

VEGETABLE GARDENING

Specifics

Robert F. Norris

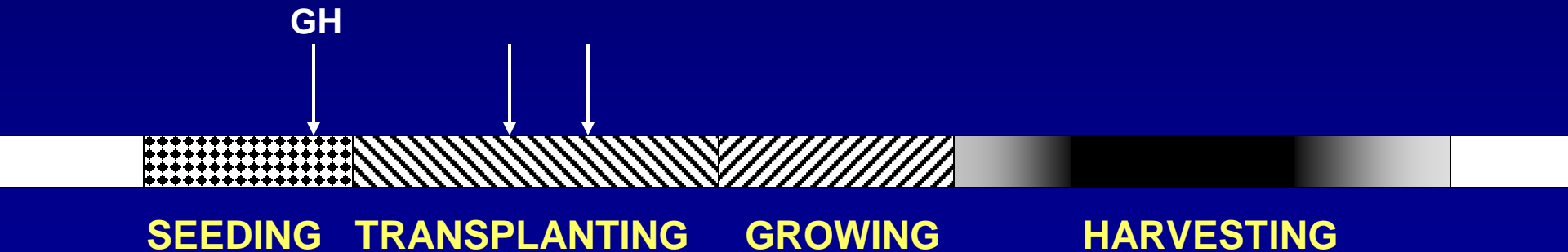
Weed Science Program,

Plant Science Department,

University of California, Davis.

Crop details:

- Notes = variety choice reasons; cultural info.; spacing; pests/problems.
- Time-lines, including varieties
 - note warm season (Dec. – Dec.) vs. cool season (June – June).



- ‘GH’ means starting in greenhouse, cold-frame, window, etc.

SPRING/SUMMER

(December to December)

TOMATOES



NOTES FOR TOMATOES

Variety choice comments:

Pest resistant varieties essential for: Verticillium, Fusarium, nematodes

Non-determinate vs determinate?

Choice depends on size, taste, & use

Ability to set in hot weather

Heirloom varieties?

Cultural information/growing tips:

Supports needed for non-determinate varieties

Row spacing:

Typically 5^{ft} to 6^{ft} between single rows; 12" to 24" in-row

Pests/problems to watch for:

Sunburn; hornworms, stinkbugs, blossom end-rot



Big Beef

TM871 BIG BEEF

(F1) 80-85 days. Vigorous indeterminate vines ripen big, 4-6 inch, globe shaped tomatoes earlier than other varieties of this size. The firm, crack-resistant tomatoes have a wonderfully sweet, slightly acid flavor and produce over a long period. Big Beef receives high marks in our after-harvest storage trials. An AAS winner. ASC, F1, F2, N, St, ToMV, V. *Also available as a plant. See plant order form.*

S SAMPLER: \$3.05 **P** PACKET: \$9.55

B ¼ oz: \$49.95



BIG BEEF VFNT



BRILLANTE VFFT

plants in the greenhouse. temp. of 80°F/27°C for 14 days. Set outside after frost. Fruit size increases by

more vigor, more uniform fruit (shoots that grow in the field). MATURITY DATES:

Leading causes are con- g trays, (c) unsterilized soil in the field (golden rod, viruses or tools used when planting; N = Nematodes;

e. This will be indicated on the seed packet to date has proven

320 BETTER BOY VFN 72 days. A standard large fruited hybrid used for bedding plants or baskets. Fruit average 16 oz/454 g. Standard home garden variety where nematodes, verticillium wilt or fusarium are common problems. Good leaf cover for southern climates. **DF/GS**

