



# Gardener's Handbook



Photo: Nick Roth, Cape Gazette

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## Mission Statement

The mission of the Lewes Community Garden is to create a sustainable community garden in the greater Lewes, Delaware area by sharing knowledge, experience, and friendship. The goal is to provide accessible gardening opportunities for people of all ages and abilities. Members use organic practices to maintain the gardens, where we learn from each other, grow nutritious food, and share with the larger community.

## Volunteer Opportunities

Volunteers are always welcome. Anyone can volunteer. There are no residency requirements.

As a volunteer you can:

- Help tend community beds
- Help with building projects
- Help with educational events
- Help with community outreach
- Act as a Garden captain (please see job description in the Appendix)

Volunteers are asked to keep track of their hours. Please see the **Volunteer Log** in the Appendix. If you are interested in volunteering please contact Perrin Smith 302-381-4779 [perrinsmith@yahoo.com](mailto:perrinsmith@yahoo.com) or Barbee Kiker 302-249-2954 [bjkik@comcast.net](mailto:bjkik@comcast.net).

## Organic Gardening

### *Soil Preparation and Care*

Soil preparation is key in organic gardening. Soil should be deep and drain well, with adequate amounts of organic matter. You should check the PH and soil fertility by doing a soil test at least every 3 years. Results of the analysis will provide guidelines and recommendations on what the soil needs. Soil can be improved by adding organic matter such as compost and manures. Both green and composted manures work. Add two inches of organic matter per year to maintain soil fertility.

### *Natural and Organic Fertilizers*

Plants in general require only a small amount of nutrients on a daily basis but vegetables demand adequate amounts right away to see them through to harvest. Insufficient amounts of nutrients will result in reduced quality and yield.

Organic fertilizers are those made from animal or plant by-products and include fish emulsions, blood meal, bone meal, alfalfa meal and animal manures. The advantage of using organic fertilizers is that they are released slowly and do not burn the plants. Also, organic amendments such as compost and manures improve the soil by adding organic matter and providing enough nutrients to the plants. This includes trace elements which are not present in inorganic fertilizers.

## *Composting*

Compost is decomposed organic material such as leaves or vegetable scraps that, once broken down, turns into humus and resists further breakdown. Decomposition takes place through the work of microscopic organisms including fungi and bacteria, and larger organisms like earthworms, sow bugs, millipedes and others. Composting benefits soil quality, increasing water retention and creating air pockets for plant roots to grow.

The LCG has several “cold” compost bins, in which plant matter from the LCG site is slowly decomposing. Seasoned compost from these bins will be added to garden beds as needed to prepare beds for planting.

## *Organic Pest Control*

The basic principles of organic pest control:

- Do not use any chemical which will harm the ecosystem.
- Build the health of the soil with compost.

Note the following:

- Healthy soil includes earthworms, bacteria, algae and fungi.
- Acceptable supplements are earthworm castings, fish and seaweed extracts, vegetable kitchen waste, eggshells, and coffee grounds.
- A healthy ecosystem includes pollinators and beneficial insects (lady bugs) that feed on pest insects such as aphids.
- Use of insecticides and pesticides should be a last resort, as there are few which will not also have adverse affects on beneficial insects and soil microbes. Consider physical methods of pest control first. Use only approved products having the OMRI<sup>1</sup> certification.

Below are examples of acceptable products:

<b>Product</b>	<b>Used For</b>
Dipel	Cabbage worms, tent caterpillars, hornworms
Rotenone/Pyrethrum	Aphids, potato beetles, cucumber beetles, mites, white flies
Rotenone	Aphids, cabbage loopers, leafhoppers
Safer's insecticidal soap	Aphids, cabbageworm, earwigs, mites, mealy bugs, white flies
Diatomaceous earth	Slugs, aphids, ants
Garlic barrier	Ants, aphids, leafhoppers, tent caterpillars
Hot pepper wax	Aphids, leafhoppers, mites, white flies
Liquid copper	Black rot, downy mildew, early blight powdery mildew
BT	Cabbage worm
Mycostop	Fusarium and Verticillium wilt <sup>2</sup>

