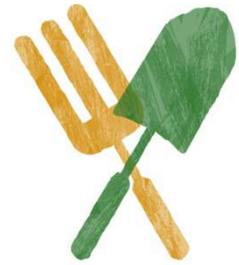


Container Herb Garden for Young Children



Connections to the Wisconsin Model Early Learning Standards



Do you have little to no space for a garden at your early care and education site but wish to engage children in growing plants? Are you looking for a type of garden where you can involve infants and toddlers as well as older children?

Consider planting a container herb garden. A small herb garden can provide a wealth of active learning experiences for children. They can use all of their senses, practice fine motor skills, express emotions and curiosity, engage in peer-to-peer and child-teacher interactions, develop math, art, and language skills, make predictions, and experiment.

The Wisconsin Model Early Learning Standards framework can help guide us to set up an active learning environment and guide teaching practices in relation to our developmental expectations of children in Wisconsin. This resource aims to give examples of ways that an herb garden can help to create an environment for child development full of opportunities for hands-on exploration.

Materials List and Approximate Cost of a Small Herb Container Garden

- One rectangular plastic container (18" x 6" x 6" – large enough for ~3 plants): \$10
- Bagged potting soil (16 qts., with no animal manure or chemical fertilizer): \$10-15
- Seeds: ~\$3/per packet
- Seedlings: \$3-5/per plant
- Organic fertilizer (if needed, high nitrogen, no animal manure): ~\$10

Maximum cost: \$50 for all new materials. Note that container gardens can be costlier than in-ground gardens. Be sure to ask about donations or discounts for garden supplies for children.

Creating Your Container Herb Garden



Step 1 - Where to plant: Most herbs like a lot of sun, so be sure to have a spot outdoors that gets at least 6 hours of sunlight. For an indoor herb garden, you will need a very sunny window or you can use a shop light with fluorescent bulbs hanging over a container (special grow lights are not necessary for non-flowering plants).

Step 2 - What to plant in: Containers can be purchased at stores, but you can also get creative and re-use old cooking pots, pans, or other household items. Just make sure there are holes in the bottom (can be made with a drill) for drainage as herbs don't like soggy soil and "wet feet" (roots sitting in water).

Step 3 - When to plant: An indoor herb garden can be started anytime, although the widest selection of herb seedlings is available in the spring. For an outdoor herb garden, it is best to plant after any danger of frost has passed (usually mid- to late-May in southern Wisconsin, early June in northern Wisconsin).

Step 4 - What to plant: Herb and flower seeds and seedlings can be found at garden centers but also quite often at grocery stores in the spring. Herb seedlings can also often be found at farmers' markets. Consider a field trip and the children could help pick out the varieties. Here are some recommended herbs and edible flowers for early care sites (all parts of these plants are safe to eat):

- **Basil** – This can be grown from seed if placed in a very warm spot or purchased as seedlings. Cuttings from plants will also root in a glass of water and then can be planted in soil. Many different types are available (lemon basil, lime basil, Thai basil, cinnamon basil, purple basil).

Container Tips:

- Wider bottoms help keep pots from tipping over.
- Soft felt containers are available which can be nice for on the playground.
- Bigger pots need to be watered less frequently whereas smaller pots and hanging baskets in full sun need to be watered very frequently (sometimes 2-3x/day).
- Plastic containers hold moisture the best, 5-gallon buckets (with holes drilled into bottom) work great.
- "Self-watering" containers are also available but are a little more expensive.
- You can also plant right into a bag of potting soil! Just lay the bag down and cut a small "x" where you want to put the plant.



- **Mint** – Once established, mint is a really hardy plant – in fact, be forewarned that if you plant it in the ground, it will spread vigorously. Some people don't mind this for if it spreads into their lawn, they will get a lovely refreshing scent when they mow over it! There are a lot of fun varieties of mint (pineapple mint, chocolate mint, spearmint, etc.; lemon balm is in the mint family too). It is a perennial, meaning that it will sprout up again from the roots each year. It is recommended to get mint as seedlings for ease of planting, or as with basil, cuttings from existing plants will root in a glass of water and then can be planted in soil.



- Other herbs – **Cilantro** and **dill** both grow easily from seed, tiny-leaved **thyme** comes in different flavors, **parsley** is available both flat-leaved and curly, and **chives** has pretty edible purple flowers. There are many options available for a wide variety of colors, textures, tastes, and smells. Consider planting herbs that have cultural significance for your families.



