



Canadian Grain
Commission

Commission canadienne
des grains

UGMA Grain Calibration Update

Standard operating procedure
AC04.610.v2

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Verify from the Master List that this is the current version before using.

1.0 Purpose

- 1.1 This document has been developed to ensure grain calibrations are updated to the correct calibration version.

2.0 Abbreviations

- 2.1 FGIS – Food and Grain Inspection Service of the United States
Department of Agriculture
- 2.2 GRL – Grain Research Laboratory
- 2.3 OGGG – Official Grain Grading Guide

3.0 Responsibilities

- 3.1 The moisture lab supervisor (or delegate) is responsible for training the staff and overseeing operations.
- 3.2 Regional laboratory staff are responsible for updating the moisture meters in their region.
- 3.3 Inspection staff at Canadian Grain Commission service centres are responsible for working with either regional laboratory staff or Winnipeg moisture laboratory staff to update their moisture meters.

4.0 Health and safety

- 4.1 The Canadian Grain Commission's health and safety program complies with the *Canada Labour Code Part II* and the Canada Occupational Health and Safety Regulations. Contact the Manager, Health and Safety, for further details.
- 4.2 Refer to the applicable equipment and instrument operation manuals for manufacturer recommended safety precautions.
- 4.3 Review applicable Safety Data Sheet (SDS) information for chemicals prior to use.
- 4.4 Review applicable Job Safety Analysis (JSA) procedures before testing.
- 4.5 Wear appropriate personal protective equipment (PPE).

5.0 Equipment and materials

Instrumentation

- 5.1 AM 5200-A moisture meter (PerkinElmer)
- 5.2 GAC 2700 moisture meter (DICKEY-john) – headquarters only

Equipment

- 5.3 Canned air, air duster (Koonie), or equivalent
- 5.4 SecureKey USB

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Reference material

- 5.5 Samples not on list to be updated

Software

- 5.6 PasswordGenerator (laboratory staff only)

6.0 Required training

- 6.1 Laboratory staff: read and acknowledge this procedure in SoftExpert Suite (SES).
- 6.2 Non-laboratory staff, such as inspection staff: read this procedure before performing the grain calibration updates.

7.0 Grain calibration updates

- 7.1 Information on which grain calibrations are updated is released as a Trade Memo 20YY-XX annually and is effective on July 1.
 - 7.1.1 The current Trade Memo 2025-02 lists the following changes to the grain calibrations:
 - 7.1.1.1 AM 5200-A: cranberry bean, brown mustard, yellow mustard, western amber durum wheat, eastern amber durum wheat, eastern soft red winter wheat, eastern white winter wheat, western soft white spring wheat
 - 7.1.1.2 GAC 2700: cranberry bean, brown mustard, yellow mustard, western amber durum wheat, eastern amber durum wheat

8.0 Procedure

Prior to updating the moisture meter

- 8.1 Install the new calibration on a SecureKey USB:
 - 8.1.1 Follow the instructions in Figure 1 to unlock the SecureKey.
 - 8.1.2 **NOTE:** The passcode (user PIN) may be different.

Unlocking the Aegis Secure Key	
Instructions	LED Activity
1. Press the Key button 	  will blink together
2. Within 10 seconds enter the User PIN (Factory default PIN: 1-1-2-2-3-3-4-4)	
3. Press the Key button 	 will blink for a correct PIN entry  will blink for an incorrect PIN entry
4. Connect the Aegis Secure Key to a USB port within 30 seconds	 will be on  will be on or blink for activity
5. To lock the Aegis Secure Key, Unplug it from the USB port.	

Figure 1: Instructions for unlocking the SecureKey.

- 8.1.3 Plug the USB into the computer port and wait for it to connect.
- 8.1.4 Ensure that the USB is formatted as **FAT-32** (See Note 10.1 for instructions on how to reformat the USB).
- 8.1.5 Go to the **ischecktest** drive and under the **MOISTURE\20YY UPDATE** folders, copy the folder **perten** onto the USB.
 - 8.1.5.1 For GAC 2700 update files, see **8.9**.
- 8.1.6 Ensure that the USB has the following folders and files listed:

- For field offices: **perten\import\trans_CA_CGC_F_2506011.zip**
- For Master instruments: **perten\import\trans_CA_CGC_O_2506011.zip**

8.2 Thoroughly clean the instrument according to the appropriate procedure:

- 8.2.1 AC04.600 Model AM 5200-A Moisture Meter Operation and Maintenance
- 8.2.2 AC04.601 GAC 2700 Moisture Meter Operation and Maintenance

8.3 Run a sample 2 to 3 times on the moisture meter and take note of the moisture value. The sample should not be on the list of calibration changes for this crop year (see **7.1**).

Updating the AM 5200-A moisture meter

8.4 Set a Restore Point:

- 8.4.1 Change the access level to Administrator (see Figures 2A-E).
 - 8.4.1.1 Select Menu → General Settings → Login.
 - 8.4.1.2 Provide the serial number, **Key 1** code, and **Key 2** code to the lab.
 - 8.4.1.3 Press **Default** (top middle of the screen; white background) and a keyboard will appear. Type in

the code provided by the lab followed by the green “Enter” button.