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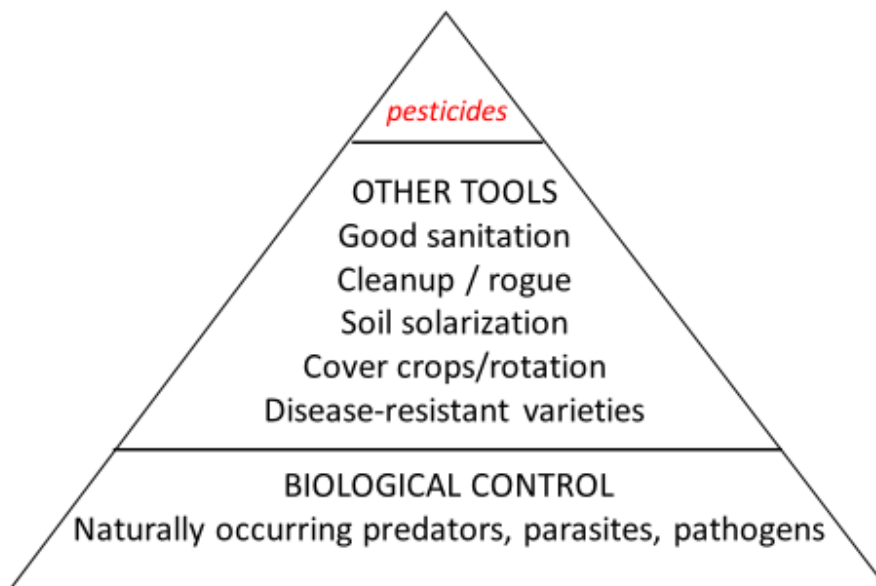
<sup>1</sup> OMRI (Organic Materials Review Institute) certify organic products and provide information and assistance.

<sup>2</sup> See <https://www.planetnatural.com/pest-problem-solver/plant-disease/fusarium-wilt/>

Other ways to manage Fusarium and Verticillium wilt:

- Remove plant debris/weeds from beds
- Use resistant plant varieties
- Avoid high nitrogen fertilizers
- Use good sanitation practices
- Crop rotation every 4-6 years
- Avoid overwatering

### *Integrated Pest Management (IPM) Pyramid*



INTEGRATED PEST MANAGEMENT (IPM) PYRAMID

### Websites

Supplies	<a href="http://www.gardensalive.com">www.gardensalive.com</a>
Seeds etc.	<a href="http://www.territorialSeed.com">www.territorialSeed.com</a> , <a href="http://www.reneesgarden.com/">www.reneesgarden.com/</a>
Disease resistant plants	<a href="https://www.hobbyfarms.com/24-disease-resistant-crop-varieties-strategies-improve-their-vigor/">https://www.hobbyfarms.com/24-disease-resistant-crop-varieties-strategies-improve-their-vigor/</a>

### Watering Guidelines

- Don't overwater. Soggy soil promotes fungal growth.
- Use hose or watering can, no sprinklers.
- Water at base of plant (about 1" per week).
- Seeds/seedlings may need daily attention.
- Established plants need 1-1.5 gallons/square foot/week.
- Let garden captain know if you will be away so arrangements can be made to have your bed watered and harvested for you.

## Mulch

Why mulch? A thick layer of organic mulch will help retain the soil moisture crucial for plant survival while also reducing growth of weeds that compete for needed resources. Mulch also helps to reduce soil erosion, provides organic matter to the plants and soil organisms, and moderates soil temperatures.

### *Types of Mulch*

Commercially available bark mulch is widely used because of its uniform texture and variety of colors suitable for tidy landscaping. However, there are several drawbacks to bark mulch:

- Higher Cost
- May contain coloring agents and/or toxic herbicides such as Preen <sup>™</sup>
- Little water-holding capacity

Wood chips are preferable to bark mulch for several reasons:

- Cheaper method
- No toxic herbicides or dyes (if from typical horticultural activity)
- Absorb and hold moisture

Other possible mulch:

- Grass clippings
- Shredded newspaper (minimize color paper and no glossy inserts)
- Leaves (preferably mowed)
- Shredded paper