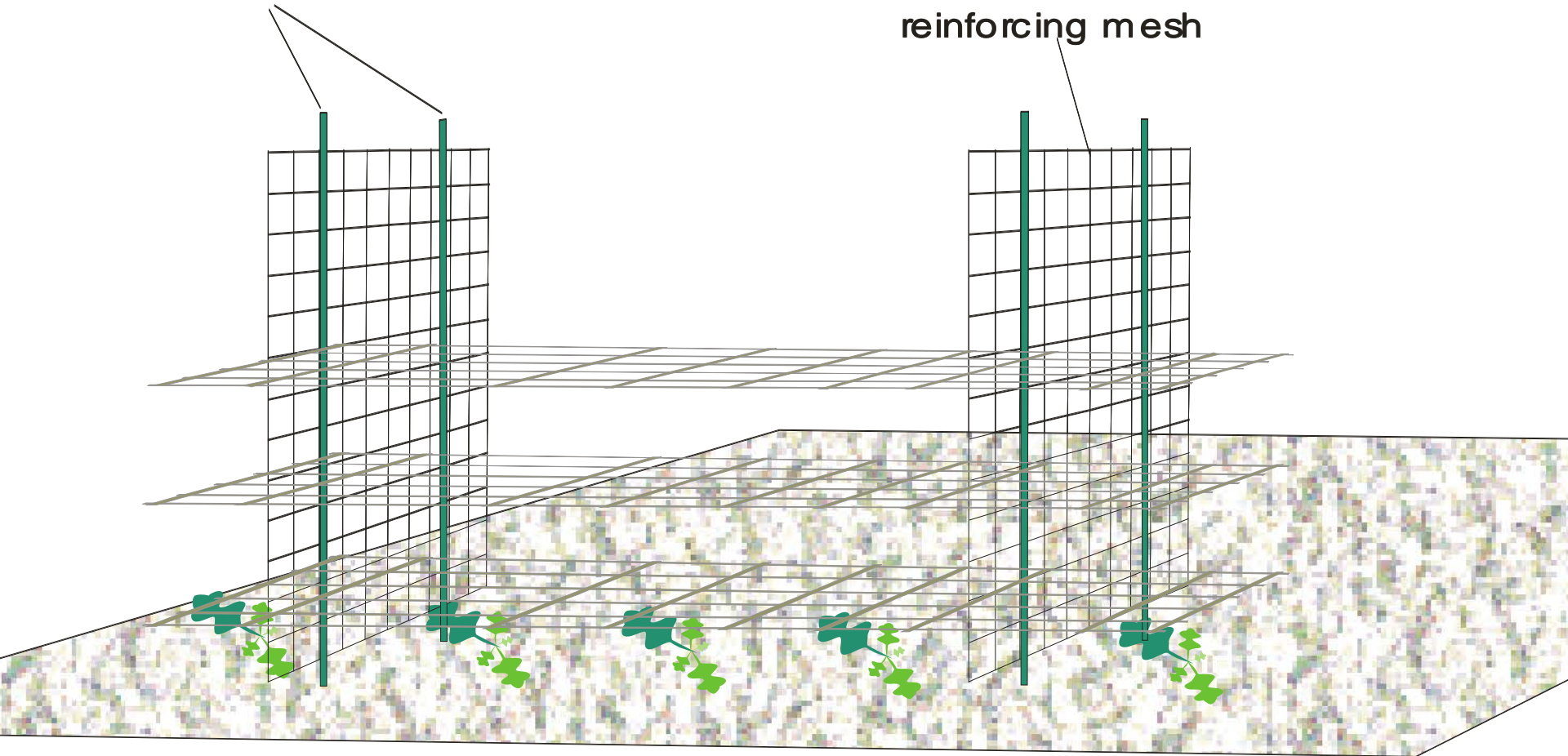
343B BRILLANTE VFFT 73 days. Medium size 7oz/198gr globe shaped fruit are very firm with good taste, green shoulders and extended shelf life. Medium size plants are great for outdoor stakes or greenhouse use. This seed is greenhouse grown by our supplier Hazera - which explains the high price of the seed, compared to other hybrids. (Pkt. 25 seeds)

360A BIG BEEF VFNT 73 days. Extra large 18-20 oz/454 - 560 g, globe shaped, good tasting beefsteak for staking. Good disease tolerances to VFNT plus Alternaria, stem canker and grey leaf spot. *All America Winner*



'T' posts

Concrete
reinforcing mesh









**Tomato trellis;
tie wire connections**

TOMATO TIME-LINE & VARIETIES:

Burpee VF hybrid

Burpee sweet seedless X

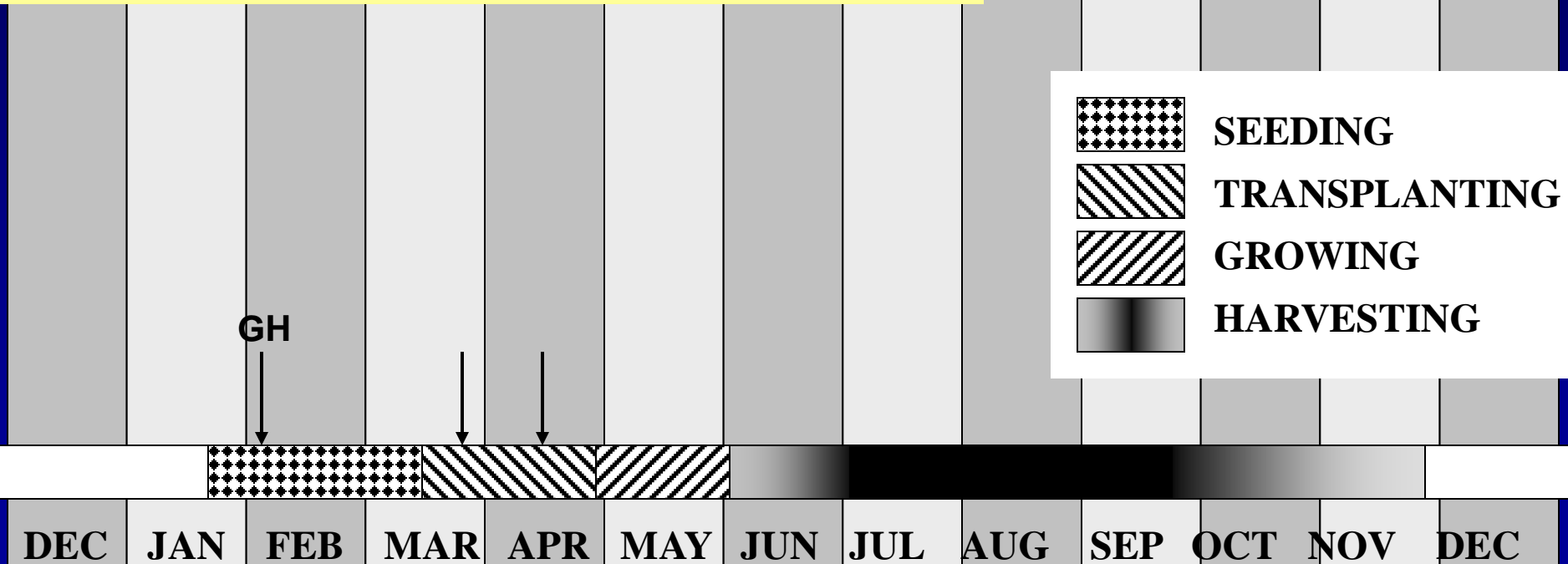
Burpee 4th July

Big Beef X

Parks Whopper CR Improved

Cherry ?

