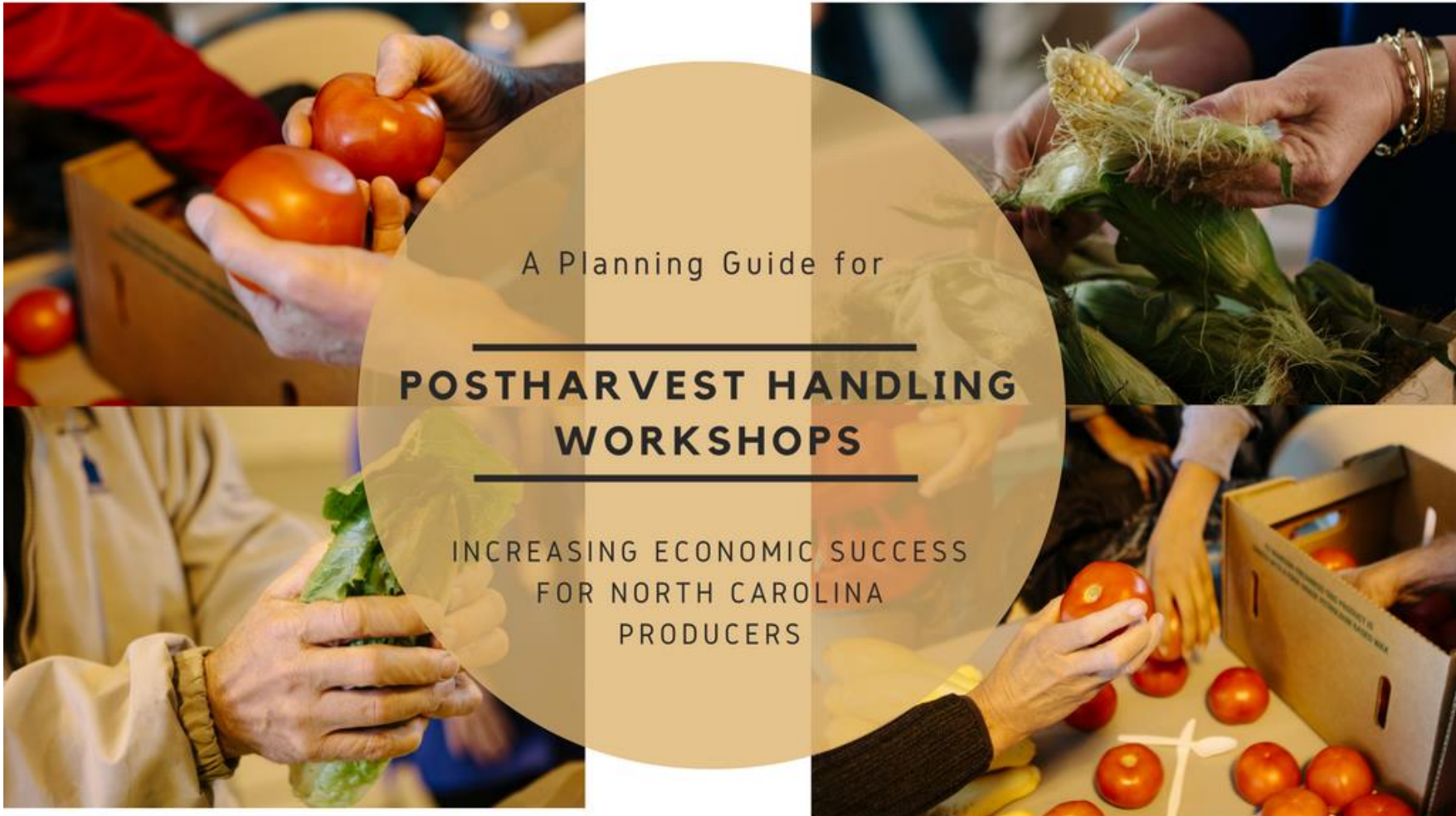


NC GROWING TOGETHER

Connecting Local Foods
to Mainstream Markets



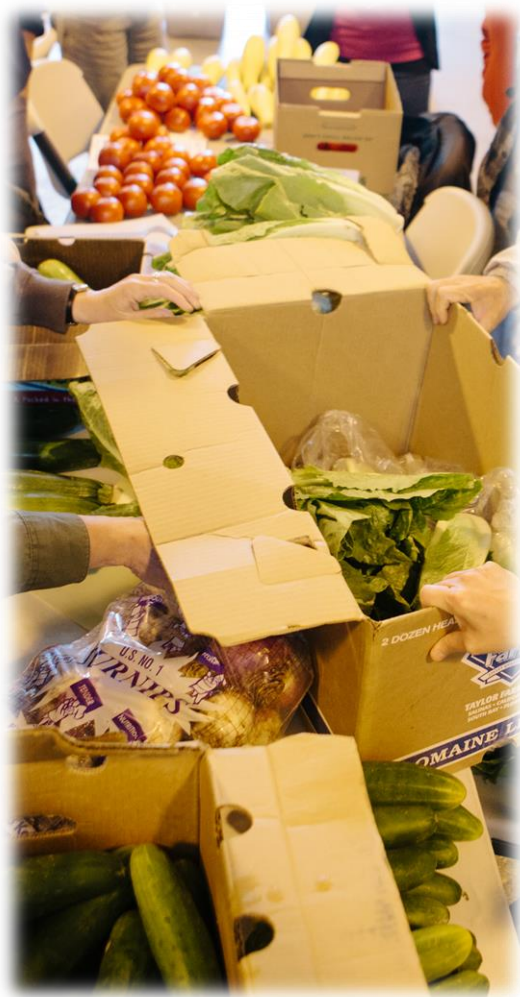
A Planning Guide for

POSTHARVEST HANDLING WORKSHOPS

INCREASING ECONOMIC SUCCESS
FOR NORTH CAROLINA
PRODUCERS

www.ncgrowingtogether.org

Purpose



Postharvest Handling workshops are an ideal way for farmers and growers to understand the harvesting, packing, and cooling requirements common to wholesale buyers, such as food distributors and grocery store chains. Workshops typically include information on postharvest disorders and common problems as well as approaches and technologies that can maintain product quality, extend shelf life, and prevent loss of sales. Wholesale buyers and distributors are invited to discuss their needs over the lunch break, with time set aside for individual grower-buyer connections as necessary.

Economically successful fruit & vegetable production is highly dependent on postharvest quality preservation. When marketing fresh fruits and vegetables, understanding the processes affecting product quality during storage and transportation is essential in obtaining a premium price for the product.