## Appendix

### *Gardeners 2020*

First Name	Last Name	Shared With	Bed #	Phone	Email
Ruth	Barnett	Kathryn Marsh	7A	302-644-1223	319samantha@comcast.com
Jen	Biddle		5B	814-360-4899	jfbiddle@gmail.com
John	Biddle		5B	814-360-8273	jpbiddle@udel.edu
Cab	Burns	Bill Avrey	2E	302-645-7437	iamcab@gmail.com
Christy	Callanan		2C	302-245-6203	christcal5007@msn.com
Yolanda	Diaz		8A,B	302-864-0275	
Ana	Dittel		1C,D	302-645-8271	adittel@udel.edu
Linda	Dylla		7B	301-996-0519	dylla_linda@yahoo.com
Judy	Eger	Kathryn Harris	2A,B	703 409 7518	judyeger@ao.com
Dennis	Ferry		3C	302-559-9568	denferry@aol.com
Deb	Fratella		7C	302-897-0983	yarbed1522@aol.com
Ray	Fratella		7C	302-437-4433	yarbed1522@aol.com
Patrick	Gaffney		2D	302-645-1151	pmgaffney@gmail.com
Kathryn	Harris	Judy Eger	2A,B	302-644-0314	kathrynph@aol.com
Janice	Hillman		3B	267-716-3995	janicehillman2@gmail.com
Dan	Howard		7D	301-343-3771	heyhoward@yahoo.com
Phil	Johnson		2F	410-963-7134	pjtreehugger@aol.com
Jon	Joyce		3F	302-644-3315	
Barbee	Kiker		6A,B	302-249-2954	bjkik@comcast.net
Bill	Lovett		1F	302-373-8187	taters52@lcloud.com
Kathryn	Marsh	Ruth Barnett	7A	817-691-7759	kvmarsh50@yahoo.com
Lou	Papp		1A,B	302-645-0230	loudot2@verizon.net
Cathy	Ramsey		3E	865-621-6039	catbentley@hotmail.com
Candy	Robinson		3A	302-383-2196	Candyrobo@live.com
Richard and Mary	Ross		5C	202-438-0051	rtross1000@yahoo.com



First Name	Last Name	Shared With	Bed #	Phone	Email
Linda	Saccardi		6C	302-682-2380	ljsaccardi@gmail.com
Gail	Seligson	Chris Braudy	3D	703-405-0872	gseligson@aol.com
Richard and Steph	Soukop		1E	917-574-9276	crossrail125@gmail.com
Gary and Jane	Stokes		8C,D	410-365-9225	muskrat48@gmail.com
Lily	Tanverdi		5E	302-547-3516	lilytanverdi@yahoo.com
Juli	Tugend		5F	570-815-0106	woodstock10363@aol.com
Michael	Whitehouse		5D	203-241-7979	majwhitehouse@comcast.net
Joan	Williamson		6D	302-841-7144	flipandjo@yahoo.com

### *Emergency Numbers*

Call 911 in case of an emergency. The Garden address is 366 Park Road.

### *Lewes Community Garden Board*

Position	Name	Email	Phone
Chair	Perrin Smith	perrinsmith@yahoo.com	302-381-4779
Vice-Chair	Barbee Kiker	bjkik@comcast.net	302.249.2954
Secretary	Janice Hilman	janicehillman2@gmail.com	267-716-3995
Treasurer	Lou Papp	loudot2@verizon.net	302-645-0230
At Large	Ana Dittel	adittel@udel.edu	302-645-8271
At Large	Linda Dylla	dylla_linda@yahoo.com	301-996-0519
At Large	Patrick Gaffney	pmgaffney@gmail.com	302-645-1151
At Large	Cathy Harris	cather1neharris@hotmail.com	302-463-0393
At Large	Kathryn Harris	kathrynph@aol.com	302-644-0314
At Large	Kathryn Marsh	kvmarsh50@yahoo.com	817-691-7759
At Large	Gary Stokes	muskratt48@gmail.com	410-365-9225
At Large	Michael Whitehouse	majwhitehouse@comcast.net	203-241-7979

### *Lewes Community Garden Committees*

**Build Committee** Charged with: Developing the site plan for the garden, preparing and planning for build days; Developing timelines for future garden development and growth; Helping maintain the physical structure of the garden; Testing soil and making recommendations for improvement; Implementing the pest (tick) management plan; Developing garden watering guidelines; and Managing compost bins.

