



UC Napa County Master Gardeners August 10, 2024

Growing Fall and Winter Vegetables



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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
- Maria Bautista
- Linda McClimans
- Jill Pahl
- Kathy Tschida



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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.

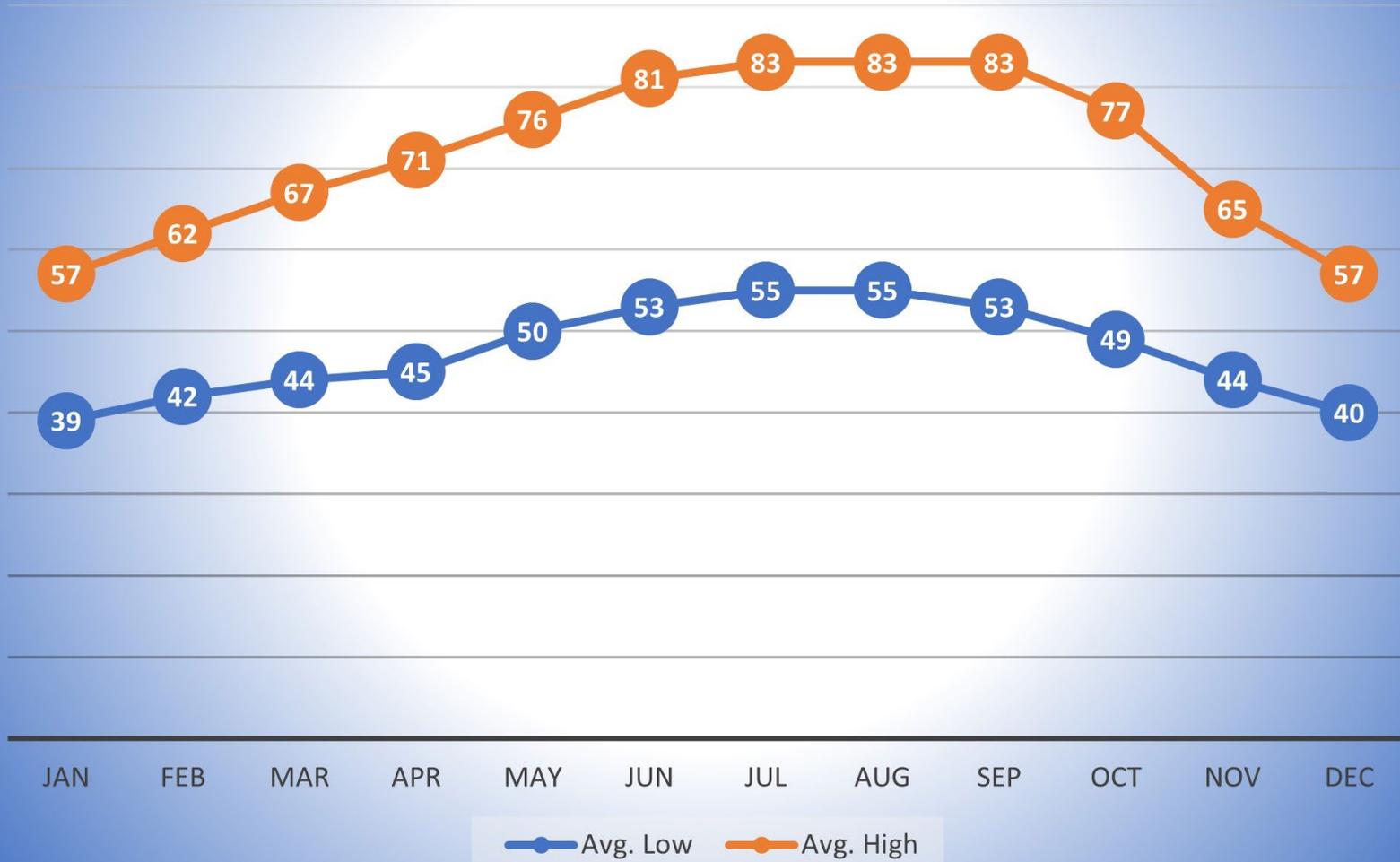


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Monthly Average Temperatures Napa, CA