- Edible flowers – **Nasturtiums** (pictured right) and **pansies** are bright and beautiful and have edible flowers. If purchasing seedlings, be sure they have not been sprayed with pesticides. Nasturtiums grow easily from seed, but pansies can take a long time to mature and are best purchased as seedlings. Note that nasturtium seeds are large and could be a choking hazard for small children.



Step 5 - How to plant: Fill the containers of your choice with bagged organic potting soil that does not contain any animal manure or chemical fertilizer for safety. Adding in some compost can help hold water in the soil. Be sure to leave at least 1" of space from the top of the container to keep soil from spilling over when watering.

Follow the directions on the seed packets. You can plant the seeds directly into your larger pot. Scatter several seeds; too many is better than too few as you can thin them (clip or pull unwanted plants and use for activities) to eventually leave just a few plants per container. Top with additional soil no thicker than 2-3x the width of the seeds. To help keep the soil moist while germinating, you can cover it with light fabric until the seedlings germinate.

Transplant purchased seedlings into wet potting soil by digging a hole about twice the size of the pot. Make sure the seedling is well watered ahead of time (to keep the soil and roots intact). Press on the outsides of the container, slip the soil/roots of the seedling out of the container, and plant it into the container (being careful not to damage the stem). Give each seedling at least a few inches of space around it to grow. Water immediately after planting.

Step 6 – Fertilizing and watering: If there is not any organic fertilizer or compost already in the soil, and the plants start to yellow or slow their growth, you may need to fertilize every two weeks or so. Ask your local garden center about an organic, high nitrogen (to encourage leaf growth), non-manure-based fertilizer to use.

Important: Note that when the weather is very warm that containers can need water 1-3x/day depending on the size. Water the containers whenever the top 1” of soil is dry, or when the container feels very light. Adding wood chips, straw, or small pebbles as mulch on top of the soil can help keep moisture in. Moveable pots can be put in a shadier area or covered with a light fabric for the weekend to slow drying. Simple drip systems can be purchased and put on a timer if funds allow, or possibly ask families if they would like to help water on weekends.

Step 7 – Harvesting: Most herbs can be cut repeatedly and will grow back for more fun. You can start harvesting the herbs after the plant has about 8 leaves by snipping the tops of the stems with scissors (or cut the outer leaves at the base for parsley or cilantro). Leave at least a few leaves at the base to help with regrowth (see example to right).



Important: If the herbs produce flowers (basil and mint will send up a taller stem with small white flowers on top, lemon balm flowers will start where the leaves meet the stem – see photo to right), cut the plants back as this will encourage the plants to keep growing more leaves. Also, cut back any dead pansy or nasturtium flowers to keep those plants blooming as well. This is a good project for older children! Herbs can be used fresh or sprigs hung in bundles with string and allowed to air dry.



For extra growing guidance, ask your staff, families, and caregivers about their gardening knowledge. Also refer to the resources section at the end, or contact your County Extension Agent (<https://anre.uwex.edu/directory/county/>).

The fun has just begun! See below for explorations and activity ideas for each age group along with tips for gardening with young children. With a small garden and just a few plants, it may be best work with smaller groups of children if possible. Remember to have the children wash their hands before they handle leaves and flowers for eating.



How to Involve Young Children in the Garden:

- As much as possible, allow the children to be the gardeners in order to foster ownership and interest and build skills.
- Include them in the planning process by looking at pictures or seed catalogs. Consider having a field trip to choose plants/seeds if possible.
- To fill containers, open the soil bag wide, wet the soil to keep dust down, and allow children to scoop it with a small cup or trowel into the container.
- Read seed packet instructions aloud to the children.
- Each child can add a few seeds, or if they are really tiny, you can mix them with sand and put them a salt or parmesan cheese shaker and have the children shake them onto the soil for better distribution.
- Children can water using small cups dipped into a small bucket (with supervision), with spray bottles, or with a half-gallon plastic milk jug with the lid left on and holes poked in the top.
- If they are excited to water beyond what the plants need, encourage them to water a grassy area or pour some in the sandbox instead.
- If young children should pull seedlings out of the pot, try to replant them – they can be pretty resilient if they have enough roots!

