



UC Master  
Gardeners  
Napa County

# Welcome!



## Fall & Winter Vegetables

August 13, 2023



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Agriculture and Natural Resources

UCCE Master Gardener Program



## UC Master Gardeners of Napa County

<http://napamg.ucanr.edu/>

*Our mission: To extend research-based knowledge and information on home horticulture, pest management, and sustainable landscape practices to the residents of California and be guided by our core values and strategic initiatives.*



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# Help Us Grow!

Our follow-up survey provides us the tools we need to grow and improve the quality of our program.



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# Today's Team

- Pat Hitchcock
- Adrienne Boudreaux
- Sue Helms
- June Ressler
- Janice Mathews



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# Today's Schedule

## **General orientation to fall & winter vegetable gardening:**

- Cool season vegetables defined
- Climate and environmental factors
- Your site and microclimate
- Healthy soil

## **Hands on activities:**

- Starting your own transplants from seed
- Planting seeds into ground
- Transplanting vegetable starts

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



# Cool vs Warm Season Veggies

- Warm season vegetables grow best at 65 to 95 degrees Fahrenheit and are damaged or killed by frost.
- Cool season vegetables grow best in daytime temperatures of 55 to 75 degrees Fahrenheit and tolerate some amount of short-term freezing.



# Seed Packet Sorting



What part of the plant do we eat?

1 Roots

2

Stems/leaves/flowers

3 Fruits/seeds



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# Seed Packet Sorting



Divide packets into cool season or warm season.



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# Seed Packet Sorting



Looking only at the cool season packets, put in order of days to maturity.

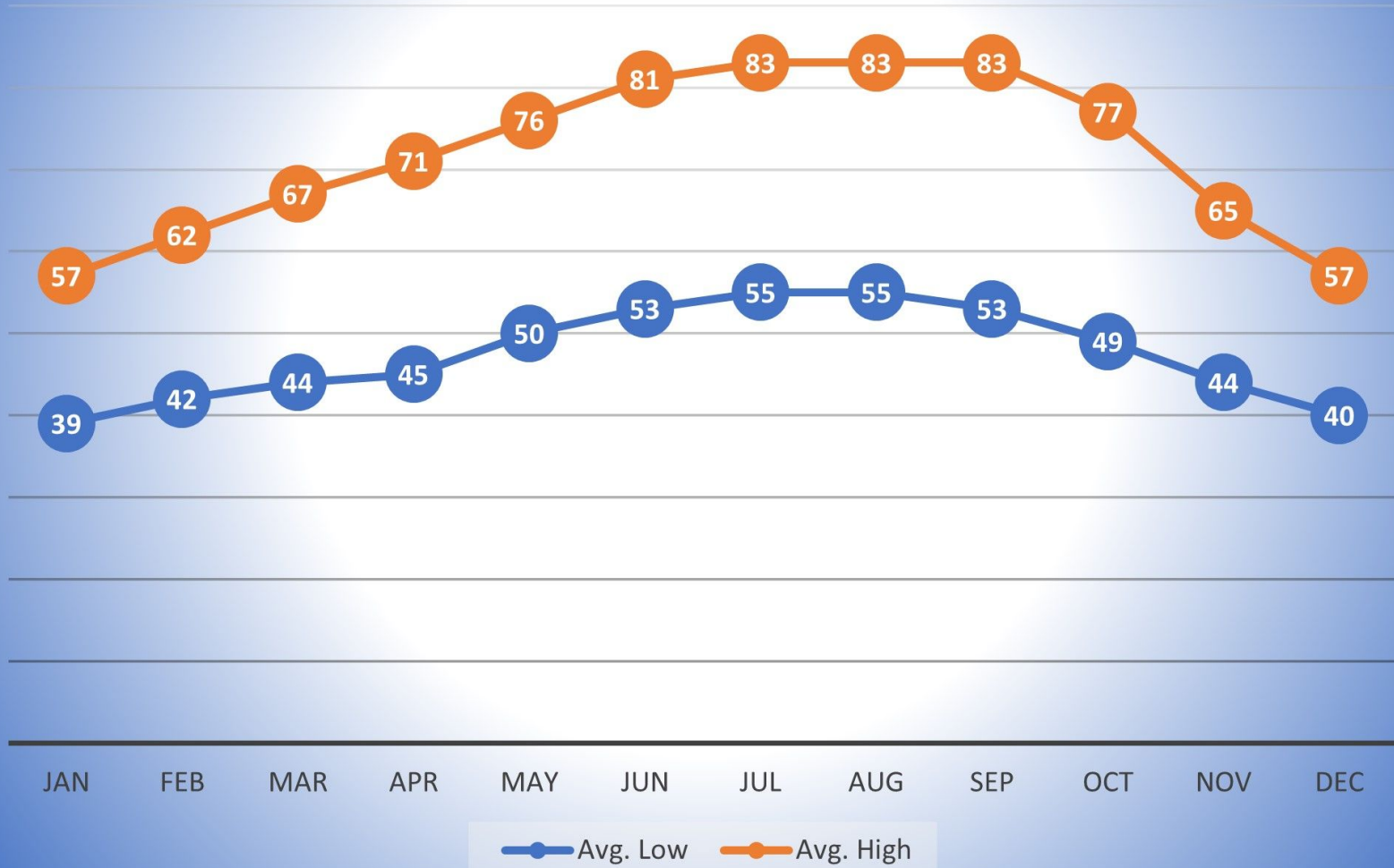


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# Monthly Average Temperatures Napa, CA

