

Project Title: Electronic Data Collection/Labeling for the USDA *Rubus* Genebank

Progress Report 2014

Principal Investigators

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Objectives:

- To improve the visible plant label information of the *Rubus* collection at the NCGR.
- To make plant data accessible to electronic data gathering devices (such as tablets or smart phones).

Procedure followed:

1. Purchased a printer, tablet computer, with barcode reader and Excel compatible software. (Using other collaborative funding sources).
2. Inventoried the raspberry collection in Screenhouse 8.
3. Generated QR (quick response) labels with GRIN accession URL to add to existing plant tags.

Results:

The \$1,000 funding provided funding in 2014 for temporary student help to prepare and attach QR labels for 202 raspberry accessions (2 clonal replicates each) for the USDA raspberry collection. These plants are growing in 4-gal deep containers in a screenhouse in Corvallis, Oregon. The usual NCGR screenhouse plant identification labels are computer generated and printed on plastic paper. These 2 x 4 labels are affixed with a zip-tie to each plant container. QR codes were printed on weatherproof 1.25" square adhesive labels using a Datamax P1129n thermal transfer printer (Fig. 1) (Westmark Industries, Inc., Lake Oswego, Oregon). QR labels were affixed to plastic plant stakes (Fig. 2) and inserted into the containers (Fig. 3).

The QR code generates a URL using the germplasm accession number and links to the USDA GRIN germplasm database. The public web page for the accession can be retrieved using a free QR code reader app on any tablet computer or smart phone. The link displays all public information in GRIN for the accession including plant origin, pedigree, source history, as well as voucher images and evaluation results.

The funding from NARBA in 2014 enabled the raspberry collection to be labeled. Visitors to our raspberry collection can now link to GRIN database records from their smart phone while looking at the plant. We greatly appreciate this assistance from NARBA.



Fig. 1. Datamax printer, Westmark Industries Inc.

Fig. 2. Assorted labelling options

Fig. 3. Example of QR code in a container of *Rubus idaeus* 'Autumn Britten'. The QR code links to the GRIN-Global display. The QR code can be scanned from the label or also from this photo using a smart device with a QR reader.



Hyperlink: <http://npgsweb.ars-grin.gov/gringlobal/accessiondetail.aspx?id=1603276>