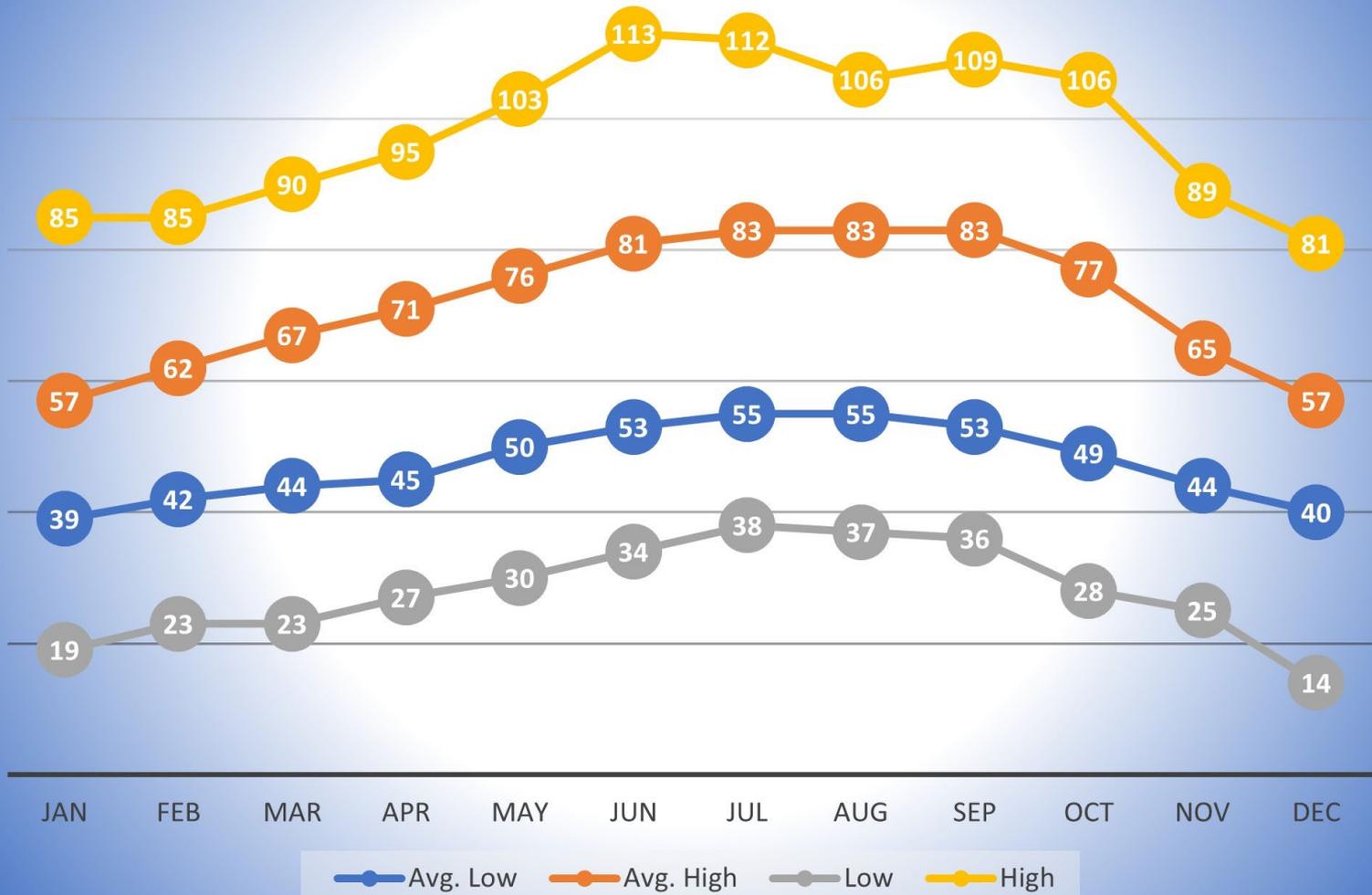
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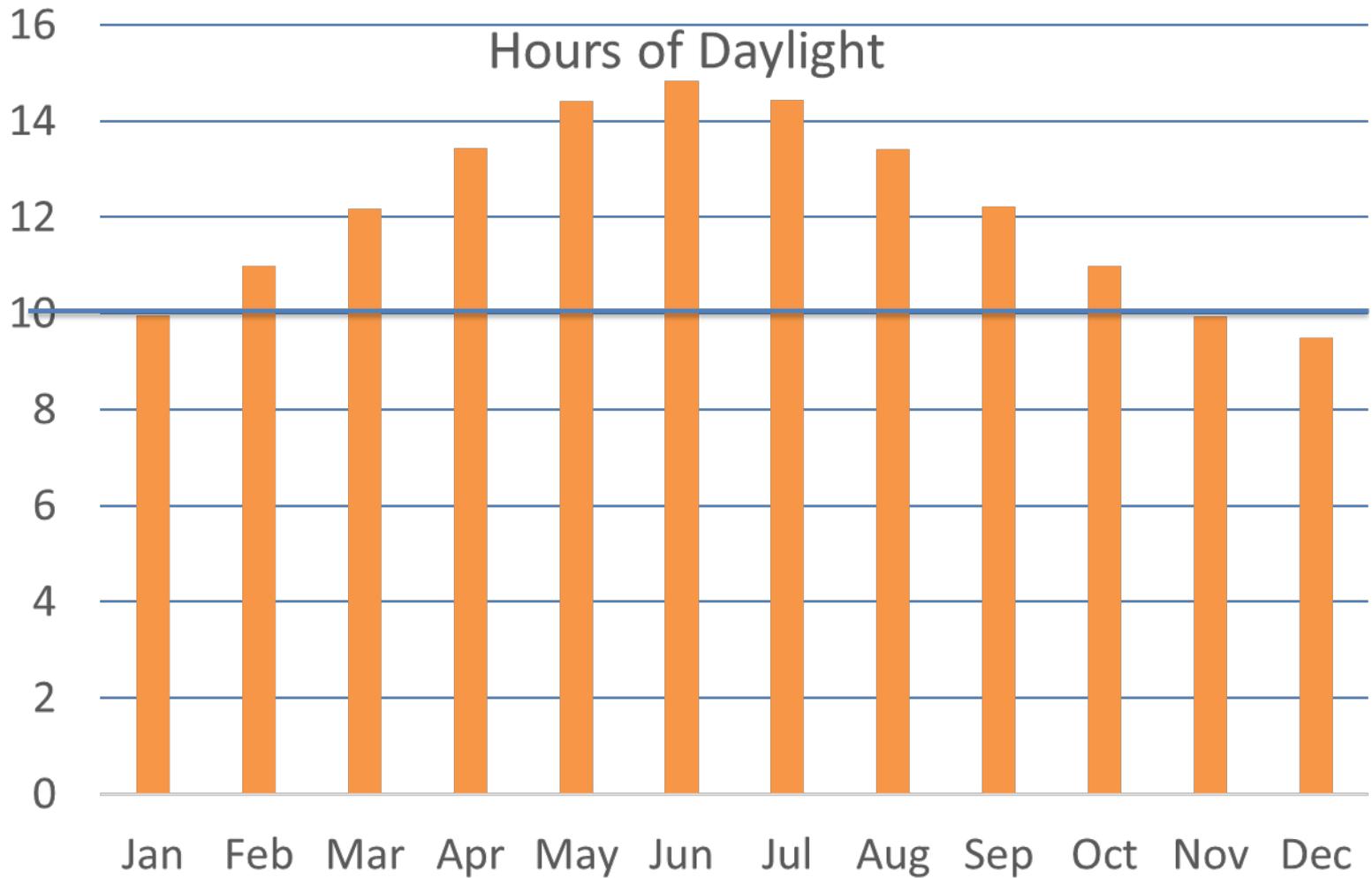
Monthly Record Highs and Lows