Postharvest Handling Workshops are designed to assist growers in developing skills that provide a competitive advantage in the fresh produce market. This guide outlines the processes needed to host a successful Postharvest Handling Workshop, as well as a toolkit of resources that can be used, including a Postharvest Handling PowerPoint presentation; a North Carolina-specific Wholesale Specifications Guide; and multiple resources for growers to learn more about postharvest handling and quality issues.

Sample Agenda



- 8:30 – 9:00 a.m.** **Registration and networking**
- 9:00 – 9:15 a.m.** **Introductions and Overview**
Venue Information (restrooms, lunch, etc.)
- 9:15 - 10:15 a.m.** [Postharvest Handling Presentation \(Part I\)](#)
- 10:15 – 10:30 a.m.** **Break**
- 10:30 – 11:45 a.m.** [Postharvest Handling Presentation \(Part II\)](#)
- 11:45 a.m. – 12:00 p.m.** **Break**
- 12:00 – 1:15 p.m.** **Lunch**
- *Buffet or boxed lunches are recommended due to time constraints.
- Optional: Buyer/distributor panel and/or one-on-ones
- *A lunch panel offers an opportunity for buyers and distributors to introduce themselves to farmers and talk more about their work. Make sure each includes information about their company, the type of farmer they are seeking, and their desired geographic location.*
- *Time permitting, one-on-ones with growers and buyers can be facilitated. However, this is often best addressed through a separate grower-buyer meeting – [see our guide here.](#)*
- 1:15-3:00 p.m.** **Hands-On Packing & Grading Demonstration**

