

VEGETABLES AND HERBS
Overview of Cultural Techniques
Text of PowerPoint
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Native to the Americas

Beans, blueberries, corn, cucumber, grapes, potatoes, squash, strawberries, sweet potatoes, prickly pear cactus, tomatoes

Fall and Winter Growing – “Cool Season”

Part we eat

Roots – beets, carrots, parsnips, radish, turnip

Stems – asparagus, potatoes

Leaves – cabbage, celery, lettuce, onion, spinach, pea shoots

Immature flowers – artichoke, broccoli, cauliflower/broccoflower

Exception – pea (we eat fruit)

Best growing conditions

Air temperature 55-75°F

Direct sun minimum of 4-6 hours daily – but peas need more to blossom and develop fruit

Spring and Summer Growing – “Warm Season”

Part we eat

Mature fruit – melon, squash, tomatoes

Immature fruit – beans, corn, cucumbers, eggplant, peppers, squash

Best growing conditions

Air temperature 65-95°F

Direct sun minimum of 8 hours daily – more is better = more flavor development

Variety Selection

Microclimates

Stretch seasons

Harvest times – per use

All at once for preserving

A few at a time for a long time

“Baby” or “Gourmet” varieties

Germination

Soil temperature

Cool season crops = 50-65°F

Warm season crops = 65-80°F

Direct sowing

Big seeds

Root crops

Speedling® tray

Transplanting

Most – at same depth as in container

Exceptions

Tomato – Always deeper for sturdier roots

Potato – Underground

Growing point above ground

Handle by leaves or roots, not stem – plant can't repair damaged stem or resprout new one

Soil Preparation – “Feed the Soil, Not the Plants”

Organic, Biodynamic, French Intensive

“Rich” (fertile) or “Lean” (lacking in nutrients)

“Sweet” (mid range Ph) or “Sour” (acidic Ph)

pH – most vegetables prefer 6.5

Raised Beds

Early-season and late-season warming

Good drainage

Easy working, uncompacted

No walking within root zone

Access for wheelchairs, elders (less bending, increased seating)

Succession Planting

Every 1 or 2 weeks for short harvest period or bolt-prone like cilantro or lettuce in summer

Every 3 or 4 weeks for long harvest period like lettuce in fall or winter or early spring

Companion Planting/Intercropping (Non-UC Research)

Helping each other grow – carrots/tomatoes

Deterring pests – garlic/aphids on roses

Moon-phase tasks – waxing & waning moon determine above-ground or below-ground “energy”

Steiner bio-intensive – same basic tenets as sustainable agriculture, aside from buried-cow’s-horn type information

Spacing

Germination and maturity rates – radish (quick) + carrot (slow)

Growing zone – root (garlic), surface (bok choy), mid-air (cabbage), trellis (peas)

Sun orientation – lettuce on north side of peas or corn during summer

Water zone – same water needs

Support + pest deterrent – 3 Sisters – corn, beans, squash

Mature size of plants – including square-foot gardening

Trellising, Staking

Using air space for growing

More intensive use of amended soil

Better air circulation

Fewer pest problems

Clean harvests

Lengthening Seasons

Plant despite weather – never know future

Row cover germination and shading

Fertilize

Continue watering

Continue harvesting – counter hormone shift

Irrigation

Depth – stays same year ‘round per foot depth so entire root zone remains evenly moist

Shallow – to 1’ – celery, lettuce, onion, radish, potato

Moderate – to 2’ – bean, carrot, cucumber, eggplant, pepper, squash

Deep – to 3’ – asparagus, globe artichoke, melon, pumpkin, tomato

Frequency – changes depending on weather and finger test below mulch

Spring – once every 3 weeks

Summer – once a week; more according to specific foliage bulk & respiration rate – like tomatoes when 95°F

Fall – once every 2 weeks

Winter – once a month if no rain

Methods

Hand-held hose – specific plant needs, clean foliage undersides (stomates, pests)

Overhead sprinkler – wash off dust for more effective photosynthesis

Mini-tube drip emitter – specific location

Soaker hose under mulch – entire root zone

Buried 5-gallon nursery containers

Mulch

Conserves soil moisture

Moderates soil temperature

Keeps weeds from germinating; easy to pull

Lessens erosion

Enrichens soil nutrition and texture as decomposes, and feeds beneficial microorganisms

Harvest

Individual taste preferences

Uses – foliage, blossoms, immature fruit, stages of maturity, mature fruit, seeds

Harvesting outer leaves; plant continues growing until bolts – maybe 9 months – lettuce, chard, collard, kale, spinach

Saving Seeds

Wet – potential virus in mucous membrane around seed, so must ferment it off – tomato, melon, squash

Dry – dry till crispy – lettuce, pea, pepper

Eat Your Yard!