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The Persephone Period

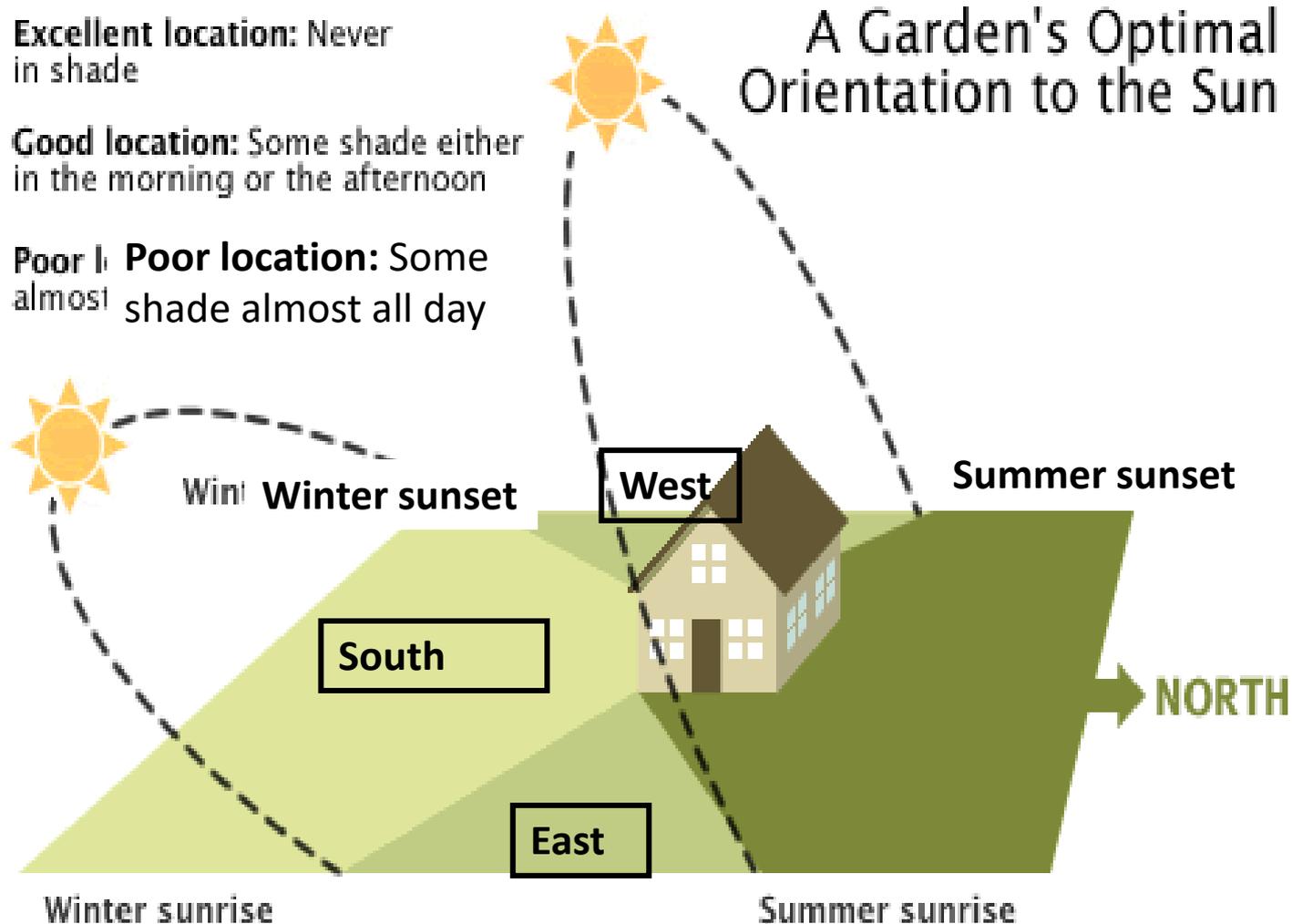
- Time of year when days have 10 or fewer hours of sunlight
- Plants grow slowly during this period, usually mid-November to mid-January
- For winter harvest, want plants to be about 75% mature
- Plant fall/winter veggies from mid-August to mid-October