Presentation Notes

Parts I & II: Classroom Setting on Postharvest Handling, Physiology, and Specifications

- The material in the presentation includes several points at which group discussion, such as best practices for packing, can take place. This kind of farmer-to-farmer learning can be an invaluable benefit of the day. The instructor should allow for guided, structured discussion at intervals throughout the presentation.
- Make sure that participant packages are bundled in order, corresponding to their sections in the PowerPoint presentation. This makes it easier for attendees to follow the presentation.



Part III: Hands-On Demonstration Session / Mobile & On-Farm Cooling Methods

- This portion requires USDA AMS grading tools and color charts, as well as several wholesale-packaged types of vegetables (see cost estimates on page 7). Tables should be set up around the room with each vegetable at its own station, and the instructor should move participants through those stations, asking them to grade each item; judge color, size, and condition; and examine packaging.
- The Wholesale Spec Guide should be handy for reference during this portion of the workshop.
- Pack 'n' Cool demonstrations or demonstrations of other mobile/on-farm cooling methods can also take place during this time.
- Asking produce distributors to stay for the hands-on demonstration can provide useful, relevant advice to farmers, and provide additional networking opportunities for buyers.

Planning Timeline

Three Months Ahead:

- Select date, time, and location for workshop. *Typical workshops last for 7-8 hours on a single day.*
- Contact Cooperative Extension and other partners to coordinate on dates, locations, resources, and marketing the workshop.
- Secure sponsorships or funding (if applicable).
- Create an outreach list for growers, buyers, and others who may be interested in the workshop.

Two Months Ahead:

- Confirm location. Ideal venues are affordable, centrally located for buyers and farmers, have plenty of parking, and accommodate at least 20-40 people. If possible, choose a venue where two rooms and a nearby parking area are available; one room can be used as the classroom setting, while another can be used for packing and grading demonstrations. If a mobile cooler, such as a [Pack 'N' Cool](#), will be on-site, make sure there is easy access to a parking area where it can be set up.
- Create event invitations. Email a “Save the Date” announcement to your outreach list and promote through social media.
- Print & distribute postcards or flyers that can be used in other locations, such as Extension and USDA offices, and sent via mail.
- Set up registration and logistics (catering, breakfast, and sign-in materials). Create a registration form that includes information about the schedule, location, date, who to contact with questions, and how to register.
- **Important registration notes:** online registration is great, but many farmers will want a paper option. If co-sponsoring with Extension, most offices know the farmers and content and have experience doing workshops, so they have a good mechanism for accepting payment. Payment options should include, at a minimum, checks and money orders, and preferably credit cards.
- Contact potential buyers who could come for the panel portion of the workshop. Note that it’s important to have, to the greatest degree possible, well-matched growers and buyers: make sure to match them by volume and type (such as larger volume GAP certified growers with larger wholesale buyers) whenever possible.
 - It’s important to make clear to buyers that this is a general information session, not a one-on-one event., at which they can engage in general networking rather than direct connections.

One Month Ahead:

- Prepare the presentation.
 - *Begin compiling participant packages and resources. Identify an instructor – this could be a consultant or Extension agent familiar with postharvest methods and approaches.*

Planning Timeline



Two Weeks Ahead:

- Confirm all details of the schedule with the instructor and anyone providing services or goods (caterer, produce provider, sign-in and registration assistants, etc.)
- Order produce from a reliable distributor or wholesaler – it's a good idea to get several types of vegetables in their typical packaging and weight.
- Confirm all wholesale buyers/distributors who will be present for lunch (and ask them if they can assist you in getting a discounted price for the produce you need!)
- Re-send electronic reminder for registration to grower lists and other marketing sources.
- Make direct calls to farmers who received paper invitations and may not respond online.

