FALL SCHOOL GARDENS - COMAL COUNTY (B. Keese, 8/13/20)

Hardy and Semi-Hardy Vegetables to Consider for Fall

Key date: Average first frost/ freeze in New Braunfels is on November 24 but can occur in October. Planting suggestions are based on plans to have two school gardens – one in the fall and the other in the spring. 'Best' time to plant (3rd column) is approximate as weather conditions often vary, affecting germination of seeds and plant growth. Plants usually grow slower in cold weather and in fewer hours of daylight.

Vegetable - Seed (S) or Transplant (T) "COOL, COLD, WARM Season Plants"	Possible Varieties & Estimated Maturity Time (temperature affects maturity)	'Best' Time to Plant in Fall	Comments
Beets (S) **COLD**	Detroit Dark Red (60 days)	By Oct 1	Good well below 26°
Broccoli (T) **COOL**	Green Magic (70 days)	By Sep 15	Below 26° could damage
Cabbage, Chinese (T) **COOL**	Michihili (78 days)	By Sep 15	Below 26° could damage
Cabbage, Head (T) **COOL**	Golden Acre (62days), Red Acre (75)	By Sep 15	Cabbage thrives in temperatures between 65°F and 75°F (18-24°C); below 26° could damage
Carrots (S) **COLD**	Danvers Half-Long (75 days), Nantes (62)	By Sep 15	1) Good well below 26° 2) Suggestion: scatter dirt lightly over seeds, cover with burlap, and water well. When sprouted, remove burlap
Cauliflower (T) **COOL**	Snow Crown (55 days), Cheers (75)	By Sep 15	Below 26° could damage
Kale (S) **COLD**	Toscano (Dino) (65 days) Red Russian (60)	By Oct 1	Good well below 26°
Lettuce (S) **COOL**	Black Seeded Simpson (48 days), Paris White Cos Romaine (66), Buttercrunch Bibb (55), Salad Bowl (45)	By Oct 1 Seeds germinate poorly in hot weather	1) Cold tolerant for short periods of time 2) Head lettuce is not recommended for Texas
Mustard Greens (S) **COOL**	Florida Broad Leaf (48 days), Red Giant (40-45)	By Oct 15	Below 26° could damage
Radishes (S) **COOL**	Champion (28 days), White Icicle (30), Easter Egg (30), French Breakfast (25)	By Sep 15	Optimum soil temperature is 50° to 75°F; below 26° could damage
Spinach (S or T) **COLD**	Bloomsdale (40-48 days)	By Oct 15	Good well below 26°
Swiss Chard (S) **COOL**	Ruby Red (60 days), Bright Lights (60)	By Sep 15	Below 26° could damage
Tomatoes WARM	**Not recommended for Comal County school gardens in the fall**	X	Unless planted in the summer (shaded and watered well), growing time is too limited before cold weather arrives
Turnips (S) **COOL**	Purple Top White Globe (55 days)	By Oct 1	Turnips are cool weather plants that can tolerate frost, but do not do well in a hard freeze

SPRING SCHOOL GARDENS - COMAL COUNTY (Keese, 3/1/20)

Vegetables to Consider for Spring

Key date: Average last frost/ freeze in New Braunfels is on March 8 but can occur in April.

Tip: You can buy seed potatoes & bulk seeds (by the scoop) at some local nurseries, feed and supply stores.