Sunlight: Summer vs Winter

-  **Excellent location:** Never in shade
-  **Good location:** Some shade either in the morning or the afternoon
-  **Poor location:** Some almost shade almost all day

A Garden's Optimal Orientation to the Sun



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		Harvest	Harvest	Harvest	Harvest	Harvest	Harvest				
Brussel Sprouts	Plant seeds	Plant seedlings			Harvest	Harvest	Harvest	Harvest	Harvest	Harvest				
Cabbage		Plant seeds	Plant seedlings			Harvest	Harvest	Harvest	Harvest	Harvest				"Early" types could be planted up to 10 days later
Carrots		Plant seeds				Harvest	Harvest	Harvest	Harvest	Harvest				
Cauliflower		Plant seeds	Plant seedlings		Harvest	Harvest								
Fava Beans					Plant seeds					Harvest	Harvest			
Kohlrabi		Plant seeds	Plant seedlings		Harvest	Harvest	Harvest	Harvest		Plant seeds indoors/in greenhouse	Plant seedlings		Harvest	Best to do spring planting near beginning of period shown
Lettuce		Plant seeds	Plant seedlings		Harvest	Harvest	Harvest							Planting and harvesting season depends greatly on type
Onions	Plant seeds	Plant seeds			Plant seedlings	Plant seedlings			green onions			bulbs		
Peas (early and late varieties)					Plant seeds				Harvest	Harvest				
Potatoes	Plant seeds				Harvest									Harvest and store
Radish			Plant seeds	Harvest	Harvest	Harvest								
Red Cabbage		Plant seeds	Plant seedlings			Harvest	Harvest	Harvest	Harvest	Harvest				
Rutabaga	Plant seeds	Plant seedlings												
Spinach				Plant seeds				Harvest	Harvest	Harvest				
Turnip		Plant seeds			Harvest	Harvest	Harvest	Harvest	Harvest	Harvest				

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
January	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)	
February	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
March	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
April	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)
May	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
June	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
July	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
August	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
September	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
October	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
November	Chard, carrots, cover crops, fava beans, garlic & shallots (from cloves, not seeds), onions, radishes, spinach		
December	Fava beans, garlic & shallot cloves, radishes, parsley, spinach		