8.4.1.4 The message “Successfully logged in as Admin user.” will appear. Press **Close**.

8.4.1.5 If it says “Successfully logged is as Default user” then repeat the login process.

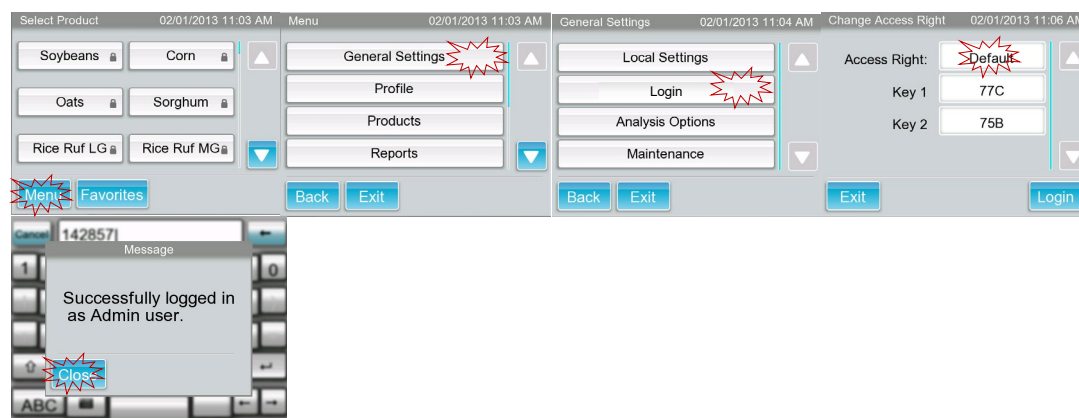


Figure 2A: select **Menu**; B: select **General Settings**; C: select **Login**; D: select **Default**; E: select **Close**.

8.4.2 Set the Restore Point. Select Menu → General Settings → Maintenance → System recovery → Set a restore point (see Figures 3A-F).

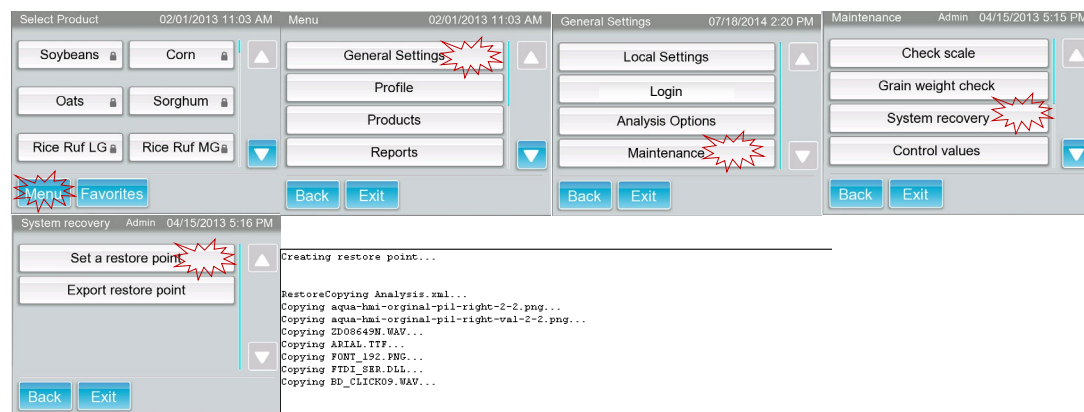


Figure 3A: select **Menu**; B: select **General Settings**; C: select **Maintenance**; D: select **System recovery**; E: select **Set a restore point**; F: what will appear on the screen before the startup process begins.

8.4.3 Once a Restore Point has been set, the instrument will automatically cycle power and the Administrator status will revert back to **Default**.

8.5 Install calibration files:

8.5.1 Insert a SecureKey USB into the USB port (back, bottom left of meter) and wait for it to connect.

8.5.2 Change access level to Administrator by providing the serial number, Key 1, and Key 2 information to the lab (see step 8.4.1 for instructions).