**Procedures Committee** Responsible for: Developing procedures for running the garden including organic pest control, organic fertilizers and mulch; Developing job description for garden captains; Planning garden orientation and educational events in coordination with Communication and Outreach committees; Advising on information to be included in the garden handbook.

**Communication Committee** Charged with: Keeping contact lists up to date and managing the LCG website and social media activities; Managing our print information material including newsletters, brochures and presentations; Developing relationships with local papers; Keeping our photographs on Google drive; Sending out announcements to the community and potential gardeners.

**Outreach Committee** Responsible for: Developing relationships with community groups such as schools, food pantries, and churches; Setting up harvest donations; Helping identify low income families for the community sponsored garden beds; Working with the Garden Management and Communications committees to plan community garden educational events.

**Fundraising Committee** The Committee works with Board to develop and conduct fundraising programs and researches potential donor sources and grants.

## *Garden Captain Job Description*

### Overview

- Two co-captains work together.
- Captains monitor the garden for a two week period.

### Duties

- Post your contact information with dates of service.
- Check the garden daily.
  - Monitor beds.
  - Assess garden maintenance needs.
  - Contact member if a problem develops (ex. aphids).
  - Follow up to verify that the problem is addressed (to prevent spread to other beds).
  - Communicate with the vice chair about all garden issues (ex, untended beds).
- Be available to answer questions from gardeners.
  - Refer gardener to appropriate person if needed.
- Provide guidance to gardeners as appropriate.
- Help arrange volunteer tasks as needed.
- Assist with harvest donations as needed.
- Greet visitors as garden representative.
- Empty trash container.
- Sign off by communicating with next round of captains.
- Send brief update email to volunteers and gardeners at the end of your two weeks.

## *Rules*

Our intent is to create a garden community and environment where people feel comfortable and safe. Your commitment to following these guidelines will help us to create and maintain this type of garden space for us all. Thank you.

1. Members will attend a Garden Orientation before they begin planting.
2. Members will not take food or plants from other gardeners' plots. Members will not take anything from the garden that is not rightfully theirs.
3. No herbicides or pesticides allowed in the garden except for LCG approved products.
4. Members will conserve water by watering only when needed. Do not leave a hose running. Replace the hose when done. No sprinklers are allowed.
5. Gardeners will be considerate and respectful. No abusive or profane language in the garden.
6. Notify the Garden Captain of any change in contact information such as phone number or email.
7. Children must be supervised at all times. No pets are permitted.
8. Members will not leave personal equipment at the garden. Members will keep plot, paths, and surrounding areas clean and neat and will remove all trash.
9. No illegal plants. No smoking, alcoholic beverages, illegal drugs, or gambling are allowed in the garden. Members will not come to the garden while under the influence of alcohol or illegal drugs.
10. Guests and visitors may enter the garden only if accompanied by a member.<sup>3</sup> Designees will be allowed to tend a garden plot after notifying the Garden Captain and providing the designee's name and contact information. Designees must follow all rules, terms, and conditions. Members are solely responsible for the behavior of their guests and designees.

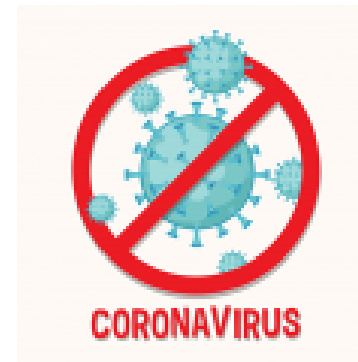
## *Breaking Rules - Cause for Expulsion and Loss of Plot*

1. Failure to comply with garden rules will result in one verbal warning from the Board.
2. If no response or correction has been made, a written notice will be sent two weeks later.
3. If no response or correction has been made after second notice, member will receive a final, written notification that gardening privileges and plot have been forfeited.
4. Suspended gardeners will be allowed to reapply for another garden plot after one year at the discretion of the Lewes Community Garden Board.

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<sup>3</sup> During the COVID-19 epidemic, a spouse or family member who lives with you will be allowed to garden with you. However, friends, neighbors, and garden partners sharing your garden plot will not.