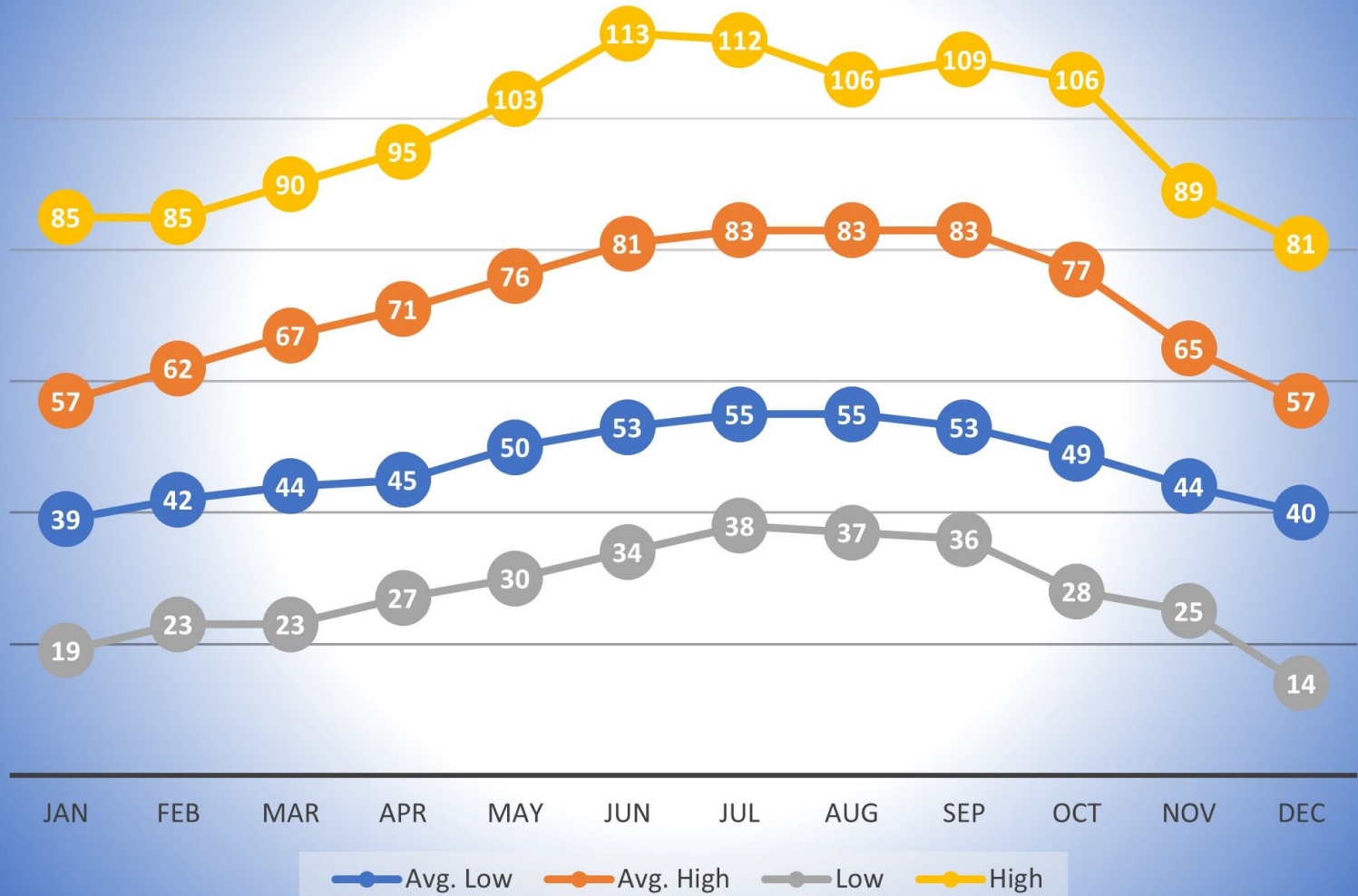


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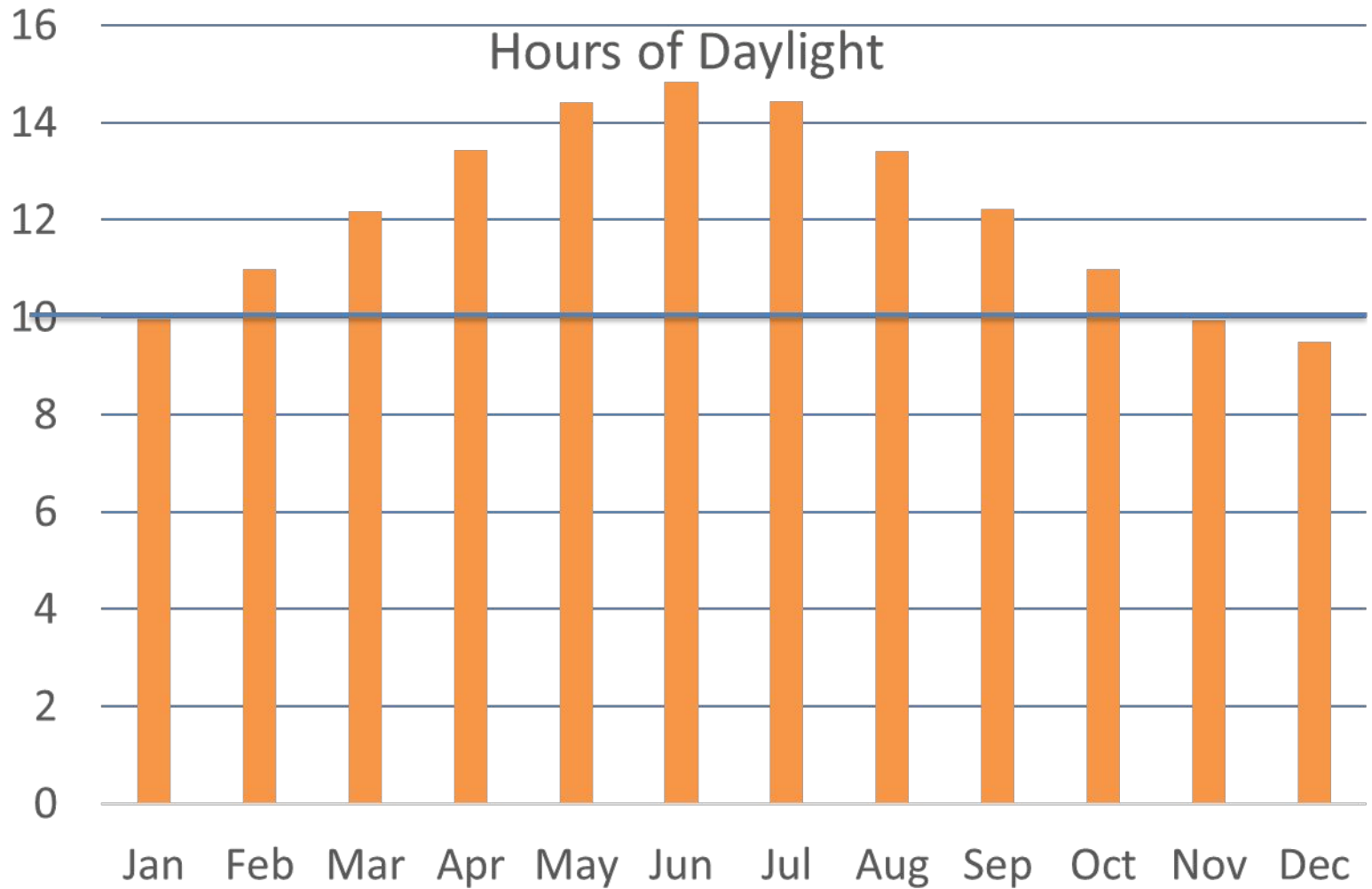
# Monthly Record Highs and Lows