Basic Garden set up

Level ground

Water Source

Enough Sunlight

Good Soil

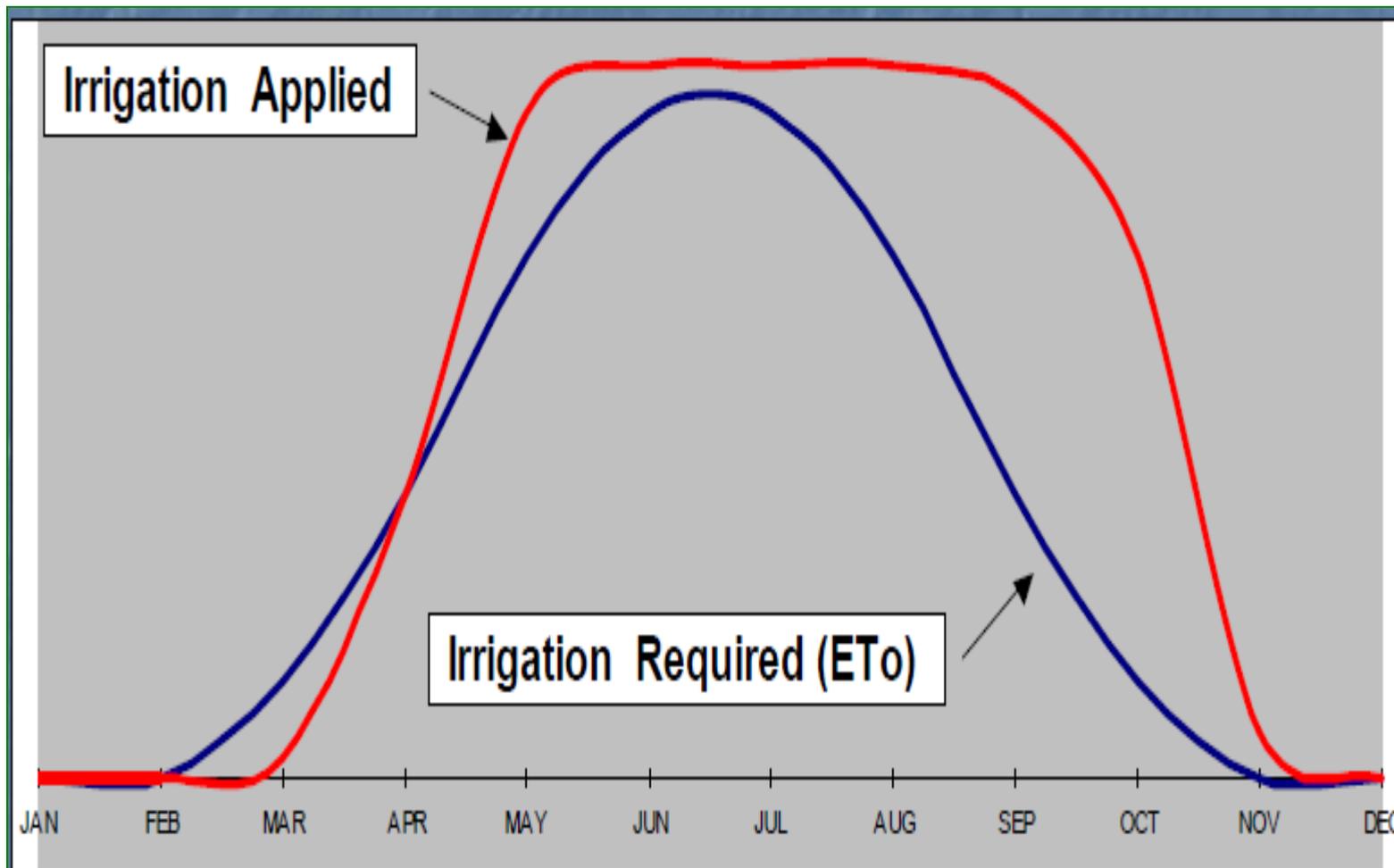


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RELATIVE WATER NEEDS BY TIME OF YEAR



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Plants grow well in soil that ...

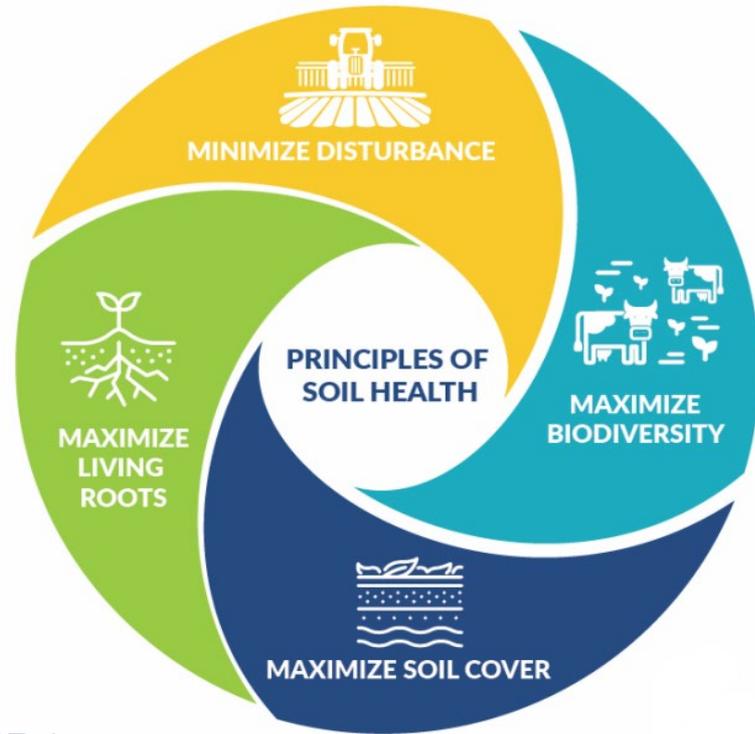


Has a healthy physical structure

Contains essential nutrients

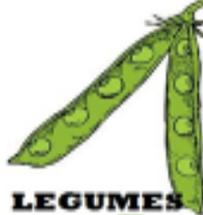
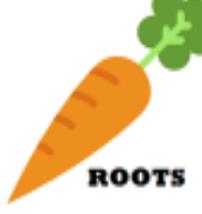
Keeping Soil Healthy

- Till as little as possible
- Grow as many plants as practical, including cover crops
- Add different varieties of plants, including ornamentals
- Use mulches to keep soil covered



Natural Resources
Conservation ServiceS

Crop Rotation for diversity & soil health

	AREA 1	AREA 2	AREA 3	AREA 4
YEAR 1	 LEAVES	 FRUIT	 ROOTS	 LEGUMES
YEAR 2	 LEGUMES	 LEAVES	 FRUIT	 ROOTS
YEAR 3	 ROOTS	 LEGUMES	 LEAVES	 FRUIT
YEAR 4	 FRUIT	 ROOTS	 LEGUMES	 LEAVES



Soil Additions



compost



mulch



amendment

fertilizer





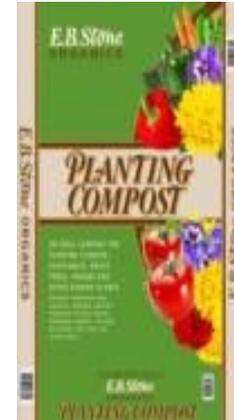
Compost

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.



One of the best amendments is compost



Compost decomposes into humus to improve soil structure.

