-identified cocoa germplasm, off-types at ICQC, R have been determined via comparison of molecular profiles with original source material or by unequivocal morphological data. We are using the internationally agreed procedure to rename off-types¹, for example, the clone previously labelled "ICS 27" at Reading that is an error becomes: -

RUQ 143 (MIS_GBRRUQ_ICS 27); the notation "RUQ" is used for accession numbers at Reading (11 off-types identified at Reading are included on the clone list).

Where a mis-labelled clone has been distributed, we are ensuring that recipient countries are made aware of this. Please contact us if you have any queries regarding any off-types that you may have received. Clearly, if a clone is mis-labelled, this does not discount the possibility that it may have useful traits. We would therefore be interested in hearing from any institutes who have evaluated a particular off-type for yield potential, disease resistance or quality attributes. This will help us in determining whether or not we should continue to maintain particular off-types at ICQC, R.

Funding

The main core funder of the project continues to be BCCCA who have been financing the facilities since their establishment around 20 years ago. The project has been most fortunate to have received additional core funding over the period 2001 to 2006 from Mars Inc. This has enabled us to expand the cocoa quarantine facilities at Reading from

four to seven poly-tunnels; a process that has been essential in meeting the challenges of supplying a diverse range of germplasm to the international cocoa community and enabled us to acquire new germplasm resistant to diseases. The grant has also helped with staffing and maintenance costs over this period. We are very grateful to Mars Inc. for this generous contribution over five years. As their support draws to a close at the end of March 2006, we are pleased to announce that the USDA is becoming a significant funder over the coming years. As part of the CFC/ICCO/IPGRI cocoa germplasm projects to supply material for the international clone and hybrid trials, co-funding has been provided by CFC since 1998.

Feedback Please

We are always interested in receiving feedback from germplasm recipients at an early stage on the success rate in establishing imported material but also on whether clones provided by ICQC, R have been used in breeding trials or as planting material.

To Receive Budwood

Please provide as much advanced warning of your requirements as possible and send us an import permit *at least two weeks* before the date of shipment. This should state that you wish to import cocoa as budwood and any treatment of the budwood required (*e.g.* pesticide and/ or fungicide treatment, if applicable). Please fax the permit to: 00 44 118 378 8160 or send as an e-mail attachment.

Enquires

Enquires or further information on ICQC, R should be directed to: Dr Andrew Daymond (a.j.daymond@reading.ac.uk)

¹Turnbull, C.J., Butler, D.R., Cryer, N.C., Zhang, D., Lanaud, C., Daymond, A.J., Ford, C.S., Wilkinson, M.J. and Hadley, P. Tackling Mislabeling in Cocoa Germplasm Collections. *INGENIC NEWSLETTER*, 9, 2004, 8-11.