8.5.3 Import calibration file (see Figures 4a-e).

8.5.3.1 Select **Menu** → <down arrow> → **Import/Export** → **Import**.

8.5.3.2 After a few minutes, the message “Imported successfully. Please reboot the system.” will appear.

8.5.3.3 Press **OK**.

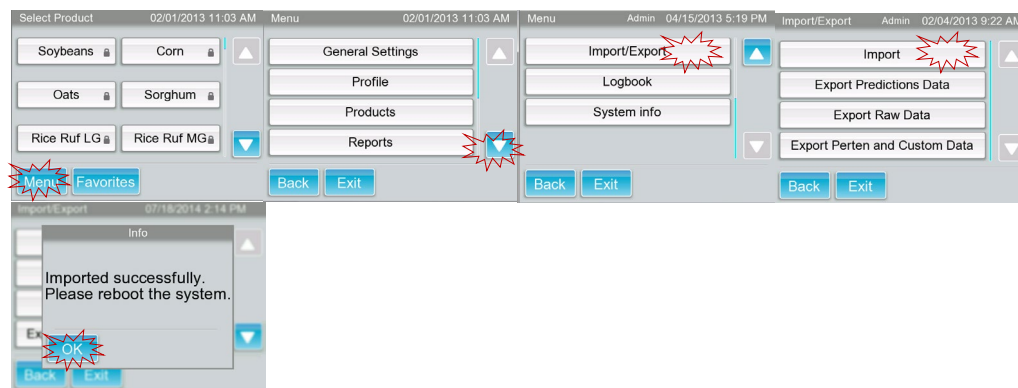


Figure 4A: select **Menu**; B: select down arrow; C: select **Import/Export**; D: select **Import**; E: select **OK**.

8.5.4 Unplug the USB.

8.5.5 Turn off the power switch for a few seconds and then turn the power back on.

8.5.6 Confirm new calibration version as **07-01-2025CA**, and next service date as **2026-07-15**.

8.5.6.1 Select **Menu** → <down arrow> → **System Info**.

8.5.6.2 The calibration version is listed on the second page.

8.5.6.3 The service date information is listed on the third page.

8.6 Re-run the sample and compare the before and after moisture results. They should not differ by more than 0.1.

8.7 Download the raw data onto the USB (see Figures 5a-d).

- 8.7.1 Insert the SecureKey USB into the USB port (back, bottom left of meter) and wait for it to connect.
- 8.7.2 Select Menu → <down arrow> → Import/Export → Export Raw Data.

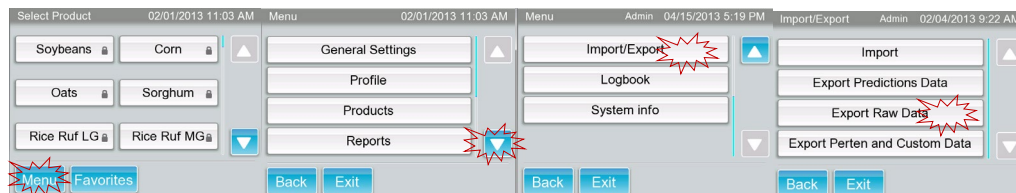


Figure 5A: select **Menu**; B: select down arrow; C: select **Import/Export**; D: select **Export Raw Data**.

8.7.3 Unplug the USB.

8.8 Transfer the raw data file:

- 8.8.1 If you are using your own SecureKey, insert the SecureKey USB into the computer port and transfer the **History_Prediction_Raw_Data_.... zip** file into your moisture check test folder.
- 8.8.2 If the SecureKey was mailed to you, return it to GRL moisture lab 1471-303 Main Street, Winnipeg, MB R3C 3G8.

Updating the GAC 2700 moisture meter (headquarters only)

8.9 Download the calibrations to the SecureKey USB.

- 8.9.1 Official Canadian calibrations will be sent directly from DICKEY-john.
- 8.9.2 Official United States calibrations need to be downloaded from the FGIS moisture website or DICKEY-john website (*.zip format).
 - 8.9.2.1 FGIS: Scroll down to the “Official Moisture Calibrations” section and right click on “Download all official moisture calibration files for DICKEY-john GAC 2700”.

8.10 Extract the calibration zip file into a unique folder on the USB.

8.11 Insert the USB into the instrument.

8.12 At the Main Menu screen, press the **Setup** button.

8.13 At the login screen, press **OK**.

8.14 At the Setup menu, press the **Product** button.

8.15 At the Product Setup screen, press the **Load New Products** button.

8.16 Navigate to the appropriate folder. The screen will then display the number of files in the folder.

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- 8.17 Press the **Enter** button.
- 8.18 Press **Yes** to begin installation of the new files.
 - 8.18.1 Old products are removed.
- 8.19 Remove the USB device from the instrument.
- 8.20 After loading calibrations, the Product Setup screen is displayed again.
Press the **Home** button to return to the Main Menu.
- 8.21 At the Main Menu, cycle power.
- 8.22 After the instrument is powered up, press the **Information** button to verify that "07-01-2025" is listed under Release Date.
- 8.23 Re-run the sample and compare the before and after moisture results.
They should not differ by more than 0.1.

9.0 References

- 9.1 AC04.600 Model AM 5200-A Moisture Meter Operation and Maintenance
- 9.2 AC04.601 Model GAC 2700 Moisture Meter Operation and Maintenance

10.0 Notes

- 10.1 To reformat the USB on a Windows computer:
 - 10.1.1 Select the USB drive in **File Explorer**.
 - 10.1.2 Save any files listed on the USB drive in an appropriate location (they will be deleted during the reformatting process).
 - 10.1.3 Right click on the USB drive and select **Format...**
 - 10.1.4 Under the **File System** dropdown, select **FAT 32**.
 - 10.1.5 Check **Quick Format**.
 - 10.1.6 Press **Start**.