Heirloom ?



 **SEEDING**
 **TRANSPLANTING**
 **GROWING**
 **HARVESTING**

LETTUCE



NOTES FOR LETTUCE

Variety choice comments:

Head vs butter head vs leaf vs cos etc.

Color and leaf type

Heat tolerance means 80° F, not 100° F

Cultural information/growing tips:

Direct seed or transplant; transplanting better in spring?

Sequential sowings needed to get extended harvest

Suggest using floating row covers

Initially thin to 2 plants per location

Row spacing:

8" between rows; 3 rows on 30" bed; thin to about 8" between plants

Pests/problems to watch for:

Slugs, snails; birds; bolting

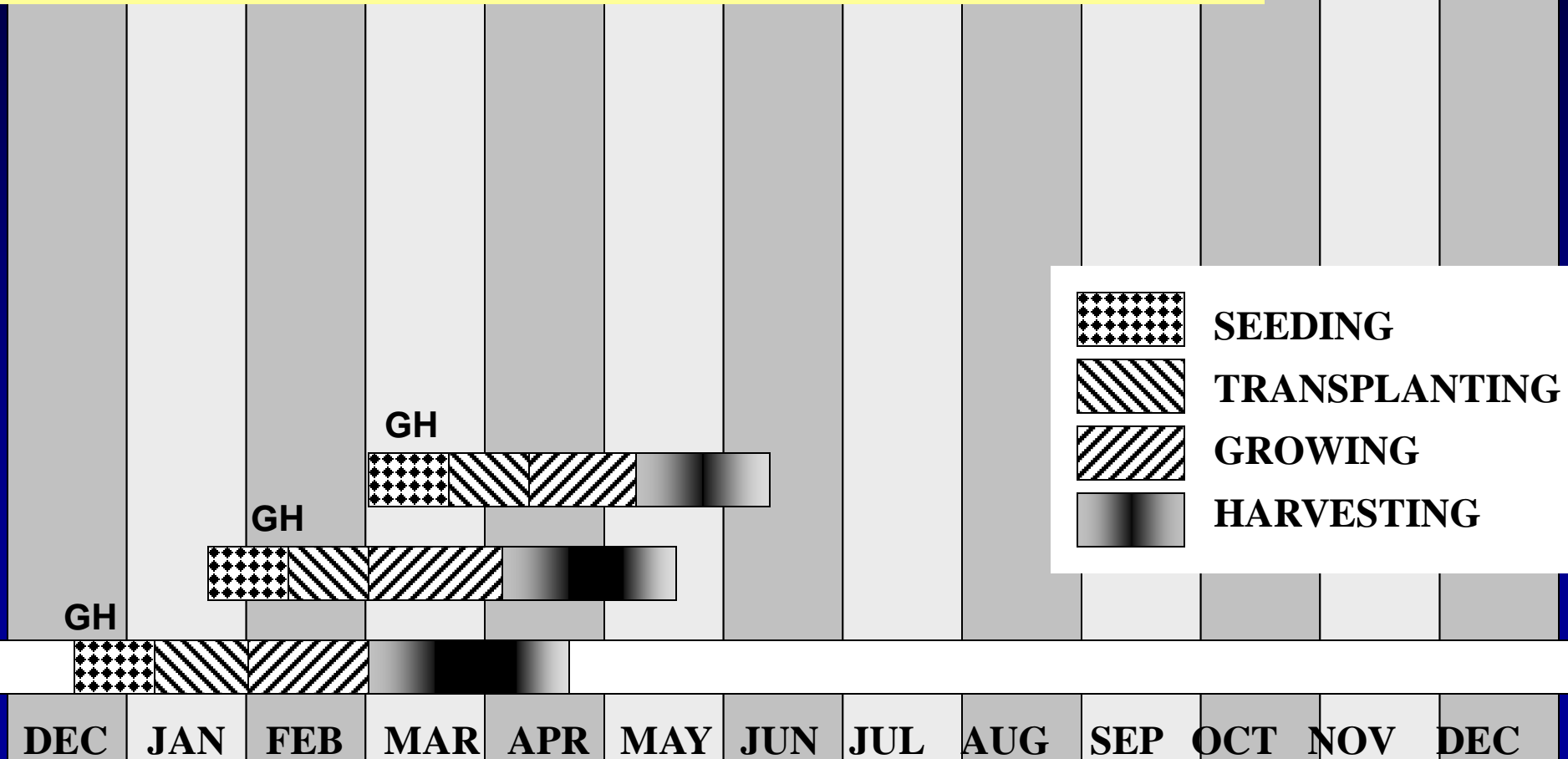
SPRING LETTUCE TIME-LINE & VARIETIES:

Baja MI; Esmeralda; Odyssey

Mighty red oak; Red Express; Red derby MI

Vivian, Green towers

Green Ice, Royal oak leaf





SPRING CABBAGE

NOTES FOR CABBAGE

Variety choice comments:

Differing maturity dates for longer harvest

Color (green vs. red), leaf type (flat or savoyed), head size.