Vegetable Seed or Transplant "COOL, COLD, WARM Season Plants"	Possible Varieties & Estimated Maturity Time (temperature affects maturity)	'Best' Time to Plant in Spring	Comments
Beans, Green (Bush) (S) **WARM**	Contender (55 days), Blue Lake (55), Provider (50)	After Mar 8 or last expected freeze/frost	Very sensitive to cold. If there is a freeze, bean seeds are easy and inexpensive to replant
Carrots (S) **COLD**	Danvers 126 Half-Long (75 days), Nantes (62)	By Feb 15 or as soon as soil can be worked in the Spring Can take up to 21 days to germinate when soil is cold!	1) Short or medium length best for shallower, heavy soils 2) Thinning gives carrots room to grow - 2" apart works well. 3) To avoid having to thin, consider using the 'paper towel method' (glue seeds to a paper towel and plant it) or using a 'seeding square' or template
Cucumbers (S or T) **WARM**	**Bush (more compact):** Spacemaster (56 days), Bush Champion (55) **Vining (need trellis)**: Summer Dance, hybrid (55) Sweet Success, hybrid (58) Japanese Cucumber Tasty Green, hybrid (60)	After Mar 8 or last expected frost/freeze Seeds germinate best when soil temp is 60° or higher	Consider planting cucumber seeds in containers inside and under grow lights about 4 weeks before your expected planting date
Lettuce (S or T) **COOL**	Black Seeded Simpson (48 days), Paris White Cos Romaine (66), Buttercrunch Bibb (55), Salad Bowl (45)	By Mar 1 Germination of seeds can occur at temps as low as 32° but could take up to 50 days!	1) Cold tolerant for short periods of time 2) Head lettuce is not recommended for Texas 3) Avoid maturing during warm or hot temperatures
Mustard Greens (S) **COOL**	Florida Broadleaf (48 days), Red Giant (40-45)	As soon as soil can be worked in the spring; seeds sprout at 40° or higher soil temp	Can harvest outer leaves - "cut and come again"
Peppers (Hot) (T) **WARM**	Jalapeno TAM (70 - 80 days), Hidalgo Serrano (70), Long Red Cayenne (75 to 80)	After Mar 8 or last expected frost/freeze. If cold predicted, cover well	1) Most peppers turn red with time 2) Can start seeds 6-8 weeks indoors before the last frost-free date
Peppers (Sweet) (T) **WARM**	Gypsy (65 days), Big Bertha (70), California Wonder (75), Sweet Banana (65)	After Mar 8 or last expected frost/freeze Like hot peppers, can start seeds indoors	1) Bell peppers should be a shiny dark green 2) Most peppers turn from green to red with time

Potatoes (Irish) (Grow using seed potatoes) **COOL**	White Kennebec (75 to 100 days), Red Pontiac (70 to 100), Red LaSoda, Yukon Gold (90)	By Feb 15 or as soon as seed potatoes available at local nursery. Cover green top growth if severe cold expected	1) 5 or 6 days before planting, cut seed potatoes into several pieces if large enough, each with 1 or more eyes 2) Tops cannot withstand frost 3) Consider growing in a bushel basket
Radishes (S) **COOL**	Champion (28 days), Easter Egg (30), French Breakfast (28), White Icicle (30)	By Feb 15 or as soon as soil can be worked in the Spring	1) Plant early enough for plants to mature in the cooler weather 2) Optimum soil temperature to grow radishes is 50° - 75°F
Spinach (S or T) **COLD**	Bloomsdale (40-48 days) Tyee (semi-savoy) (45) Space Hybrid (40)	By Feb 15 or as soon as soil can be worked in the Spring	1) Soak seeds in water in the refrigerator for 1-2 days before planting 2) Does poorly if planted too late in the spring
Swiss Chard (T) **COOL**	Bright Lights (60 days), Ruby Red (60)	After Mar 8 or last expected frost/freeze Seeds germinate in soil temperatures from 40° to 100° with 86° optimum	1) Can sow seed 5 to 6 weeks indoors before transplanting 2) Young plants might bolt if seedlings exposed to frost, but cool or mild weather preferred 3) Can harvest outer leaves - "cut and come again"
Tomatoes (T) **WARM** Note: Hybrid seeds are likely more expensive than open pollinated or non-hybrid seeds but are usually more disease resistant. Open pollinated or heirloom seeds can be saved and will grow "true" to parent plant.	**Determinate varieties** - smaller, bushy plants that produces fruit over a shorter period of time. Dwarf Cherry Surprise (BHN 968) (75 days), Celebrity (75), Tycoon (80), Roma (78) **Indeterminate varieties -** larger plants harvested over a longer period of time. Juliet (60), Early Girl (62), Valley Cat (70), Large Red Cherry (75), Yellow Pear (78), Sun Gold Cherry (65)	After Mar 8 - must protect if frost/freeze is predicted Can start seeds in Jan/early Feb inside under grow lights	1) Most tomato plants (especially indeterminate) should be caged, staked, or trellised and protected from cold, strong winds in the first few weeks 2) For containers, look for smaller, determinate varieties 3) Heirloom tomatoes are not recommended for school gardens - although tasty, they take longer to mature and produce fewer fruit
Turnips (S) **COOL**	Purple Top White Globe (55 days)	By Feb 15 or as soon as soil can be worked in the Spring Seeds sprout at 40° or higher soil temp	1) Turnips are cool weather plants that grow best between 40° and 80° 2) Heat causes the leaves to toughen & have stronger flavor
Yellow Squash (S or T) **WARM**	Dixie, Early Prolific, Early Gold Star (most mature at 55 days or 14 days less if using transplant)	After Mar 8 or last expected frost/freeze	1) Can start indoors 4 weeks before the last expected freeze 2) Squash vine borers are deadly
Zucchini Squash (S or T) **WARM**	Aristocrat, President, Zucchini Green, Zucchini Grey, Tigress (most mature at 50 days or 14 days less if using transplant)	After Mar 8 or last expected frost/freeze	1) Can start indoors under lights 4 weeks before the last expected freeze 2) Squash vine borers are deadly