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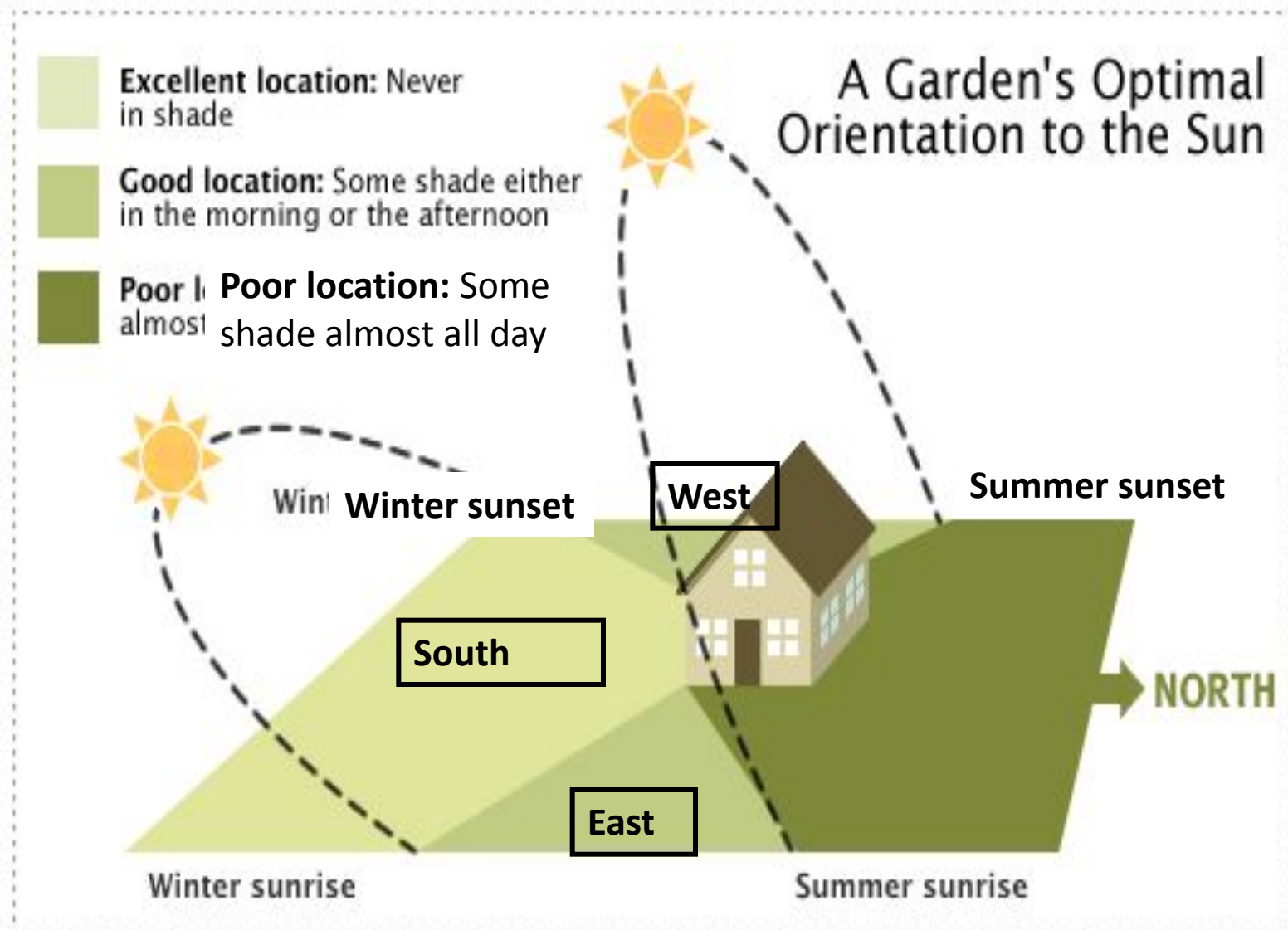


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# Sunlight: Summer vs Winter



# Microclimates in a garden plot



Sunny area

Shady area



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# HEALTHY GARDEN TIPS

Web site: <http://napamg.ucanr.edu> Telephone: 707-253-4221  
 University of California Cooperative Extension - UC Master Gardeners Napa County

## SUMMER/FALL VEGETABLE PLANTING GUIDE FOR NAPA COUNTY

(From Robert F. Norris, Botany Dept. U.C.D, Prepared 10/98)