Cultural information/growing tips:

Classic biennial; may bolt if planted too early

Direct seed or transplant

Side-dress nitrogen once well established

Even watering in hot weather to minimize splitting

Expect to have to control pests listed below

Row spacing:

Minimum 18" to 24" between rows; 12" to 18" in-row

Pests/problems to watch for:

Cabbage aphid; imported cabbage worm, loopers; bolting

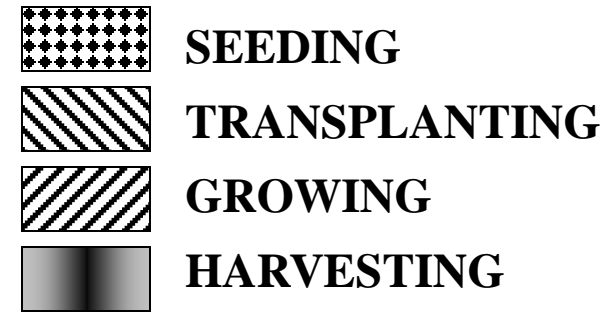
SPRING CABBAGE & VARIETIES:

Earliana (60)

Stonehead (67)

Blue thunder (85)

Ruby Dynasty (76)



GH



DEC JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC



SPRING CAULIFLOWER & BROCCOLI



NOTES FOR SPRING BROCCOLI & CAULIFLOWER

Variety choice comments:

Differing maturity dates for longer harvest

Cultural information/growing tips:

Although biennials planting date not critical as harvest is immature flower parts

Direct seed or transplant

Do not stress cauliflower, otherwise they 'button'

Side-dress nitrogen once well established

Expect to have to control pests listed below

Row spacing:

Minimum 18" to 24" between rows; 12" to 18" in-row

Pests/problems to watch for:

Cabbage aphid; imported cabbage worm, loopers; buttoning (cauliflower)



'Buttoned' cauliflower

SPRING CAULIFLOWER TIME-LINE & VARIETIES:

Wentworth (73)

Minuteman (51)

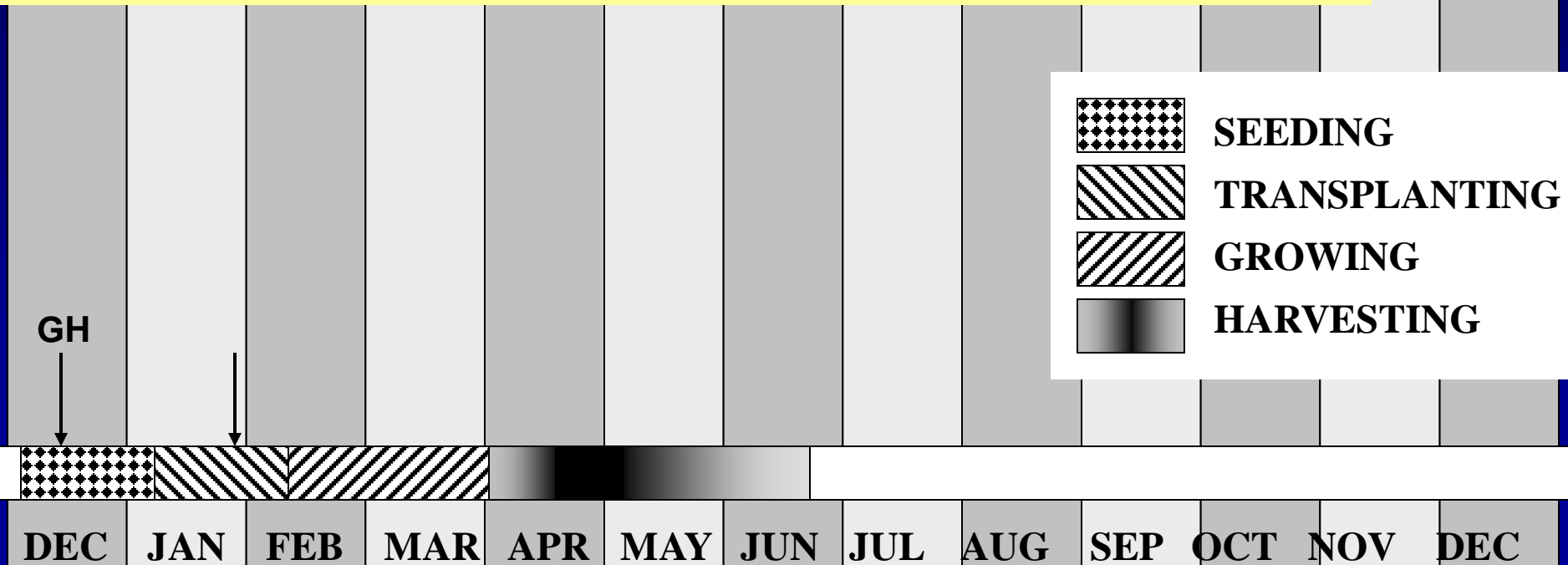
SPRING BROCCOLI VARIETIES

Premium crop X (62)

Goliath (76)

Arcadia (86)

Diplomat (100)





BEETS & CHARD

NOTES FOR BEETS & CHARD

Variety choice comments:

Color and shape of beets

Cultural information/growing tips:

Classic biennials; do not plant too early or they may bolt

Direct seed beets; do not transplant. Can direct seed or transplant chard

Sequential thin; use thinnings as 'greens'

Use floating row covers on beets to avoid virus transmission

Row spacing:

Between rows: chard 28" to 40"; beets 2 rows by 8" on 24" bed

In-row chard: 6" to 8". In-row beets: sequential thin to about 4" to 6".