## COVID-19 Precautions



**MAXIMUM 4 PEOPLE AT A TIME**

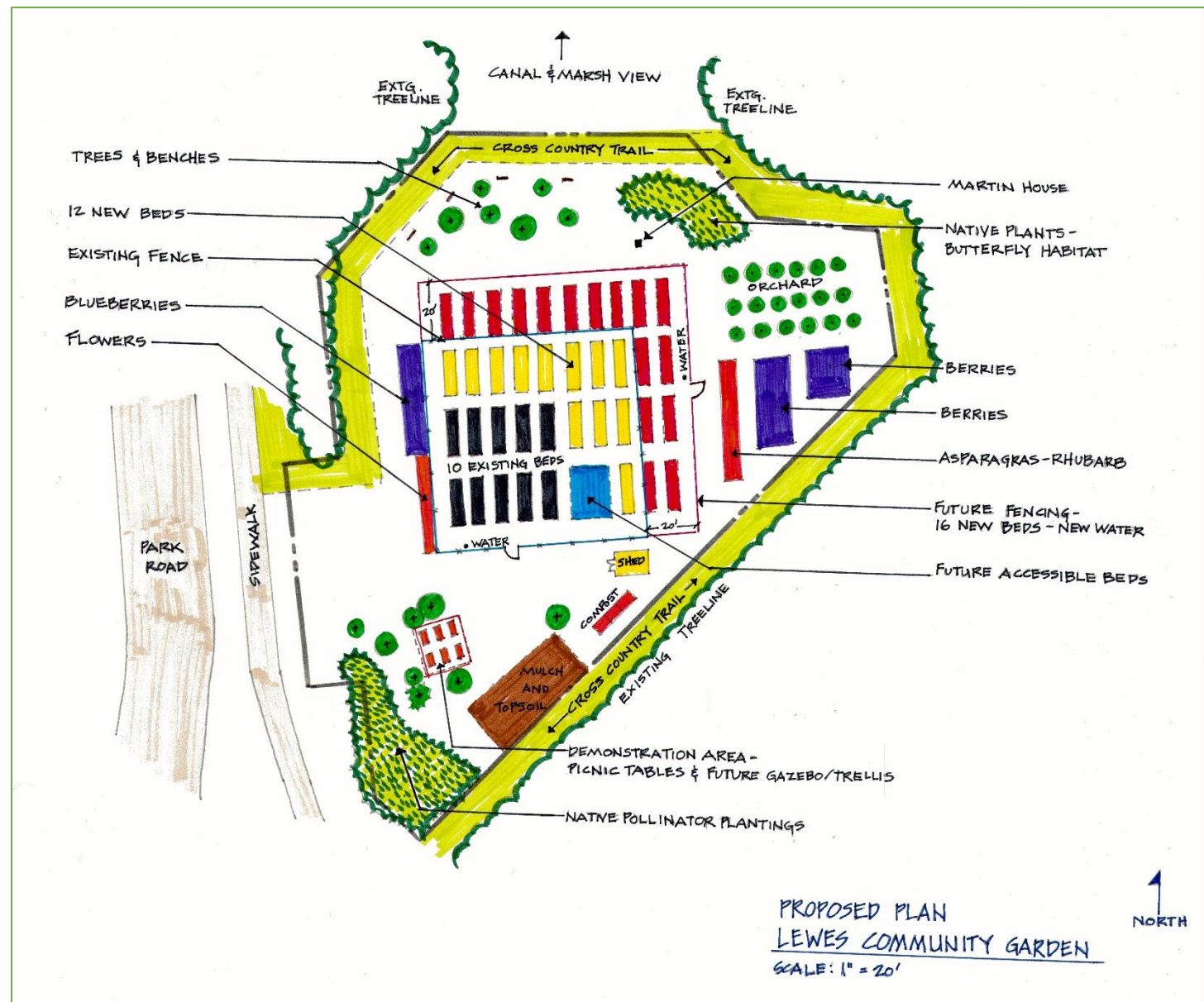
Only family members can accompany gardener

- Do you have on your garden gloves before entering?
- Did you bring your own garden tools?
- Will you maintain a 6' distance?
- Masks are recommended!

Thank you for helping to keep us all safe and well!