VEGETABLE	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	NOTES/COMMENTS
Broccoli		Plant seeds	Plant seedlings		Plant seeds indoors/in greenhouse	Harvest	Range of season	Range of season	Range of season					
Brussel Sprouts	Plant seeds	Plant seedlings		Plant seeds indoors/in greenhouse	Plant seedlings	Harvest	Range of season	Range of season	Harvest					
Cabbage		Plant seeds	Plant seedlings			Harvest	Range of season	Range of season						"Early" types could be planted up to 10 days later
Carrots		Plant seeds				Harvest	Range of season	Range of season						
Cauliflower		Plant seeds	Plant seedlings		Plant seeds indoors/in greenhouse	Harvest								
Fava Beans					Plant seeds indoors/in greenhouse					Harvest	Range of season			
Kohlrabi		Plant seeds	Plant seedlings		Plant seeds indoors/in greenhouse	Harvest	Range of season			Plant seeds indoors/in greenhouse	Plant seedlings		Harvest	Best to do spring planting near beginning of period shown
Lettuce		Plant seeds	Plant seedlings		Plant seeds indoors/in greenhouse	Harvest	Range of season							Planting and harvesting season depends greatly on type
Onions	Range of season	Plant seeds			Plant seedlings	Plant seedlings			green onions			bulbs		
Peas (early and late varieties)					Plant seeds indoors/in greenhouse				Range of season	Harvest				
Potatoes		Plant seeds				Harvest								Harvest and store
Radish			Plant seeds		Harvest	Range of season								
Red Cabbage		Plant seeds	Plant seedlings			Harvest	Range of season	Range of season						
Rutabaga	Plant seeds	Plant seedlings	Plant seedlings	Plant seedlings	Plant seedlings	Plant seedlings	Harvest	Range of season	Range of season					
Spinach				Plant seeds indoors/in greenhouse				Range of season	Harvest	Range of season				
Turnip		Plant seeds				Harvest	Range of season	Range of season	Range of season					

Code:



Plant seeds



Plant seedlings



Harvest



Range of season



Plant seeds indoors/in greenhouse



## WINTER/SPRING VEGETABLE PLANTING GUIDE FOR NAPA COUNTY

VEGETABLE	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	NOTES/COMMENTS
Broccoli														Harvest time depends on planting date and weather
Beets														
Cabbage														Harvest time depends on variety and weather
Cantaloupe														
Carrots														
Cauliflower (early) (late)														
Chard														
Corn														
Cucumber														
Eggplant														
Lettuce														Harvest time depends on variety and weather
Onions, Shallots														Harvest and store
Peas														
Peppers														
Potatoes														Harvest and store
Pumpkin														
Radish														
Snap Beans														Plant Lima beans 1 week after earliest snap beans, and until late May
Tomatoes														
Watermelon														
Zucchini														

Code:

Plant seeds

Plant seedlings

Harvest

Range of season

Plant seeds indoors/in greenhouse

Updated 7/14/22

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# Planting Guide for Annual Vegetables

## Napa County

Month	Plant seed outdoors	Start seed indoors	Plant seedlings outdoors
<b>January</b>	Garlic (sets), kale, onions, radishes, spinach	Asian greens (bok choys, mustards), brassicas (broccoli, cabbage, cauliflower, collards, kale, kohlrabi), lettuce, leeks, onions, (late in month: eggplant & peppers)	
<b>February</b>	chard, lettuce, onions, parsnips, peas, potatoes, radishes, rutabagas, spinach, turnips	Asian greens, brassicas (broccoli, cabbage, cauliflower, collards, kale, kohlrabi), chard, eggplant, leeks, lettuce, onions, parsley, peas, peppers, tomatoes	Asian greens (bok choys, mustards), brassicas (broccoli, cabbage, cauliflower, collards, kale, kohlrabi), celery, leeks, lettuce, onions
<b>March</b>	Asian greens (bok choys, mustards), beets, carrots, chard, kale, cilantro, fava beans, lettuce, parsnip, peas, potatoes, radishes, rutabagas, spinach, sunchoke (tubers), turnips	Brassicas (broccoli, cabbage, cauliflower, collards, kale, kohlrabi), chard, eggplant, leeks, lettuce, onions, parsley, peppers, tomatoes, tomatillos	Asian greens (bok choys, mustards), brassicas (broccoli, cabbage, cauliflower, collards, kale, kohlrabi), chard, leeks, lettuce, onions
<b>April</b>	Beans, beets, carrots, chard, endive, lettuce, parsnip, potatoes, radishes, spinach, sunflower, turnip, (late in month: squash, cucumbers, pumpkins)	Basil, chard, cucumbers, leeks, lettuce, melons, onions, parsley	Brassicas (broccoli, cabbage, cauliflower, collards, kale, kohlrabi), chard, leeks, lettuce, onions, (late in month: eggplant, peppers, tomatoes)
<b>May</b>	Beans, beets, carrots, chard, cilantro, corn, cucumbers, dill, endive, leeks, lettuce, melons, okra, onions, parsnip, potatoes, pumpkins, radishes, squash, sunflower	Basil, chard, lettuce (heat tolerant), parsley	Basil, chard, cucumbers, eggplant, leeks, lettuce, melons, onions, parsley, peppers, pumpkins, squash, tomatoes, tomatillos
<b>June</b>	Beans, beets, chard, cilantro, corn, cucumbers, dill, endive, leeks, lettuce, melons, okra, parsnip, pumpkins, radishes, squash, sunflower	Basil, chard, lettuce (heat tolerant), parsley	Basil, chard, cucumbers, eggplant, lettuce, melons, parsley, peppers, pumpkins, squash, tomatoes, tomatillos
<b>July</b>	Beans, beets, chard, cilantro, corn, cucumbers, dill, endive, leeks, lettuce, melons, parsnip, peas, pumpkins, radishes, squash	Chard, leeks, lettuce, (late in month: brassicas including Brussels sprouts, celery)	Basil, chard, lettuce
<b>August</b>	Beets, carrots, chard, cilantro, lettuce, parsnips, peas, radishes, rutabagas, spinach, turnips	Brassicas (cabbage, kohlrabi, kale, broccoli, cauliflower, Brussels sprouts), fennel, radicchio	Brassicas (broccoli, Brussels sprouts, cabbage, cauliflower, collards, kale, kohlrabi), chard, leeks, lettuce
<b>September</b>	Asian greens, beets, carrots, chard, cilantro, dill, endive, lettuce, parsnips, peas, radishes, rutabagas, spinach, turnips	Bok choy, brassicas (broccoli, cabbage, cauliflower, collards, kale, kohlrabi), endive, escarole, lettuce, onions	Brassicas (broccoli, Brussels sprouts, cabbage, cauliflower, collards, kale, kohlrabi), endive, fennel, celery, leeks, lettuce, radicchio
<b>October</b>	Asian greens, carrot, chard, cover crops, fava beans, garlic, mache, onions, parsnip, radishes, rutabaga, spinach, turnips		Brassicas (broccoli, cabbage, cauliflower, collards, kale, kohlrabi), endive, escarole, lettuce, onions
<b>November</b>	Chard, carrots, cover crops, fava beans, garlic & shallots (from cloves, not seeds), onions, radishes, spinach		
<b>December</b>	Fava beans, garlic & shallot cloves, radishes, parsley, spinach		