Pests/problems to watch for:

Black bean aphids on chard; yellows & mosaic virus can be a problem in beets

CHARD TIME-LINE & VARIETIES:

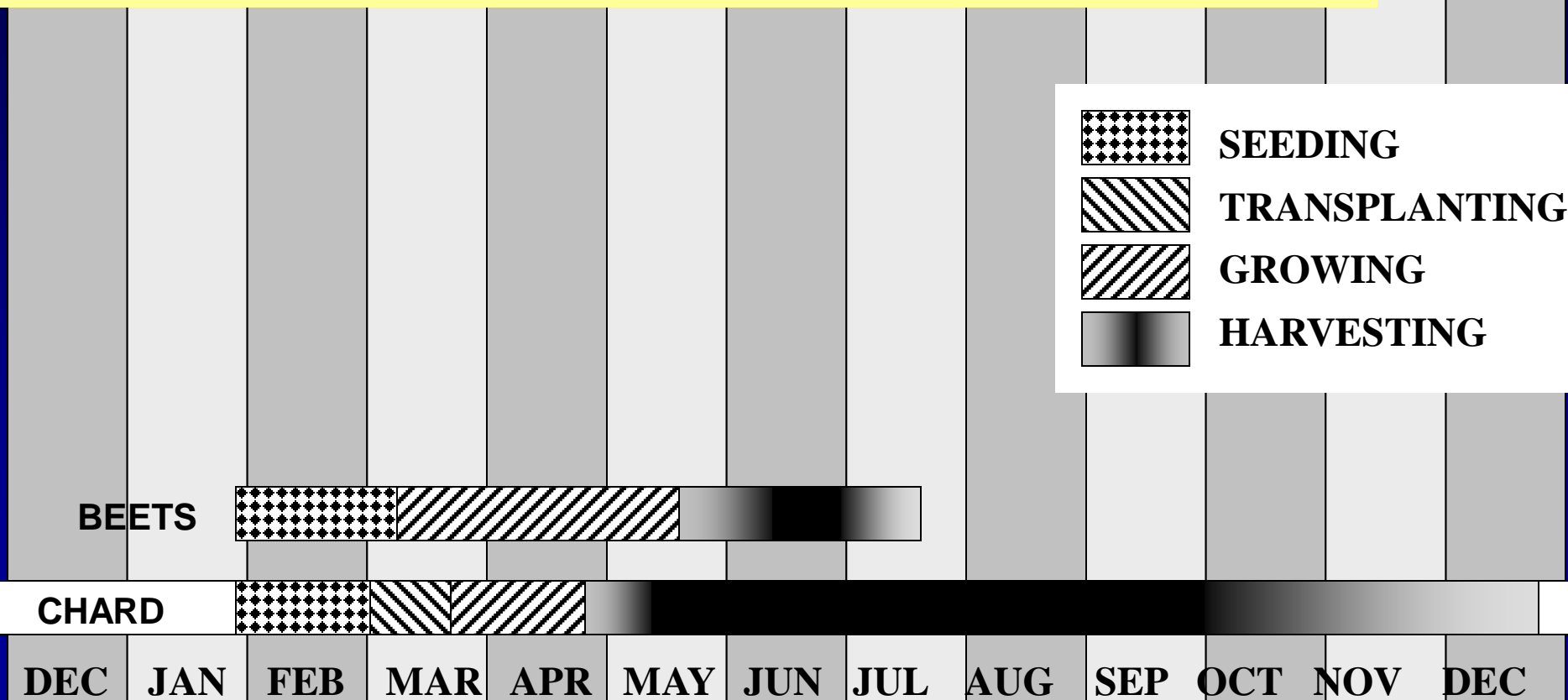
Burpee's Fordhook giant

Bright lights

SPRING BEET VARIETIES

Detroit dark red (short or medium top)

Red ace X





CARROTS

NOTES FOR SPRING CARROTS

Variety choice comments:

Variety depends on soil type

Cultural information/growing tips:

Can save seeds of non-hybrid varieties (problem of space and 'weeds')

Classic biennials; do not sow too early

Do not transplant

Must be thinned! Suggest sequential thinning

Row spacing:

Broadcast, or typically 6" between single rows (suggest 3 rows on 24" bed); thin to not less and 1½" to 2" in-row

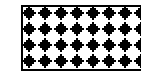
Pests/problems to watch for:

Carrot root aphid

SPRING CARROTS TIME-LINE & VARIETIES:

Nantes-type half-long

Danvers-type half-long



SEEDING



GROWING



HARVESTING



DEC JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC

WHITE (IRISH) POTATOES



NOTES FOR POTATOES

Variety choice comments:

Use 'certified' seed (virus free)

Color (white, red, yellow, etc. flesh; russeted)

Cultural information/growing tips:

Require relatively large area

Prefer cool weather, but not frost tolerant

Cut large 'seed' pieces to 2 or 3 'eyes'

Double dig area; use lots of compost (if available)

Hill up when about 12" tall

Keep foliage dry

Lift and store in dark when tops mature and die

Row spacing:

Typically 28" to 40" between single rows; 8" to 16" in-row

Pests/problems to watch for:

Normally none; late-blight if foliage gets wet

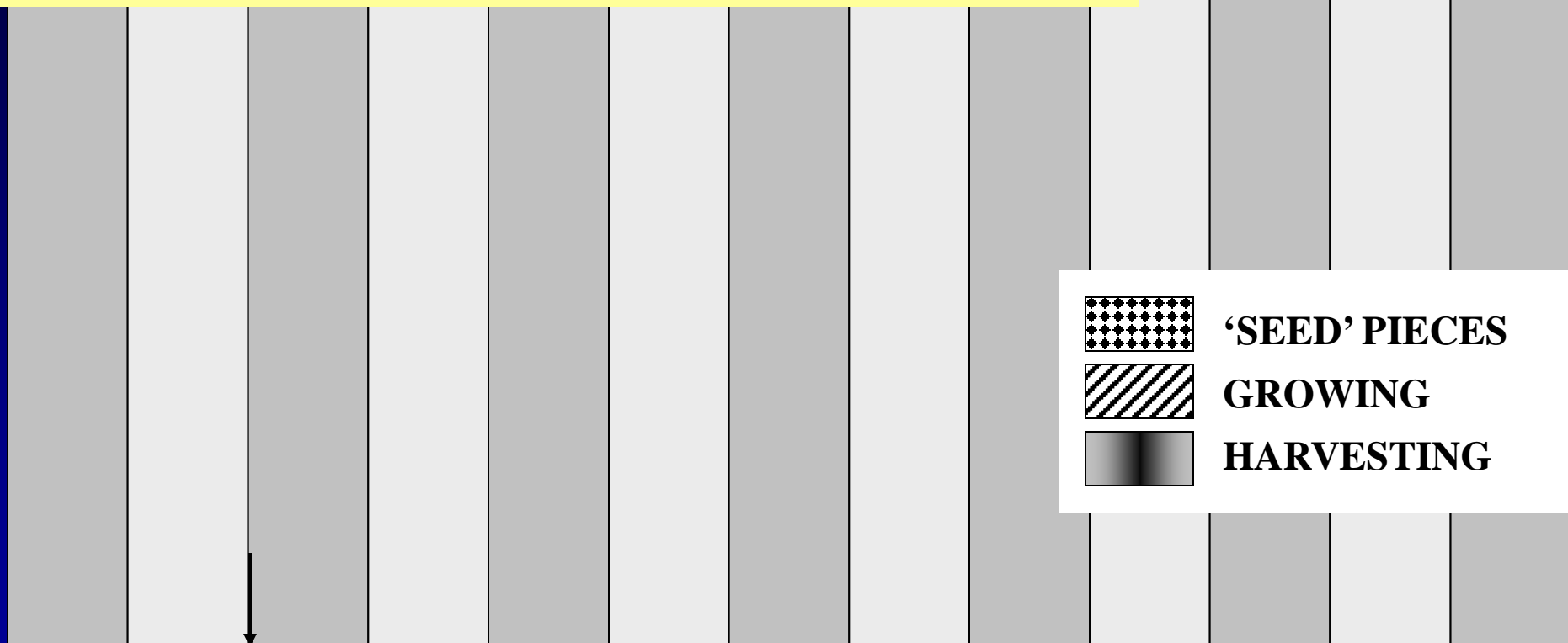
IRISH POTATO TIME-LINE & VARIETIES:

White rose; California white

Red LaSoda

Russet (Norkotah, Burbank, Rio Grande, etc.)

Yukon Gold



DEC JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC

ONIONS (also shallots & garlic)



NOTES FOR ONIONS, GARLIC, SHALLOTS

Variety choice comments:

Day-length requirements/bolting tolerance

Taste and intended use (immediate use or storage i.e. keeping qualities)

Cultural information/growing tips:

Onions are biennials that are prone to bolting if planted too early

Direct seed or transplant onions; seeding is cheaper and easier, also allows for green onions during thinning

Use sets for garlic and shallots; perennials.

Allow tops to collapse and dry before lifting for storage

Row spacing:

Onions: minimum 6" to 12" between rows; 3" to 5" in-row. Garlic and shallots add about 2" to 3".

Pests/problems to watch for:

Usually none; onion thrips can be a problem.



Onion thinnings = green onions

ONION, ETC. TIME-LINE & VARIETIES:

(Stockton yellow globe)

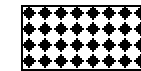
Ailsa Craig (non-keeper)

Copra, Fortress

Mars

Garlic ?

Shallots (French?)



SEEDING



TRANSPLANTING



GROWING



HARVESTING



SHALLOTS/GARLIC



ONIONS

DEC JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC

SWEET CORN



NOTES FOR SWEET CORN

Variety choice comments:

Different maturity dates for extended harvest

Sweetness type: SU = normal sugar; SE = sugary enhanced;

Sh2 = supersweet

Color; yellow vs. white (vs. mixed, red, etc.)

Cultural information/growing tips:

Sequential sowings for continuous harvest

Wind pollinated; plant in blocks, not single rows

Side-dress nitrogen fertilizer at about 12" and 30" tall

Do not stress for moisture, especially during tasseling; pollen can be killed by high temperatures

Hill up at about 8" to 12" tall to help prop roots

Row spacing:

Between row: 28" to 40"; approx. 8" in-row. Or sown in hills

Pests/problems to watch for:

Corn earworms (plant early to avoid), aphids, smut

SWEET CORN TIME-LINE & VARIETIES:

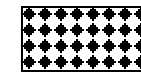
Silver queen (SU) 92

Early sunglow (SU) 63

Early choice (SE) 66

Silver princess (SE) 76

Silver king (SE) 82



SEEDING



GROWING



HARVESTING



DEC JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC

BEANS



NOTES FOR BEANS

Variety choice comments:

Bush vs pole (pole are easier to pick & higher yield; require support)

Personal taste

Cultural information/growing tips:

At least 2 sowings for longer green bean harvest

Sow to moisture; do not irrigate until after emergence

Do not handle foliage when wet

Keep green beans picked for prolonged harvesting

Do not plant limas until soil is thoroughly warmed up

Row spacing:

Bush: between row: 30" to 40"; approx. 6" in-row.