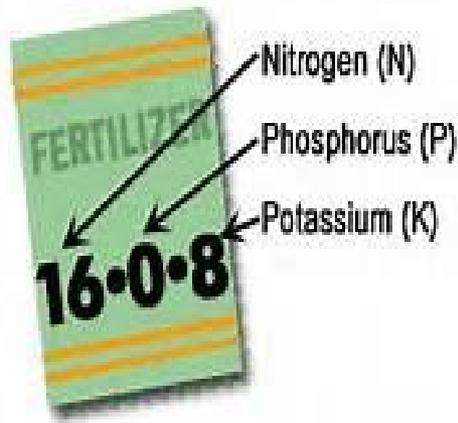
Compost improves drainage and aeration.

Compost conserves soil moisture.

Compost nurtures the soil biome.



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

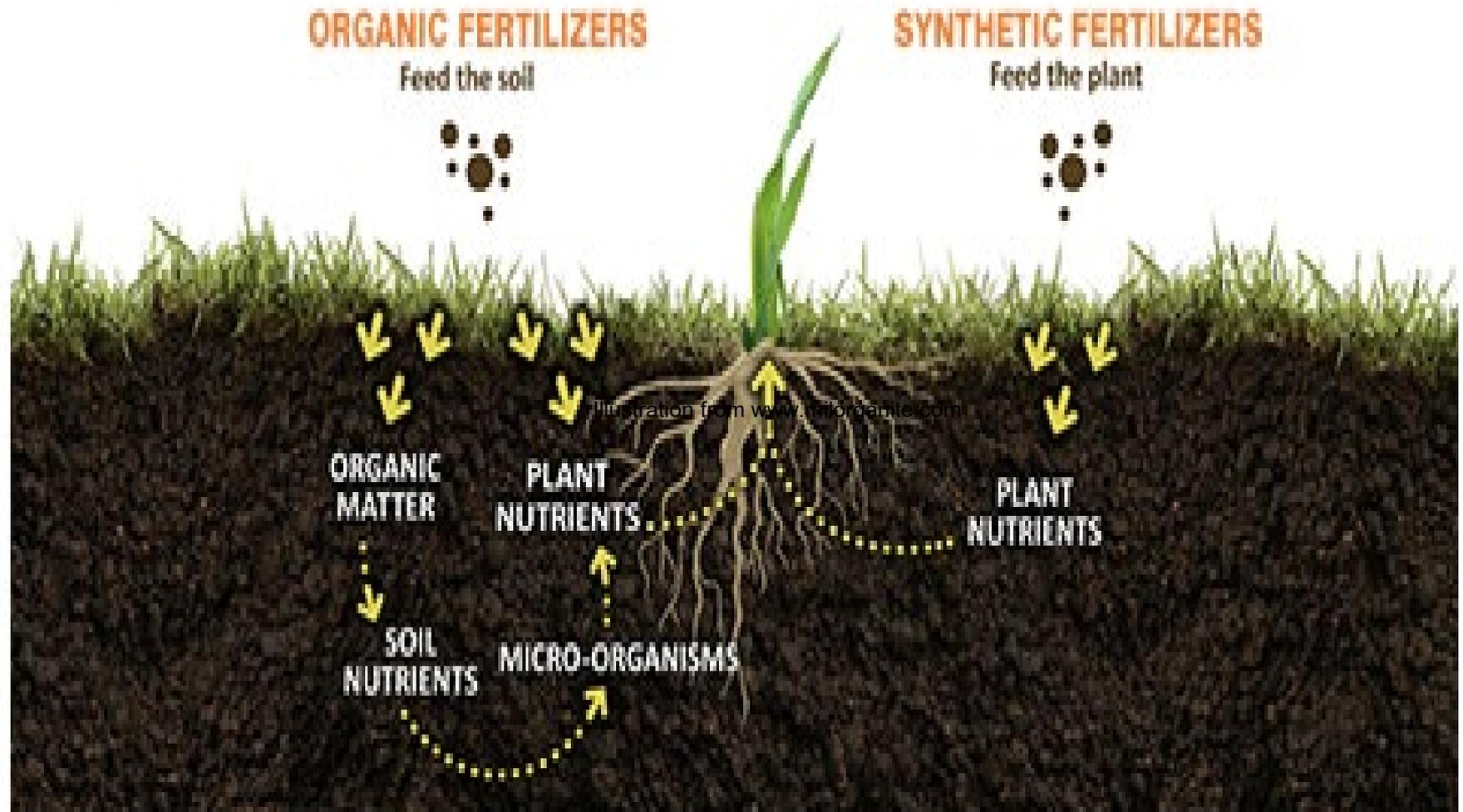
Soybean meal

Alfalfa pellets

Bone and blood meal



Organic vs. Synthetic Fertilizers



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

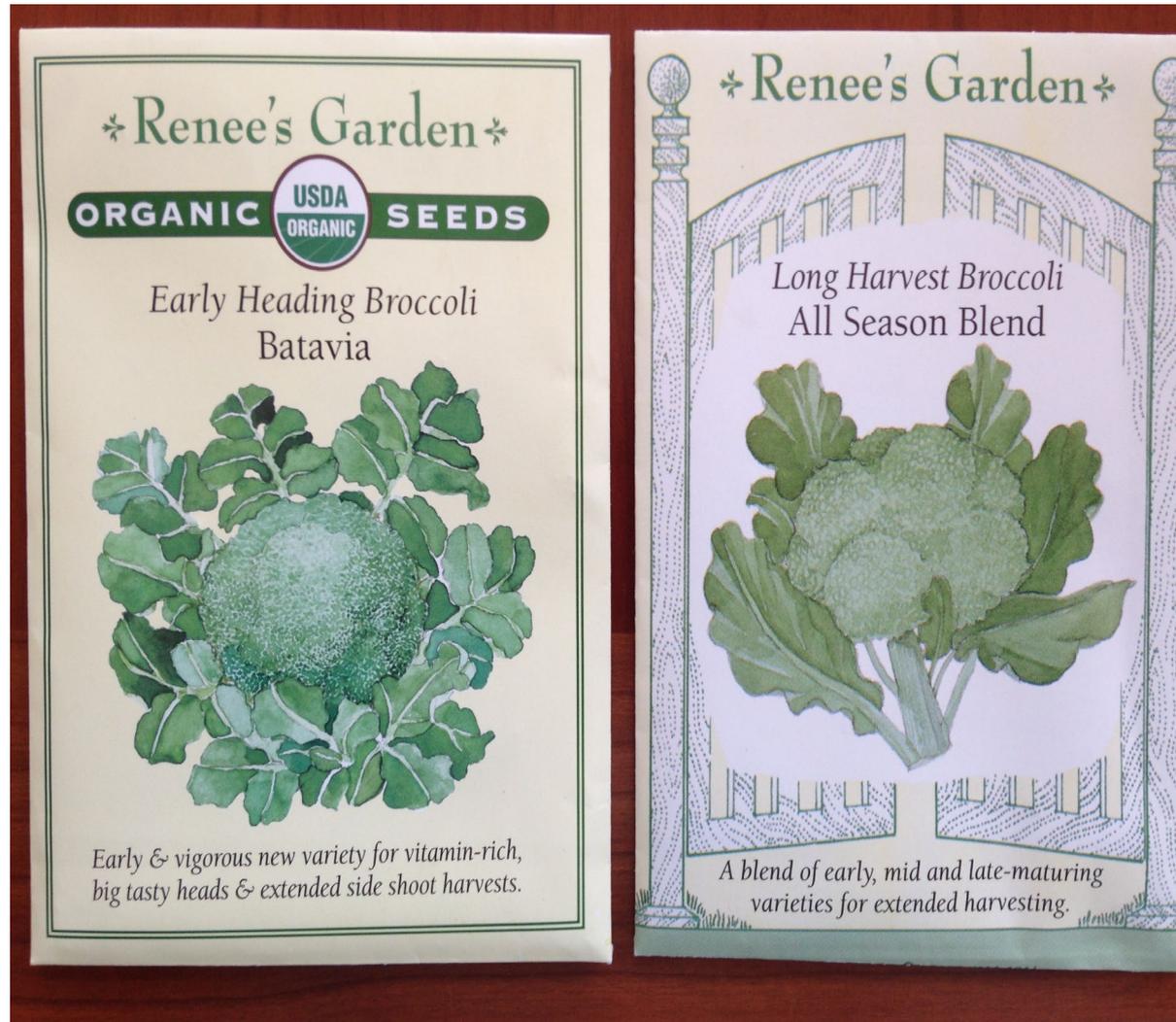


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Plant Varieties with differing maturity rates



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Resources

- UC Davis Vegetable Planting Guide
<https://vric.ucdavis.edu/pdf/homegardening/Vegetable%20Planting%20Guide.pdf>
- UC California Garden Web
<https://cagardenweb.ucanr.edu/Vegetables/>
- Integrated Pest Management
<https://ipm.ucanr.edu/>
