

**IR-4 National Education Conference
Orlando, FL
March 1, 2017
Lab and Field Roundtable Discussion Summary**

Following is a summary of discussions that took place during the March 1, 2017 Lab and Field Roundtable Session at the National Education Conference held in Orlando, Florida.

The items contained in this document are not intended to replace conversation with your Study Director or Regional Field Coordinator. Please always contact your Study Director with questions and concerns about trials.

- 1. Sample modification implications. How can quartering, pitting, drying, etc. help or hinder the lab in processing? What implications can it have on analysis? How should it be documented in the Field Data Book?**
 - a. Lab prefers small pieces and minimal soil adhering to samples can cause residues to occur where not expected
 - b. Flat edges are helpful for the grinding process
 - c. Whatever modification is done should be documented (e.g. quartering in field or thawing in lab)
 - d. Plastic bags inside of the IR-4 sample residue bag is helpful
 - e. Grinding and percent of grind is in protocol (not all samples get ground)
 - f. Implications on analysis – depends on chemistry/ anytime it is handled it increases chances for contamination
 - g. When drying- strive for consistency in samples
 - h. Unless area where modifications are made is unsanitary, implications on analysis is unlikely
 - i. Potential problems with sampling procedures can be addressed during draft protocol review and discussion
 - j. Long grasses and dried fruits are a challenge
 - k. If it is a decline trial- sending samples at separate times can be hard for lab to track (it is best to check with the lab and study director)
 - l. JMPR (Joint FAO¹/WHO² Meetings on Pesticide Residues) won't accept data from samples that were modified in the field –so that could be an issue; however, modifications in the field might be easier for the sampling process (it is best to check with study director)
 - m. Pictures of modification is encouraged
 - n. Blades breaking on hard fruits is still an issue even with modification in field (e.g. sugar beet and guava)
 - o. Some samples cannot be modified in the field because the test substance will begin to degrade
 - p. Communication between lab, field and study director in draft protocol stage can help determine appropriate sample modifications
 - q. FRD (Field Research Director) should talk to study director before modifying if not written in the protocol
 - r. Part 17 of the Protocol tells you what modifications are acceptable
 - s. Lab must process entire sample received

¹ FAO- Food and Agriculture Organization of the United Nations

² WHO- World Health Organization

IR-4 National Education Conference

Orlando, FL

March 1, 2017

Lab and Field Roundtable Discussion Summary

2. **What sort of precautions do you consider when sending samples to the lab? What are some good techniques for shipping on dry ice? What are the implications of samples arriving at the lab in less than perfect conditions? How should it be documented?**
 - a. Extra labeling/writing on bag is good idea
 - b. Do not ship on dry ice at the end of week (avoid the weekend)
 - c. 4:1 (ice : sample weight) is standard dry ice shipping ratio
 - d. Plastic baggies to contain juices is helpful
 - e. Pay careful attention to descriptions used on shipping documents
 - f. Be sure to put paperwork in reclosable plastic bags before placing in box
 - g. Contact lab before shipping on dry ice to confirm logistics of shipping and receiving the samples quickly and smoothly
 - h. If shipping on dry ice, have sample containers properly stamped/labeled before shipping to clear all checks on way to destination
 - i. Always use ACDS (Agriculture Chemicals Development Services) if possible
 - j. Consider upcoming weather for large events that may hinder your dry ice shipment
 - k. FedEx has dry ice training online
 - l. Duplicate samples if possible to help avoid trial loss related to dry ice complications
 - m. Insure the boxes for cost of trial if shipping on dry ice
 - n. Dry ice samples can be heavy (over 140 lbs.)
 - o. Write tracking # on cooler or box
 - p. Overnight ship if possible
 - q. Layer dry ice with samples like sandwich if possible
 - r. Study director will be contacted if there are any complications with the samples and field will be notified as well
 - s. When shipping with dry ice, the container must be able to vent
 - t. Block dry ice may last longer than pellets; pellets are typically easier to pack and generally more available
 - u. Plan ahead; dry ice is not available everywhere, sometimes hard to find
 - v. Pack as close to ship time as possible.
 - w. Samples should be frozen before packing unless immediate shipping is required
 - x. Tape won't stick to a cold box or cooler; wrap the tape all the way around the box or cooler
 - y. If treated and untreated samples are in the same box double bag the samples for separation
3. **If a protocol deviation is anticipated or has already occurred and the Field or Lab Research Director and the Study Director have discussed the situation, whose responsibility is it to write the Protocol Deviation or Protocol Amendment? What should be done to ensure that it is acceptable to proceed with the field trial or lab project?**
 - a. FRD/LRD is responsible for writing deviation
 - b. Study director writes amendment
 - c. Study director gives approval to proceed
 - d. Keep trying to contact study director until you can discuss situation; if the study director is absent for an extended period, it is ok to contact another study director or Debbie Carpenter at IR-4 HQ
 - e. Deviation form is not an acceptable form of communication; there should be more contact/discussion

IR-4 National Education Conference

Orlando, FL

March 1, 2017

Lab and Field Roundtable Discussion Summary

- f. Amendment can be helpful when it will apply to more than one trial; typically problems are addressed in the draft protocol stage; it can also be an amendment for a special case or local practice
 - g. All calls, emails, etc. should be documented in the notes and communication section
 - h. Amendments are for planned changes or impacting more than one location
 - i. Deviations are for unforeseen circumstances
 - j. Study director can write a deviation but typically occurs in the final report and when needed immediately
- 4. Large VS small fruited varieties – are there implications on residues?**
- a. Check with study director to ensure there is enough difference in varieties if using for differentiation
 - b. Varieties with different size, shape, thickness and/or texture of peel/skin are good options
 - c. Small fruited varieties often have higher residue because of the greater surface area to mass ratio
 - d. More handling of small fruit can effect residues
 - e. Small fruits often provide the worst-case scenario when going to registration
 - f. Application type and location of the harvested fruit (sheltered, exposed, etc.) will affect the residues as well
 - g. Representative sampling is important
 - h. Systemic vs non-systemic will have different effects no matter the size of the fruit
 - i. Sample weight is more important than number of fruits; if there is a protocol requirement for both weight and number, then both are very important; contact the study director if there will be a problem meeting either minimum
- 5. Choosing varieties for differentiation – are there implications on residues? Variety can be used if one variety is uniquely local. What other differences qualify?**
- a. Varieties with different size, shape, texture and thickness of peel/skin are good options
 - b. Don't know if the different flesh color varieties qualifies for differentiation, unless related to tannin and sugar
 - c. In analysis and in measured residues/recoveries, differences can be observed due to varieties
 - d. Spearmint and peppermint have different oils and that can have an impact on residues
 - e. Local varieties are important when trying to simulate commercial practice and may be provide an important differentiation between trials at the same site
 - f. Physiological differences can be important (foliage density or skin texture)
 - g. Maturing at different times of the year can have impacts on residues