Pole: between row at least 4 ft; approx. 6" in-row

Pests/problems to watch for:

Mites sometimes; watch for aphids on limas

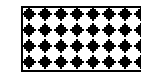
GREEN BEAN TIME-LINE & VARIETIES:

Kwintus (pole)

Roma II (bush)

LIMA BEANS

Big Mama (pole)



SEEDING



GROWING



HARVESTING

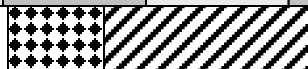
LIMA BEANS



GREEN BEANS



GREEN BEANS



DEC JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC

CUCUMBERS



NOTES FOR CUCUMBERS

Variety choice comments:

Use is major determinant (slicing, pickling, etc.)

Burpless vs normal

Size of vine (bush vs vining)

Cultural information/growing tips:

Double dig, lots of compost if available = larger rooting volume

Heavy water users; use extra drip line or irrigation

Grown on a trellis saves space (+ better shaped fruit); need 'weaving'

Keep picked for extended harvest

Row spacing:

Trailing vines: between row: 5 ft to 6 ft; or sown in hills

On trellis: 4 to 5 ft between rows; 8" to 12" between plants

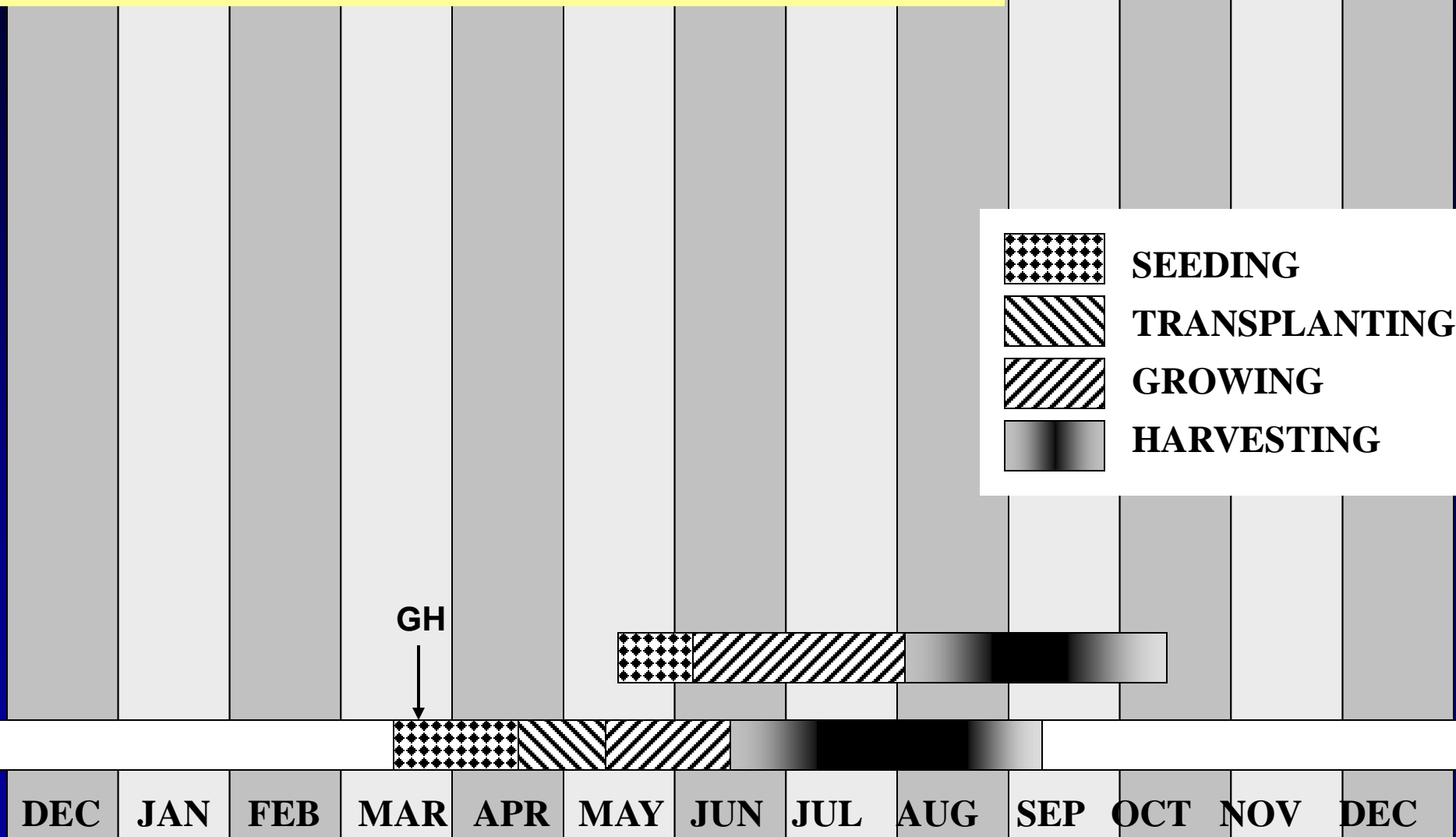
Pests/problems to watch for:

Melon (= cotton) aphids can kill plants, whiteflies, cuc. mosaic virus

CUCUMBER TIME-LINE & VARIETIES:

Green Knight X

Bush types?



PEPPERS & EGGPLANT



NOTES FOR PEPPERS & EGGPLANT

Variety choice comments:

For peppers personal taste is # 1; 'heat'; also color

For eggplant shape and color

Cultural information/growing tips:

Warm-season plants; do not try to start too early

High water use; need extra irrigation. Additional drip line

Row spacing:

Between row: 28" to 40"; approx. 9" to 12" in-row.