Herb Garden Activities Appropriate for Infants/Toddlers and Connections to the Wisconsin Model Early Learning Standards

Activity 1 - Sensory Exploration

- Allow infants and toddlers to see into the containers as the plants grow and talk about the changes. Take some leaves or a sprig of the herb and invite the infants to touch and play with them. Introduce words like soft, bumpy, smooth, hairy, and color words. Crush the leaves and let them smell the scents. Toddlers can learn to lightly brush their hands over the tops of the plants to release the smell. Offer them small pieces to taste. Offer the herbs

repeatedly over time to expose them to the flavors as their tastes change. Notice their expressions after tasting and give words for their feelings.

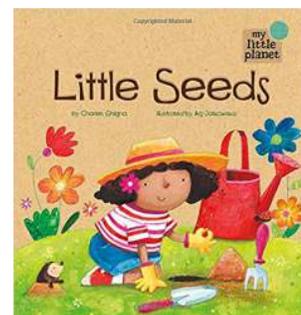
- *II. Social and Emotional A. EL. 1 Expresses a wide range of emotions.*
- *III. Language and Communication B. EL. 1 Uses gestures and movements (non-verbal) to communicate.*
- *V. Cognition And General Knowledge A. EL. 1 Uses multi-sensory abilities to process information*

Activity 2 - Imaginative Play

- Toddlers can pull leaves or flowers off of cut sprigs for play and experimenting.
 - *I. Health and Physical B. EL. 2 Exhibits eye-hand coordination, strength, control, and object manipulation.*
- Take leaves and pretend to feed them to dolls or stuffed animals. Observe if the children imitate you.
 - *IV. Approaches to Learning B. EL. 1 Engages in imaginative play and inventive thinking through interactions with people, materials, and the environment*
- If old enough to help water the plants, sing “I’m a Little Watering Can” to the tune of “I’m a Little Tea Pot” with the motions.
 - *IV. Approaches to Learning B. EL. 2 Expresses self creatively through music, movement, and art.*

Activity 3 – Learning About Plants and Insects

- Read the book *Little Seeds* by Charles Ghigna. Talk with the children about how a seed grows into a plant and act this out with them by curling up into a seed, then growing by slowly standing up and stretching arms out as leaves.
 - *III. Language and Communication A. EL. 1 Derives meaning through listening to communications of others and sounds in the environment.*
- Give the children plenty of time to notice and explore the plants and any living things that come to them. Look under the pots where it is dark and moist for pill bugs, snails, or slugs. Observe the creatures and encourage the children to be gentle and return them to their home.
 - *IV. Approaches to Learning A. EL. 1 Displays curiosity, risk-taking, and willingness to engage in new experiences*



Activity 4 - Cooking and Food Activities

- Encourage children to make “tea” by helping them to pour water over crushed mint, basil, or lemon balm leaves in a “teapot” or small pitcher. Pour into small cups, have a tea party, and taste test the teas.
 - *II. Social and Emotional C.EL. 2 Engages in social interaction and plays with others.*
- Add parsley or chives to mashed potatoes or scrambled eggs. Assist the children to harvest the leaves, rip into smaller pieces, and put them on top of their portion.

- *I. Health and Physical B. EL. 2 Exhibits eye-hand coordination, strength, control, and object manipulation.*

Herb Garden Activities Appropriate for 2-Year-Old Children and Connections to the Wisconsin Model Early Learning Standards

Activity 1 - Sensory Exploration

- Two-year olds can help harvest leaves and flowers with their fingers (if you help to hold the stem).
 - *I. Health and Physical B. EL. 2 Exhibits eye-hand coordination, strength, control, and object manipulation.*
- After they have harvested leaves and/or flowers, ask the child to feel, smell, and taste them. Ask questions about what they look and feel like (colors, shapes, textures) and what they smell or taste like (good, fresh, spicy, strong, strange, cool, hot). Split open the nectar spur on the back side of the nasturtium flowers and see and taste the sweet liquid. Help give names for the reactions the children have to these sensory experiences.
 - *I. Health and Physical C. EL. 1 Uses senses to take in, experience, integrate, and regulate responses to the environment.*
 - *II. Social and Emotional A. EL. 1 Expresses a wide range of emotions.*
 - *IV. Approaches to Learning A. EL. 1 Displays curiosity, risk-taking, and willingness to engage in new experiences.*