- Golden Gate Gardening, Pam Pierce
- Sunset Western Garden Book
- California Master Gardener Handbook, 2nd ed.



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: Arugula



Annual arugula
Eruca vesicaria



Perennial arugula
Diplotaxis tenuifolia

Salad Greens: Lettuce

Lactuca sativa



Mix (mesclun)



Heading
Romaine



Looseleaf



Lettuce going to seed (bo

Snails and Slugs



Greens: Kale



Red Russian



Nero di Toscano



Aphids



Parasitized aphids



Chard and Beets

Beta vulgaris



Bright Lights Chard



Beets



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: Radishes, Turnips, Rutabagas



Radishes

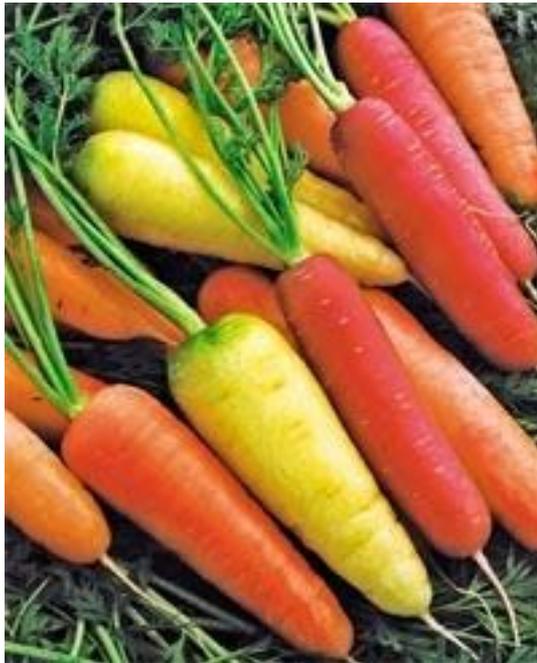


Turnips



Rutabagas

Root crops: Carrots





Peas



Shelling



Snow or pea pod



Sugar snap



Peas: Powdery Mildew



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)