One Week Ahead:

- Print all workshop materials and an agenda.
 - *Create a package for each registrant that includes [information sheets](#) and a copy of the [wholesale spec guide](#) for use during the course.*
- Pre-load all presentations onto a thumb drive, and verify that a computer and projector will be available for the class portion of the workshop.
- Check registration for a final head count and send the total number of meals needed to the caterer. Verify final number of attendees with the venue or office manager. Send final reminder email to all participants and include directions, parking information, and the agenda or schedule for the day.
- Verify pickup/delivery of produce items and AMS grading materials.

Supplies and Costs

Estimated Cost	Recommended Supply Items
\$5.00	Name tags and sign-in sheets
\$0.00	Projector and computer (included with venue or borrowed from partner agency)
\$75.00*	<p>USDA AMS Grading Standards Materials These include color and size guides and are available from USDA at https://www.ams.usda.gov/grades-standards/how-purchase-equipment-and-visual-aids. *Cost varies based on types and number of produce items for hands-on demonstration.</p>
VARIES	<p>Produce for Demonstration Session This should include one of each of a variety of your state's common crops in wholesale form (for example, 25# boxes of squash or zucchini, 50# bags of turnips or potatoes, etc.) *Cost varies based on types and number of produce items for hands-on demonstration. Soliciting donations from wholesale partners is recommended, as is donation of items to local food pantries after workshop is complete.*</p>
\$8.00 / participant*	<p>Participant Package Free resources can be downloaded and printed from www.ncgrowingtogether.org (see specific links on final page). *Printing costs vary depending on number of participants.</p>
\$10.00 / participant*	<p>Local Foods Lunch Catering for boxed or buffet lunches can vary, especially for providers who utilize local foods. Make sure to include napkins, plates, silverware, and cups either in the catering quote or elsewhere in the budget for local purchases.</p>
\$2.00 / participant*	<p>Coffee & Breakfast Snacks Can be purchased from caterer or other provider; costs may vary.</p>
\$0.00	<p>Pack 'n' Cool Trailer or other mobile cold storage unit Typically these can be borrowed for demonstration purposes from university or extension-based research facilities; other options include borrowing or renting from a local farm.</p>

Event Setup



Produce for Demonstration Sessions

Typically, you'll want to include one of each of a variety of produce packed in its actual wholesale container. Use crops common to your region, sourced from local distributors or farms. (Ask for a discount in exchange for sponsorship marketing!) Set 2-3 people on each box and ask them to grade them using the USDA standards provided. Then, have them explain the USDA standard used and whether their produce passed. The instructor can act in the role of buyer to explain further detail and correct grading analyses.



Mobile and on-farm cooling methods are critical for the success of postharvest handling. Having a mobile demonstration unit, temperature monitors, fans, CoolBot engines, or other mobile cooling examples will help farmers fully understand the options available to them for mobile and on-farm cooling.

Event Setup

Registration table, including sign-in sheet, participant packages, nametags, and evaluations

Projector and computer with slide show prepared and launched

Food table for morning snacks, coffee, and lunch

Stations with produce and appropriate grading tools for each crop set up in demonstration room

Outdoor setup for mobile or cold storage unit, if included

Suggested Language

Save The Date / Event Announcement

Date + Time
Hosts & Sponsors
Location
Local lunch included!
Registration cost

Are you a farmer interested in selling wholesale?

This postharvest handling workshop will discuss key elements of harvesting, packing, storing, and distributing wholesale produce. Economic success in wholesale markets is dependent on the safe and efficient harvesting and packaging of vegetable products. Join us to learn more about these processes, understanding grading standards and packaging options, and even meet wholesale buyers who are interested in purchasing from local producers!

Full event registration will be announced on (date) and can be found at (website, office locations, etc.).