Activity 2 - Imaginative Play

- Make small “clothespin people” to put into the pots and ask the children about the little people’s experiences the next day.
 - *III. Language and Communication B. EL. 2a Uses vocalizations and spoken language to communicate.*
- Encourage children to use their imaginations to make “soup” for fairies (adding leaves and flowers to small container of water).
 - *IV. Approaches to Learning B. EL. 1 Engages in imaginative play and inventive thinking through interactions with people, materials, and the environment.*



Activity 3 – Learning About Plants and Insects

- Read *Over in the Garden* by Jennifer Ward, a counting book about insects in the garden read to the tune of “Over in the Meadow”. Act out the motions of grasshoppers, snails, bees, and other creatures mentioned in the book.
 - *III. Language and Communication A. EL. 1 Derives meaning through listening to communications of others and sounds in the environment.*

- IV. Approaches to Learning B. EL. 2 Expresses self creatively through music, movement, and art.
- Examine any insects on the plants (or under the pots) with magnifying glasses. Compare with picture books to help identify creatures like ladybugs, caterpillars, slugs, or pillbugs (a.k.a. roly polies).
 - V. Cognition and General Knowledge C.EL. 1 Uses observation to gather information;
 - C.EL. 2 Uses tools to gather information, compare observed objects, and seek answers to questions through active investigation.



Activity 4 – Making Bouquets for Others

- Help children to harvest sprigs of herbs and flowers. Provide small cups for children to make bouquets for staff or caregivers.
 - II. Social and Emotional C.EL. 2 Engages in social interaction and plays with others

Activity 5 – Cooking and Food Activities

- Make mint or lemon balm “tea” by having children pour warm water from a small pitcher onto leaves in a cup. Ask the children if they like the taste or to predict what will happen if you add more leaves. Have a tea party and invite stuffed animals, dolls, friends, and caregivers.
 - I. Health and Physical C.EL.1 Uses senses to take in, experience, integrate, and regulate responses to the environment
- Make homemade basil or mint lemonade with as much assistance from the children in squeezing, pouring, and stirring as possible. Encourage and model “why” questions and “I wonder” statements (“I wonder how much juice we will get from this lemon.”).
 - For 2 quarts of lemonade, use juice from about 4 fresh squeezed lemons or 3/4 cup of bottled lemon juice, fill rest of pitcher with water, add sugar or maple syrup to taste, and sliced or crushed basil or mint leaves. Stir and let set in the refrigerator for at least 30 minutes to let flavors blend.



- For optional flower ice cubes - ask the children to put one pansy or nasturtium flower in each compartment of an empty ice cube tray. It's alright if the flower sticks out of the compartment a little. Pour cool water into the compartments. Freeze until solid.



- Pour lemonade into cups and ask children to add the ice cubes to the drinks.
- Share with caregivers at pick-up and encourage the children to explain how they helped to make it. Ask children and caregivers to comment on the taste, appearance, and smell of the herbs and lemonade.

- *I. Health and Physical B. EL. 2 Exhibits eye-hand coordination, strength, control, and object manipulation.*
- *II. Social and Emotional B. EL. 1 Develops positive self-esteem.*
- *III. Language and Communication A. EL. 3 Follows directions of increasing complexity.*
- *V. Cognition and General Knowledge A. EL. 1 Uses multi-sensory abilities to process information; B. EL. 1 Demonstrates understanding of numbers and counting; C.EL. 1 Uses observation to gather information.*



Herb Garden Activities Appropriate for 3 to 5-Year-Olds and School Age Children and Connections to the Wisconsin Model Early Learning Standards

Activity 1 - Language and Literacy

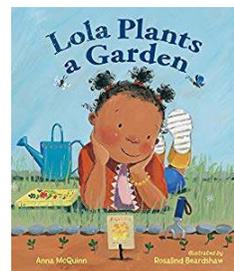
- Look at pictures of herbs and edible flowers in seed catalogs to help choose what types the children would like to grow. Ask the children if they have heard of the herbs, and ask what letter they start with. After they are planted, children can help to make labels/signs for each of the herbs by writing or tracing letters, perhaps in different languages. (Tip: Labels that are horizontal are easier for the children to read.)
 - *III. Language and Communication C. EL. 1 Develops ability to detect, manipulate, or analyze the auditory parts of spoken language; C. EL. 2 Emergent - Understands concept that the alphabet represents the sounds of spoken language and the letters of written language; C. EL. 4 Emergent - Uses writing to represent thoughts or ideas.*

Activity 2 – Learning About Plants and Insects

- Talk about what plants need to grow and explore the process from seed to flower and fruit with the book *It All Starts with a Seed* by Usborne Books. Invite the children to develop a

story using a collection of drawings or photos of seeds, plants, flowers, farmers, etc or through physical actions.