Fava beans



Crimson fava



Fava flower and aphids



Fava root nodules

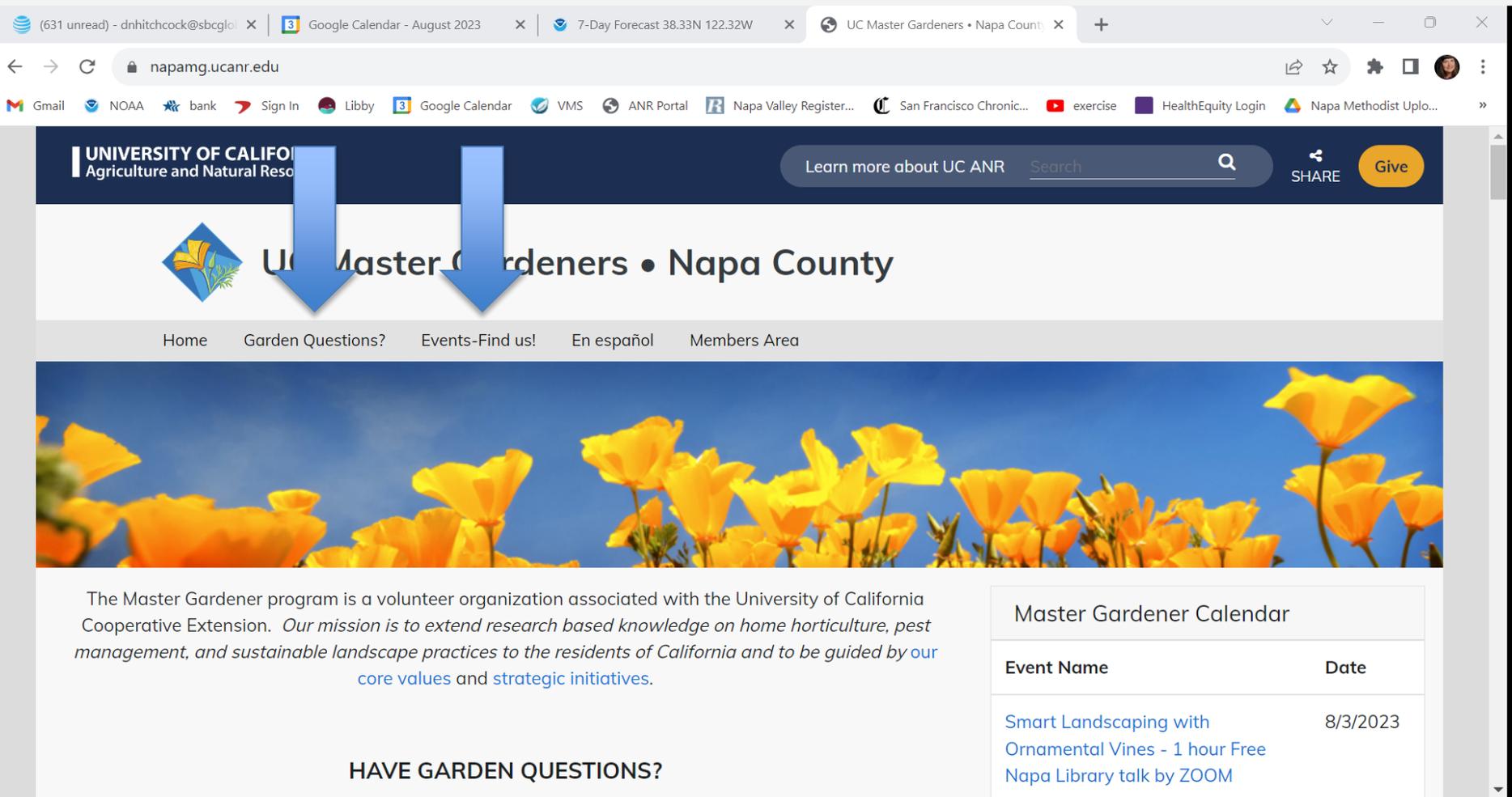
FIND this slideshow & further resources
on our website:

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. The page header includes the University of California Agriculture and Natural Resources logo and navigation links for Home, Garden Questions?, Events-Find us!, En español, and Members Area. Two blue arrows point to the 'Garden Questions?' and 'Events-Find us!' tabs. Below the navigation is a banner image of yellow poppies. The main content area features a paragraph about the Master Gardener program and a 'Master Gardener Calendar' table.

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

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HAVE GARDEN QUESTIONS?

Master Gardener Calendar	
Event Name	Date
Smart Landscaping with Ornamental Vines - 1 hour Free Napa Library talk by ZOOM	8/3/2023



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Questions?

And thanks for joining us today.