*Make sure to include event partners/sponsors names/logos, including any buyers who may be attending if they are to be counted as sponsors or partners.
Make sure to include RSVP instructions.*

Full Event Registration Flyer / Letter

Workshop: Advanced Postharvest Handling for Enhanced Shelf Life

The economic success of fruit and vegetable production is highly dependent on postharvest quality preservation. When marketing fresh fruits and vegetables, understanding the processes affecting product quality during storage and transportation is essential in obtaining a premium price for the product.

To assist growers in developing skills that will provide a competitive advantage within the fresh produce market, (your organization name here) is offering a Postharvest Physiology, Pathology and Handling Workshop, in collaboration with the [insert partner names here]. Participants will learn approaches and technologies to maintain product quality and extend shelf-life, limiting postharvest disorders and loss of sales.

Geared toward producers selling into wholesale markets, as well as Extension Agents who are assisting growers with wholesale market expansion, this full-day, hands-on workshop will offer a variety of tools to assist growers in meeting US Grade #1 Standards. The workshops will be conducted by (insert instructor name here).

Date + Time

Location

Cost: \$(insert cost here)/person (Includes lunch and snacks)

For additional information, please visit (your website link) or click [HERE](#) (actual link to registration form).

REGISTRATION DEADLINE:

If you need additional assistance, please contact (your agency information here).
Include hosts/sponsors, along with their logos, as needed.

Post-Event Tasks & Evaluation

****At the end of the event, make sure to get evaluation sheets or surveys back from all participants before they leave.****

A great tip: print the evaluations on brightly colored paper, so you can see which ones are still with participants!

Produce can be used for an additional workshop, or donated to a local food bank, pantry, or soup kitchen.

Within two days:

Send a thank-you email to attendees, with additional information or links you wish to share and a copy of the evaluation survey for anyone who did not turn one in.

Send a thank-you email to buyers, and check to see if they need any further information about growers in your area.

Within two weeks:

Summarize event evaluation surveys – What worked? What needs adjustment for future events? Are there additional events or information that your growers need?

Share your findings and thoughts about future workshops with other Extension agents or farmer groups in your region, and encourage them to host additional events for their own producers.



More Information



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This guide and its associated resources are available from NC Growing Together, an initiative of the Center for Environmental Farming Systems (CEFS). CEFS is a partnership of North Carolina State University, North Carolina Agricultural and Technical State University, and the North Carolina Department of Agriculture and Consumer Services. For more information, please visit www.cefs.ncsu.edu.

Presentation & Package Links

Postharvest Handling PowerPoint Presentation:

<https://www.cefs.ncsu.edu/ncgt/postharvest-handling-for-enhanced-shelf-life.pdf>

Spec Guide:

<https://www.cefs.ncsu.edu/ncgt/wholesale-and-retail-product-specs-2.pdf>

Pack 'N' Cool Information:

<https://cefs.ncsu.edu/wp-content/uploads/PackNCool-Manual2.pdf>

Additional Postharvest Handling Resources

Best Practices for Grading and Packing (Video): <https://www.youtube.com/watch?v=wiDRNsEces&feature=youtu.be>

Best Practices for Temperature and Humidity Management (Video): <https://www.youtube.com/watch?v=RUnCawcloo&feature=youtu.be>

NC DHHS List of Certified Water Testing Labs:

<https://slphreporting.ncpublichealth.com/EnvironmentalSciences/Certification/CertifiedLaboratory.asp>

Estimated Rows and Acres of Production Per Case and Pallet at Wholesale: <https://www.cefs.ncsu.edu/ncgt/ncgt-product-row-and-acres-to-cases-and-pallets.pdf>

ALL NCGT RESOURCES ARE ARCHIVED AT [HTTPS://WWW.NCGROWINGTOGETHER.ORG/FOR-PRODUCERS](https://www.ncgrowingtogether.org/for-producers).

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All photos in this guide are courtesy of [Briana Brough](#).