- *IV. Approaches to Learning B. EL. 1 Engages in imaginative play and inventive thinking through interactions with people, materials, and the environment.*
- Read *Lola Plants a Garden* by Anna McQuinn and ask the children to imagine what they would plant in their very own garden and to draw a picture of it.
 - *III. Language and Communication C. EL. 3 Emergent - Shows appreciation of books and understands how print works.*
 - *V. Cognition and General Knowledge B. EL. 6 Collects, describes, and records information using all senses.*



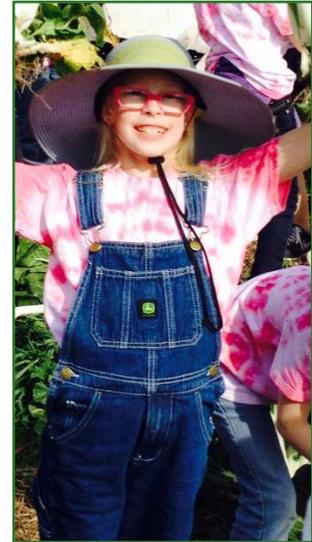
Activity 3 - Sensory Exploration

- Ask the children to gently harvest some leaves, flowers, or sprigs with their fingers or a small scissors. Ask them about their shapes, textures, and scents (have them crush the leaves a bit to release the scent). Make predictions like “Do you think these mints will taste different if they smell different?”
 - *I. Health and Physical B. EL. 2 Exhibits eye-hand coordination, strength, control, and object manipulation*
 - *V. Cognition and General Knowledge A. EL. 1 Uses multi-sensory abilities to process information; C. EL. 3 Hypothesizes and makes predictions.*
- Do taste tests and see which one they liked best. Have them ask their peers what they thought about them. Graph the results using tallies or photos of the students under a picture of each herb or flower. After they have sampled them a few times (over several days or weeks), have them close their eyes, then smell or taste and guess which one it is. Compare their smells and tastes.
 - *II. Social and Emotional A. EL. 1 Expresses a wide range of emotions.*
 - *IV. Approaches to Learning A. EL. 1 Displays curiosity, risk-taking, and willingness to engage in new experiences.*
 - *V. Cognition and General Knowledge A. EL. 1 Uses multi-sensory abilities to process information; B. EL. 6 Collects, describes, and records information using all senses; C. EL. 1 Uses observation to gather information.*
- Have children sit in a circle and play a leaf-matching game. Give each child a leaf from one of the herbs, then ask them to stand up if they have a leaf that is pointy, fuzzy, smells sweet, etc. At the end, children can find the others with matching leaves. Line them up from smallest to largest, count how many of each there are, notice which plants have more or less leaves.
 - *V. Cognition and General Knowledge B. EL. 4 Uses the attributes of objects for comparison and patterning.*
- Investigate the leaves, flowers, or insects on the plants with magnifying lenses. Look up pictures of pollinators in books to try and identify them. Encourage children to wonder (“I wonder why that insect has such small wings.” “I wonder why that leaf turned brown). Encourage the children to come up with their own explanations.

- *V. Cognition and General Knowledge C. EL. 2 Use tools to gather information, compare observed objects, and seek answers to questions through active investigation; C. EL. 3 Hypothesizes and makes predictions; C. EL. 4 Forms explanations based on trial and error, observations, and explorations.*

Activity 4 – Imaginative Play

- Encourage children to sing little songs to the plants to help them grow (they love kindness and attention!).
 - *II. Social and Emotional B. EL. 2 Expresses self creatively through music, movement, and art.*
- In the dramatic play area, provide seed packets, trowels, farmer hats and overalls, artificial flowers and vases for farmers’ market role playing.
 - *II. Social and Emotional C. EL. 2 Engages in social interaction and plays with others.*
- Long mint stems can be woven together to make an aromatic wreath or crown or hoops for playing with. Flowers and leaves can be used to make patterns.
 - *IV. Approaches to Learning B. EL. 1 Engages in imaginative play and inventive thinking through interactions with people, materials, and the environment.*



Activity 5 - Cooking and Food Activities:

- Talk with the children about how herbs are used in cooking – usually only a little bit is needed to help flavor other things. See the box on the next page for cooking ideas. Children (after washing hands) can help harvest leaves and flowers with fingers or scissors, rinse them in water, cut them into smaller pieces with scissors or wavy choppers, and each contribute a small amount to the dish. Ask them to take turns adding their herbs. Encourage and model “why” questions and “I wonder” statements and make predictions.