# Basic Garden set up

**Level ground**

**Water Source**

**Enough Sunlight**

**Good Soil**

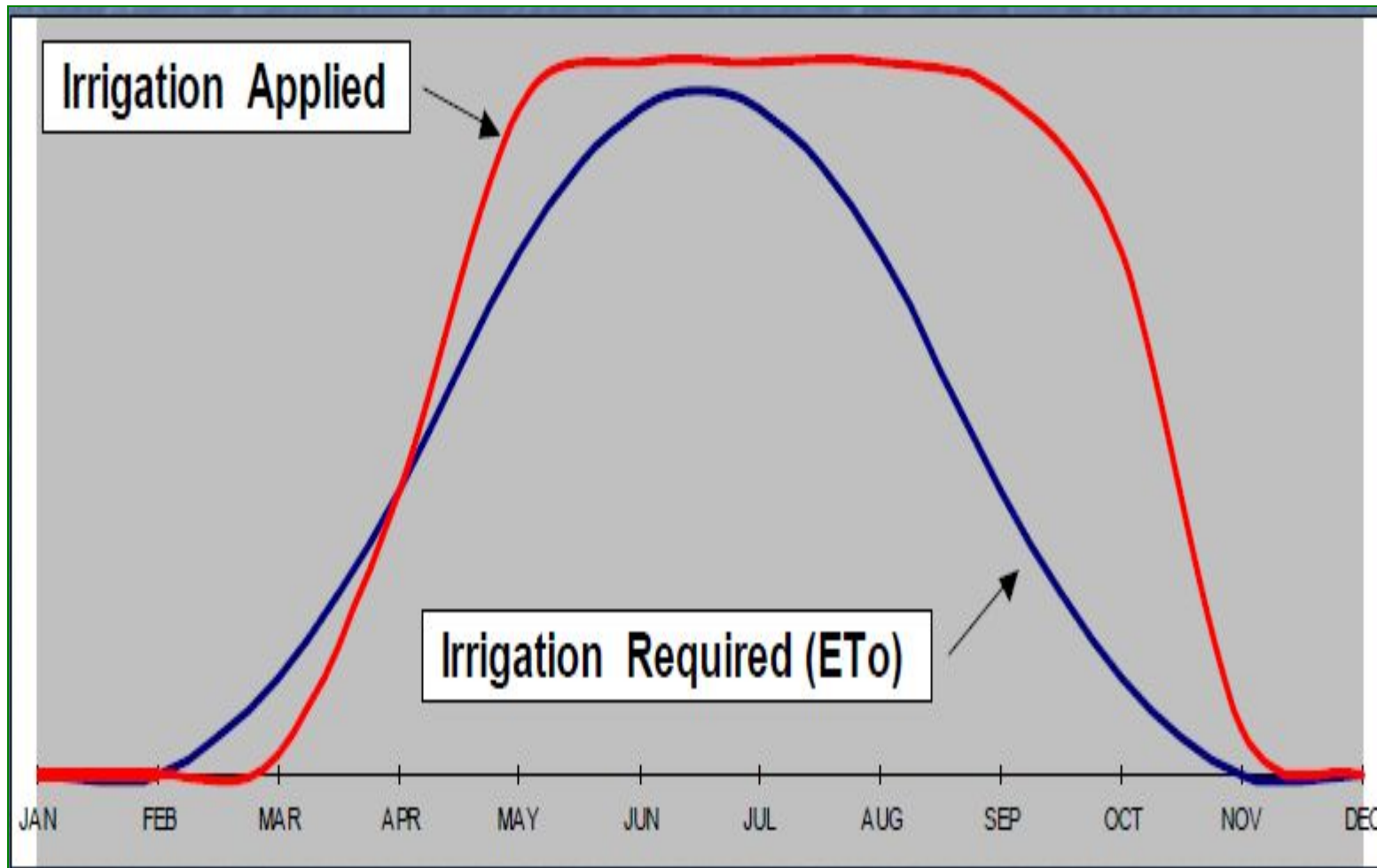


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# RELATIVE WATER NEEDS BY TIME OF YEAR



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# Plants grow well in soil that ...