Suggested Herbs and Flowers to Bring Pollinators to the Garden

Did you know? Animal pollinators are required for reproduction of 90% of flowering plants and one third of our food crops. Pollinators include bees, butterflies, moths, birds, flies, beetles, and bats. (USDA)

Herbs	Fall Planting in School Garden	Spring Planting in School Garden	Comments
Basil - *Ocimum basilicum*	Not recommended Can transplant in late summer/early fall, but cold weather will destroy it	Yes After Mar 8 or last expected frost/freeze. Best grown in warm weather	1) Many varieties 2) Very easy to grow from seed 3) Harvest when plant has developed up to six pairs of leaves on a branch & before it flowers. Remove flower buds to ensure best flavor for eating, but it means less pollen for the bees!
Lemon Balm - *Melissa officinalis*	No	Yes After Mar 8 or last frost/freeze and best grown in warm weather	1) Easy to grow 2) Prolific grower, especially good in a container 3) Remove flower heads before they set seed 4) Children enjoy the lemony fragrance and texture of its leaves
Chives - ***Allium schoenoprasum (onion)*** ***A. tuberosum (garlic)*** Onion chives have a hollow stem while garlic chives have a flat, grass-like leaf.	Yes	Yes Plant in spring as soon as weather warms	1) Perennial 2) Spreading growth habit - good in containers 3) Pink, white, purple, or red edible flowers appear in the summer 4) Root division is the easiest way to propagate
Cilantro - *Coriandrum sativum* When the plant dies, harvest the seeds known as **coriander**	Yes Plant in September for a November harvest	Yes Plant in February for an April harvest	1) Tolerates temperature as low as 10°, but if temperatures exceed 85°, will start to bolt 2) While some adults hate the taste, most children seem to like the taste 3) Attracts beneficial insects and deters harmful ones
Dill - *Anethum graveolens*	Yes Plant at least 2 months before the first expected frost (by Sep 24). Dill dies in a freeze	Yes Plant early spring Dill dies when it gets too hot	1) Harvest dill foliage (leaves) at any time. To use later, cut off an entire branch, put in a plastic bag & freeze 2) Leaves, flowers & seeds are edible 3) **The caterpillar of the swallowtail butterfly likes to eat dill as well as parsley and fennel**
Mexican Mint Marigold - *Tagetes lucida* **Good substitute for French tarragon which is hard to grow in our heat. Russian tarragon is not recommended for culinary purposes.**	? Larger plants can survive if protected or brought inside if hard freeze projected	Yes After the last frost	1) Does well in containers 2) Yellow gold, edible flowers appear in the summer and fall 3) Easy to propagate cuttings in water 4) If watered, survives summer heat and into the fall with temps over 28°

Mint - *Mentha* species	Yes Might die back in winter, but usually returns when the weather warms	Yes Plant early spring	1) Perennial 2) spreads if not contained 3) Cuttings root readily in water or by root division (square stems usually root easily) 4) repels fleas and sometimes aphids as well as rodents
Parsley -*Petroselinum crispum* (Curly or Italian Flat Leaf)	Yes Transplant recommended	Yes Transplant very early in Spring	1) Seeds can take up to 5 or 6 weeks to germinate 2) **Grows well in a deep container with chives and basil** 3) Chewing parsley leaves freshens the breath
Flowers to Consider for School Gardens	**Fall Planting COOL**	**Spring Planting WARM**	**Comments**
Bee Balm		X	Edible petals with a lemon, mint, oregano flavor. Bees love this beautiful plant!
Calendula	X		Attractive and edible flowers
Dianthus	X		Single carnation, hardy
Pansy	X		Hardy, wide color range
Petunia		X	Many varieties, holds up to light frost
Phlox, Drummond		X	Drummond phlox is native to Texas; blooms April-June
Snapdragon	X		Many varieties & colors; transplants are recommended as seeds can take almost a month to germinate
Sunflower		X	Might not be the best flower for school gardens as it usually blooms in summer
Marigold		X	Holds up in heat; repels some pests
Zinnia		X	Many colors, heat resistant

Tip: Comal Master Gardener Organization operates under the purview of Texas A&M University AgriLife Extension Office. Texas A&M's recommendations are research-based and provide the best advice for growing plants in Texas. An easy way to search electronically for information is to type in 'TAMU + whatever you are looking for', e.g., TAMU growing tomatoes or TAMU pests on peppers.