- *Please note:* The WMELS Performance Standards are designed to inform what we expect children to know and be able to do birth – first grade in Wisconsin. There will often be multiple WMELS Performance Standards that can be used to inform us as we plan for children’s learning. By using cooking activities in your curriculum, each time you do the activity or a similar activity, additional performance standards can be identified from the list below that can be used to intentionally plan for learning expectations of children based on each individual child’s development, the planned curriculum, implementation and assessment process.
 - *I. Health and Physical A. EL. 1d Demonstrates behaviors to meet self-help and physical needs. Eating; B. EL. 2 Exhibits eye-hand coordination, strength, control, and object manipulation.*
 - *II. Social and Emotional C. EL. 2 Engages in social interaction and plays with others.*
 - *III. Language and Communication A. EL. 3 Follows directions of increasing complexity; B. EL. 2a Uses vocalizations and spoken language to communicate.*
 - *IV. Approaches to Learning A.EL. 1 Displays curiosity, risk-taking, and willingness to engage in new experiences.*
 - *V. Cognition and General Knowledge C. EL. 1 Uses observation to gather information; C. EL. 3 Hypothesizes and makes predictions.*
- Whenever possible, offer the class-made foods to caregivers at pick-up to enjoy and taste test. Encourage the children to share how they helped to make them.
 - *II. Social and Emotional B. EL. 1 Develops positive self-esteem*
- Invite other teachers, family members, farmers, or community members to share their experiences with the children about the way herbs are used in their culture.
 - *II. Social and Emotional B. EL. 2 Demonstrates self-awareness.*
 - *IV. Approaches to Learning C. EL. 2 Learns within the context of his/her family and culture.*

Ideas for Cooking with Fresh Herbs:

- cilantro as a taco topping
- parsley on top of buttered whole-grain crackers
- dill and cucumber salad
- rosemary with potatoes
- chopped mint with watermelon cubes
- put chopped/crushed mint leaves and sliced cucumber in a pitcher of water in the refrigerator for a few hours for a refreshing drink
- basil pesto (blended basil with garlic, olive oil, salt, pine nuts or sunflower seeds and parmesan cheese) served over pasta or on a whole-grain cracker
- small amounts of herbs can be used to make salad dressings (chop and add to oil and lemon juice – each child can add an ingredient and take turns shaking in a sealable jar or container) or add chopped fresh herbs and edible flowers directly to the salad greens
- mix herbs into hummus to spread on whole grain crackers or bagels
- top whole-grain crackers with hummus and pansy or nasturtium flowers

Bonus Activities

- Make homemade herb butter! Baby food jars work well for small-sized hands. See a lesson plan here: <https://wischoolgardens.org/wp-content/uploads/2017/09/EasyHerbButterRecipe.pdf>
- Use your cilantro to make salsa with safe scissors: <https://wischoolgardens.org/wp-content/uploads/2017/09/Scissor-Salsa-Recipe.pdf>
- Every culture has its own favorite herbs and spices. Invite families to share theirs or to bring in samples in a smelling jar to share with the children and to tell the stories behind them.

Resources for Further Information:

“Gardening with Young Children” book by S. Starbuck, M. Olthof, and K. Midden

“Got Dirt?” – Wisconsin gardening information for beginning gardeners –

<https://www.dhs.wisconsin.gov/physical-activity/foodsystem/gardening.htm>

“Safety in the Little Gardeners’ Garden” - <https://learningstore.uwex.edu/Assets/pdfs/A3905-07.pdf>

“Container Gardening” - UW-Extension: <https://learningstore.uwex.edu/Assets/pdfs/A3382.pdf>

Questions? Comments? Get in touch!

Contact our farm to ECE team at wifarmtoece@rootedwi.org. Visit our website at rootedwi.org to find more farm to ECE resources.

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