Has a healthy physical structure

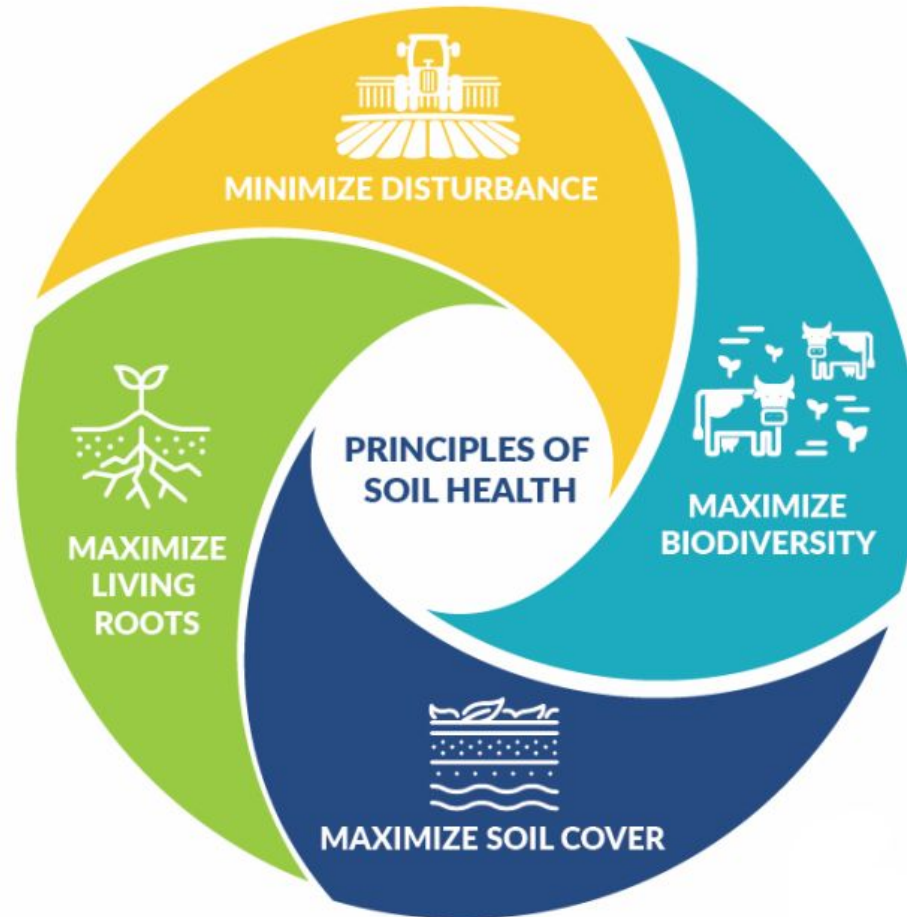


Contains essential nutrients

# Keeping Soil Healthy



Natural Resources  
Conservation Service



















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# Crop Rotation for diversity & soil health

	AREA 1	AREA 2	AREA 3	AREA 4
YEAR 1	 <b>LEAVES</b>	 <b>FRUIT</b>	 <b>ROOTS</b>	 <b>LEGUMES</b>
YEAR 2	 <b>LEGUMES</b>	 <b>LEAVES</b>	 <b>FRUIT</b>	 <b>ROOTS</b>
YEAR 3	 <b>ROOTS</b>	 <b>LEGUMES</b>	 <b>LEAVES</b>	 <b>FRUIT</b>
YEAR 4	 <b>FRUIT</b>	 <b>ROOTS</b>	 <b>LEGUMES</b>	 <b>LEAVES</b>



# Soil Additions



compost



mulch



amendment

fertilizer





# Compost

Is decomposed organic matter

Make it at home



Purchase  
in bags



Buy it from recycling  
companies



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# Mulch

Is layered on top of soil to cover and protect it

- Mulch preserves moisture, reduces weeds, prevents erosion, and can slowly add some nutrients.
- Mulch is usually organic.
- One of the best mulches is compost.



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# Amendments

Are mixed into the soil to improve the texture or physical condition of the soil.

Examples are barnyard manure, green manure and cover crops (such as fava beans, mustard, grains), and a variety of packaged mixes.



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# One of the best amendments is compost



Compost decomposes into humus to improve soil structure.

Compost improves drainage and aeration.

Compost conserves soil moisture.

Compost nurtures the soil biome.

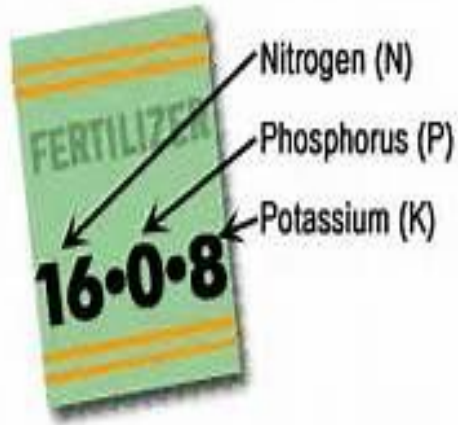


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# Fertilizers



**5-X-X Nitrogen (N)** promotes green leafy growth

**X-5-X Phosphorus (P)** assists in flower, seed, and fruit production

**X-X-5 Potassium (K)** helps develop root and tubers



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# Organic Fertilizer Examples

Commercial organic fertilizers

Animal manures

Seaweed (kelp)