## Garden Plan



*Volunteer Log<sup>4</sup>*



Name	Date	Hours	Description

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<sup>4</sup> Volunteers are asked to keep track of their hours. The numbers are used when applying for grants.

## *LCG Integrated Pest Management Program for Tick Control*

Note: The following recommendations are based on a review of current scientific literature (see Patrick Gaffney if you would like references). These guidelines are useful when enjoying the outdoors anywhere in Sussex County.

### **Disease Prevention:**

We have three disease-carrying species of tick in our area: Deer tick, lone star tick, and American dog tick. Lyme disease is the most familiar threat, but there are others: babesiosis, tularemia, anaplasmosis, Rocky Mountain spotted fever, and ehrlichiosis.

Disease prevention relies on the following:

- Avoiding areas where ticks occur (tall grass, woodland border vegetation), at times when they are active.
- Personal prevention of tick bites by:
  - Wearing appropriate clothing.
  - Using insect repellents (DEET) and clothing treatments (permethrin). Organic repellents are less effective but may offer some protection.
  - Promptly removing unattached or attached ticks (do a close self-inspection after possible exposure).
  - Putting garden clothes in the dryer for a few minutes after exposure (ticks can't tolerate desiccation).
- Landscape management to reduce exposure to tick hosts (deer and white-footed mice)
  - Deer will be discouraged by the garden fence and clearing of vegetation surrounding the garden.
  - Mice abundance will be reduced by cutting grass low around the garden and removing brush and debris.
- Use of pesticides to selectively target ticks (professionally installed bait boxes delivering a pesticide (Fipronil, as used in Frontline dog collars) to ticks on mice; DIY "tick tubes" that contain permethrin-soaked cotton, which mice take to use as nesting material. We are starting with the tick tubes, which are about 10X less costly than the bait boxes, and will see how they work.
- Prophylactic treatment with antibiotics after a tick bite to prevent disease transmission. (Please note that a tick bite may still transmit disease even if not accompanied by a rash or "bull's eye" marking!)

### **Garden Management**

- We recommend that anyone working in the garden have permethrin-treated clothes, especially in the springtime, or when helping with site preparation. Permethrin spray will be available to anyone requesting it. We recommend that volunteers wear closed-toe shoes or rubber gardening boots when gardening throughout the season.



- To make the area within and around the garden safe for gardeners, we will create large grass-free areas using landscape cloth and wood chips, bordered by open areas that are regularly mowed. (Although organic herbicides have been suggested as a means of grass removal, they have limited efficacy, require repeated applications, and are less effective against grass than against broadleaf weeds – so they would not eliminate the need for mowing. Landscape cloth and wood chips will allow for long-term grass-free areas.)
- In the spring and at mid-summer we will set out tick tubes containing cotton infused with permethrin. The mice carry the cotton back to their nests. The permethrin then kills the ticks without killing other insects or pollinators.
- If a volunteer receives a tick bite, or finds a tick on himself/herself while at the garden, please let a garden manager know so that we can track the incidents of tick encounters at the Garden.

### *Lewes Community Garden History*

The idea for a Lewes Community Garden grew from a conversation between three local gardeners in the summer of 2016. Wouldn't it be wonderful, they imagined, if the town of Lewes had its own community gardens, like those they had known or been members of in other places around the country.

While individually each had home gardens, the concept was to share a gardening experience at a community level and involve all comers – from budding and newly initiated growers – to master gardeners.

In early 2017, the group made a formal presentation to the Lewes City Council and garnered broad support. Another presentation to the Lewes in Bloom membership followed and was similarly encouraging. Soon after the group began promoting the garden idea publicly and hosting monthly meetings at the Lewes Public Library. During the following two and half years, as word spread and interest grew, a number of potential sites were identified but attempts to borrow or lease land proved unsuccessful.

In the early summer of 2018 the Lewes Community Gardeners returned to the City of Lewes and began working with the Town's Parks and Recreation Commission to identify available land. Soon after in July the Commission unanimously recommended the city support the group to build a community garden in the Great Marsh Park on Park Road. On June 8th 2019 the Lewes Community gardeners broke ground on the site, officially christening the opening of the Lewes Community Garden.

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