Fish meal or emulsion

Soybean meal

Alfalfa pellets

Bone and blood meal



# Organic vs. Synthetic Fertilizers

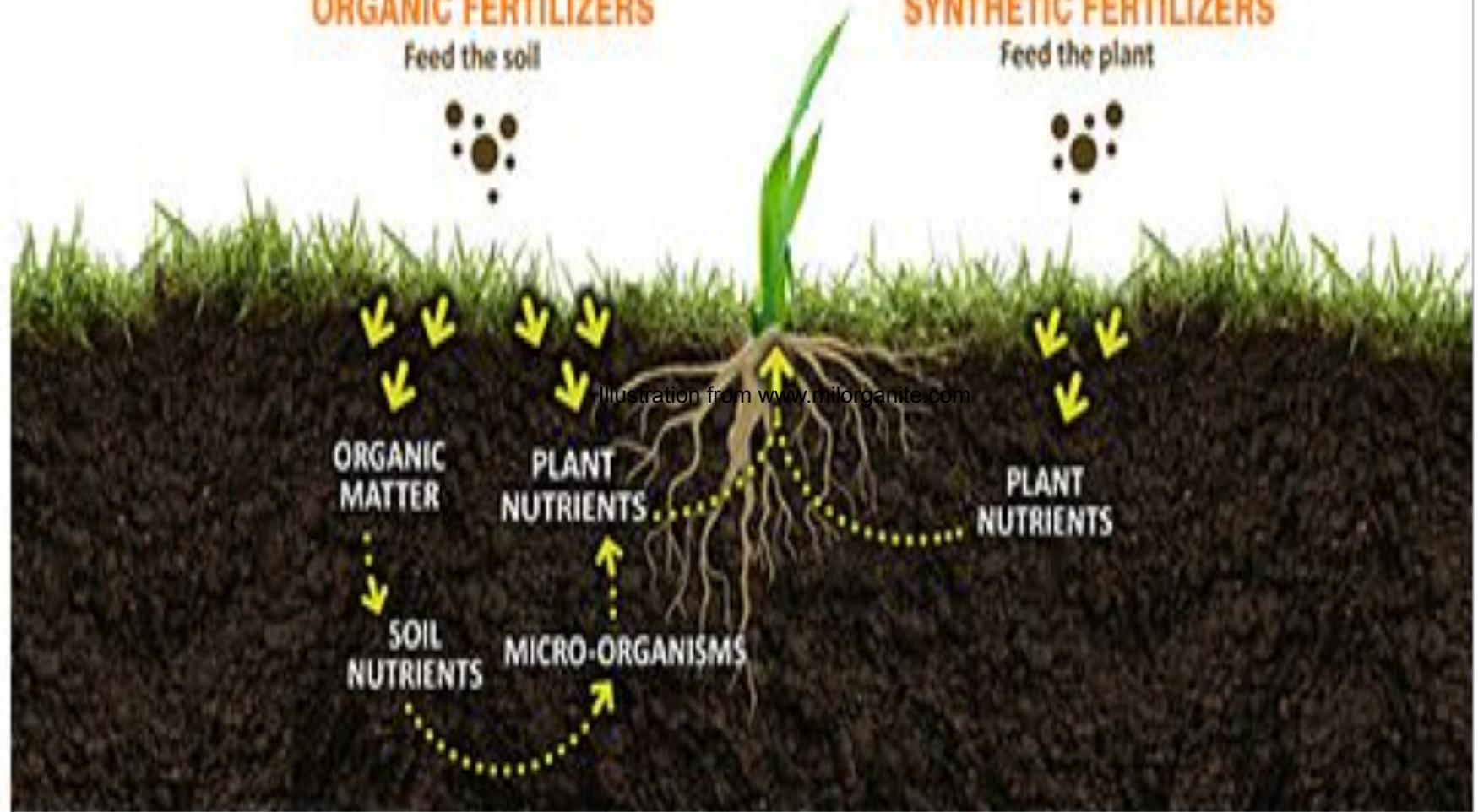
## ORGANIC FERTILIZERS

Feed the soil



## SYNTHETIC FERTILIZERS

Feed the plant



# Space-stretching Strategies

- Plant under or between summer crops
- Plant in containers
- Sacrifice a portion of summer crops
- Start seedlings indoors for later transplant to garden (not appropriate for all vegetables)





# Go vertical if possible



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# Interplant Compatible Vegetables

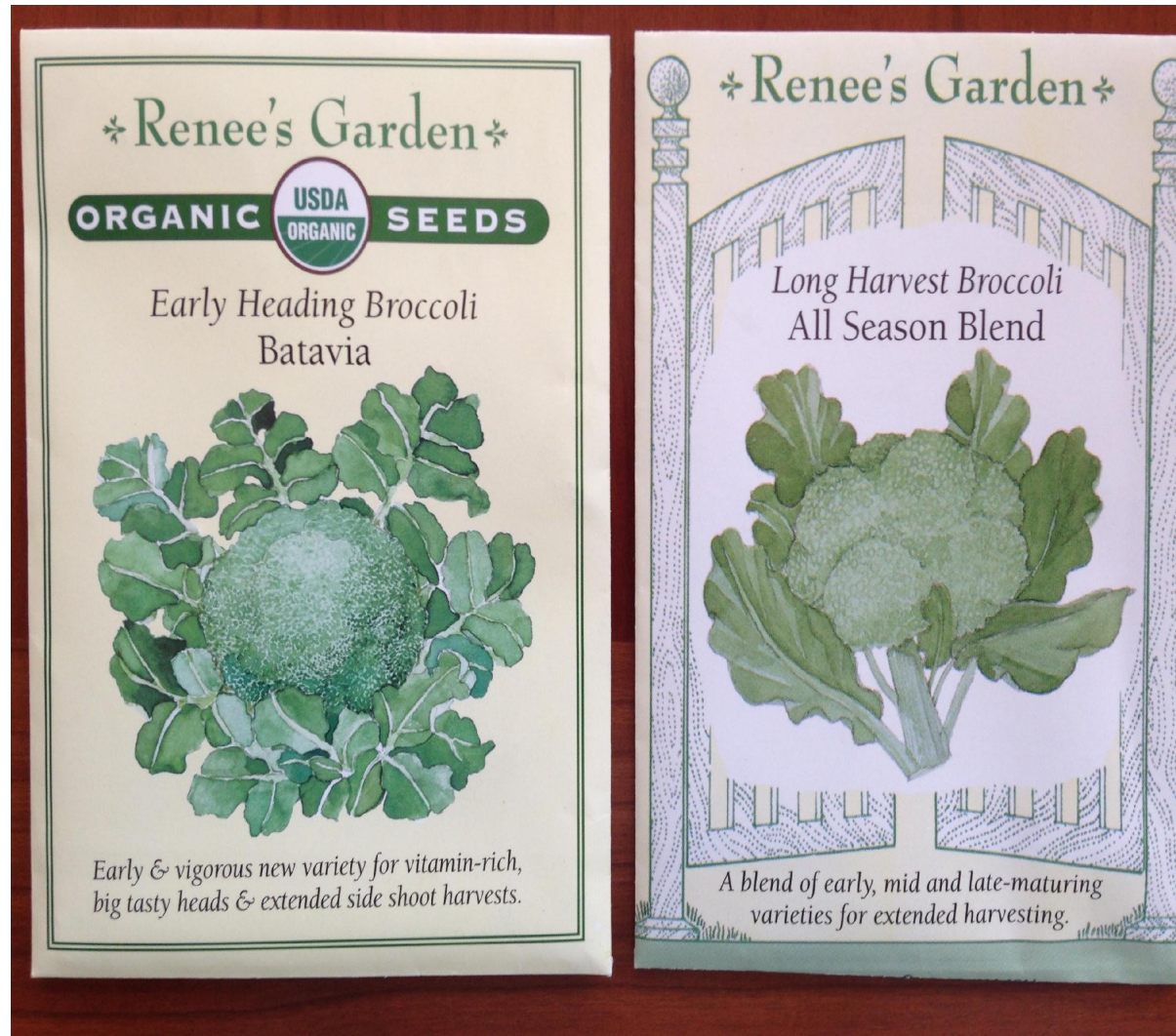


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# Plant Varieties with differing maturity rates



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# Learning Centers: 10 minutes each

Transplant lettuce seedlings to take home.



Plant seeds in the ground, small and large. (June)

Plant seeds to grow at home and transplant out in September.



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# Integrated Pest Management

- Prevention
- Diagnose First
- Non-chemical Control
- Limit use of pesticides

# Integrated Pest Management



# Salad Greens: Lettuce



Looseleaf



Mix (mesclun)



Heading

Arugula



# Snails and Slugs





# Greens: Kale



Red Russian



Nero di Toscano

# Aphids



# Parasitized aphids



# Chard



Bright Lights



French White

# Spinach



# Leafminer



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# Greens: Asian



Bok choy



Tatsoi



Komatsuna

# Cabbage Family: Cauliflower



Romanesco, Graffiti, Early Snowball



# Cabbage family: Broccoli



# Cabbage Family: Kohlrabi



# Imported cabbageworm



# Cabbage looper



# Root crops: Carrots



# Root Crops: Radishes, Turnips, Rutabagas



Radishes



Turnips



Rutabagas

# Peas



Shelling



Snow or pea pod



Sugar snap

# Peas: Powdery Mildew





# Fava beans



Crimson fava



Fava flower and aphids



Fava root nodules

# Common Theme: Row Covers



Make from:  
PVC pipe  
½" metal conduit  
bamboo stakes or rebar and 1"  
irrigation tubing  
mesh fabric (can buy in sheets or  
large rolls)



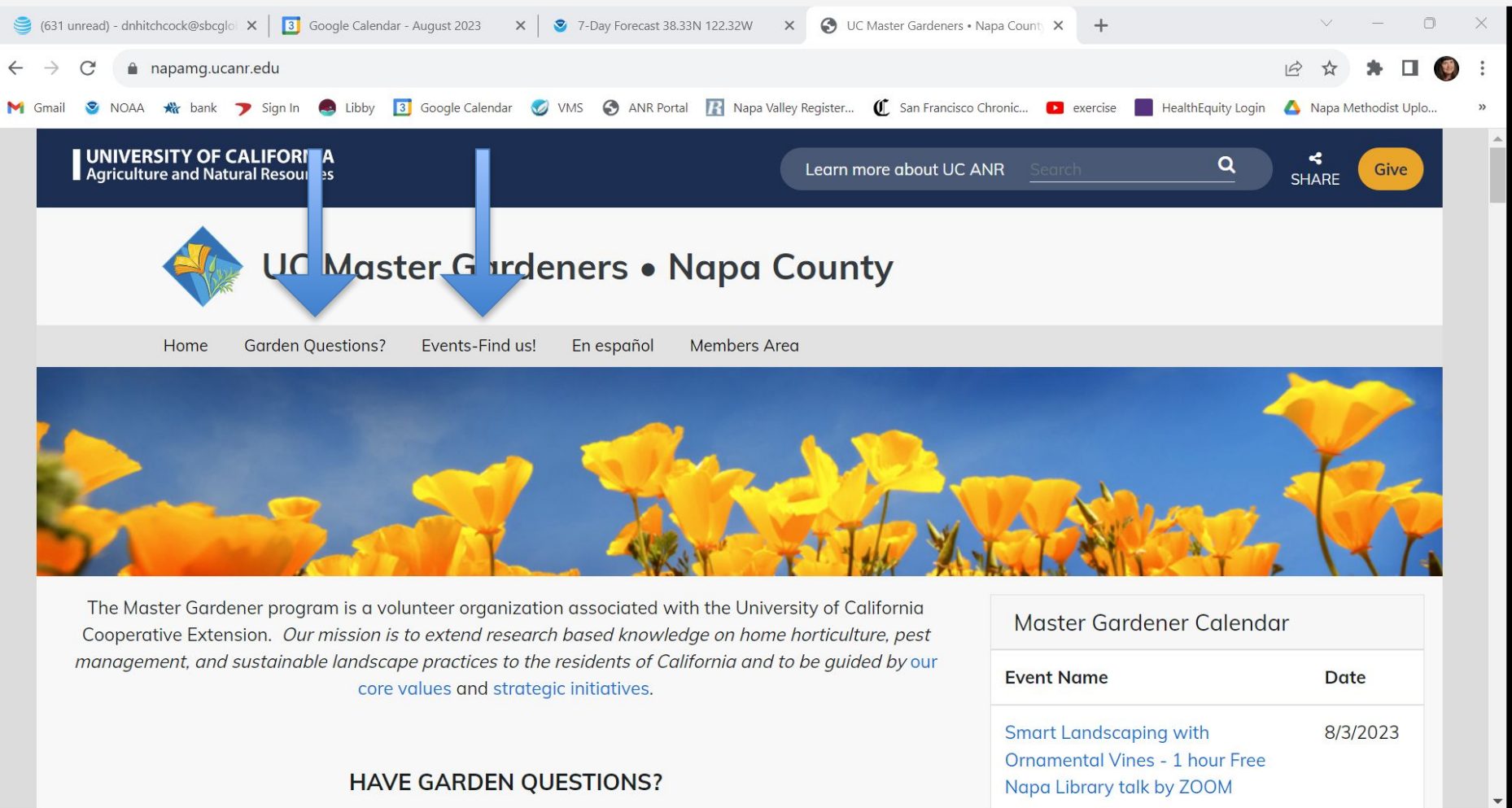
FIND this slideshow & further resources  
on our website:

UC Master Gardeners of Napa County  
<http://napamg.ucanr.edu>



# Find information on our homepage

The arrows point to tabs for garden questions and recordings of past events



The screenshot shows a web browser displaying the homepage for UC Master Gardeners Napa County. The browser's address bar shows the URL [napamg.ucanr.edu](http://napamg.ucanr.edu). The page header includes the University of California Agriculture and Natural Resources logo and navigation links for "Learn more about UC ANR", "Search", "SHARE", and "Give". The main heading is "UC Master Gardeners • Napa County". Below this is a navigation menu with tabs: "Home", "Garden Questions?", "Events-Find us!", "En español", and "Members Area". Two blue arrows point from the top of the page down to the "Garden Questions?" and "Events-Find us!" tabs. The main content area features a banner image of yellow poppies and a text block describing the Master Gardener program. To the right, there is a "Master Gardener Calendar" table.

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Learn more about UC ANR Search

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Home Garden Questions? Events-Find us! En español Members Area

The Master Gardener program is a volunteer organization associated with the University of California Cooperative Extension. *Our mission is to extend research based knowledge on home horticulture, pest management, and sustainable landscape practices to the residents of California and to be guided by our [core values](#) and [strategic initiatives](#).*

HAVE GARDEN QUESTIONS?

Master Gardener Calendar	
Event Name	Date
<a href="#">Smart Landscaping with Ornamental Vines - 1 hour Free Napa Library talk by ZOOM</a>	8/3/2023



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# Questions?

**And thanks for joining us today.**