Pests/problems to watch for:

Hornworms and mites occasionally, sunburn on bell peppers

PEPPER TIME-LINE & VARIETIES:

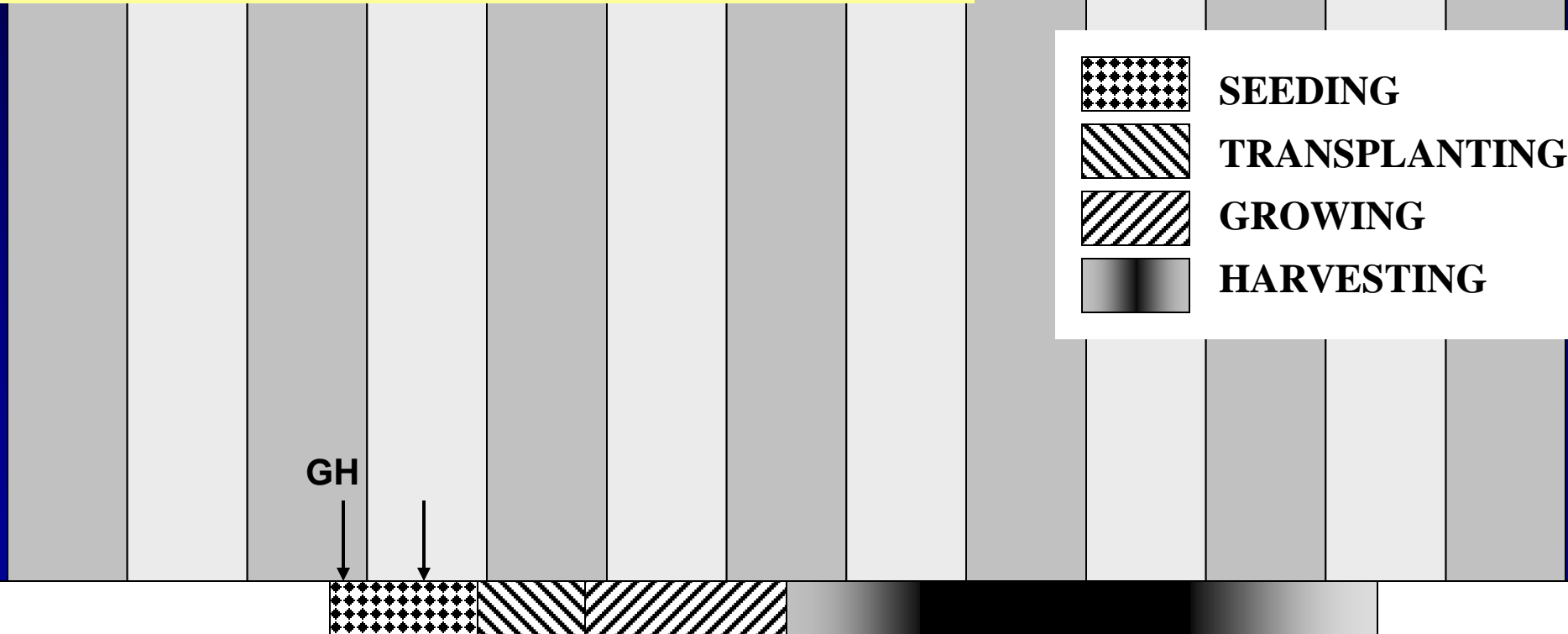
Yolo Wonder, Cal Wonder

Big dipper

EGGPLANT:

Black beauty; Black bell

Burpee Hybrid



	SEEDING
	TRANSPLANTING
	GROWING
	HARVESTING

DEC JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC

SQUASH (all)



NOTES FOR SQUASH

Variety choice comments:

Taste, and use, are major determinants

Size of vine

Pumpkins only if space available

Cultural information/growing tips:

Require relatively large area for spreading vines

Double dig, lots of compost if available = larger rooting volume

Heavy water users; use extra drip line or irrigation

Grow under floating row covers until start of flowering

Keep picked (daily in high season for zucchini)

Row spacing:

Trailing vines: between row: 5 ft to 6 ft"; or sow in hills

Pests/problems to watch for:

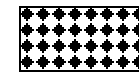
Cucumber mosaic can be serious problem with zucchini; squash bugs, western striped cucumber beetle, aphids, whiteflies

SQUASH TIME-LINE & VARIETIES:

Burpee Hybrid Zucchini

Eight ball

Winter, various



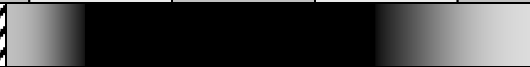
SEEDING



GROWING



HARVESTING



DEC JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC

NOTES FOR MELONS

Variety choice comments:

Taste is major determinant

Size of vine

Watermelon is ? unless very large area available

Cultural information/growing tips:

Double dig, lots of compost if available = larger rooting volume

At least two sowings for longer harvest

Heavy water users; use extra drip line or irrigation

Grown on a trellis saves space (fruit may need support); need
'weaving'

Row spacing:

Trailing vines: between row: 5 ft to 6 ft; or sown in hills

On trellis: 4 to 5 ft between rows; 8" to 12" between plants

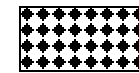
Pests/problems to watch for:

Melon (= cotton) aphids can kill plants; whiteflies; cuc. mosaic virus

MELON TIME-LINE & VARIETIES:

Burpee Early hybrid Crenshaw

Burpee Hybrid Cantaloupe



SEEDING



GROWING



HARVESTING



DEC JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC

FALL/WINTER

(June to June)

BRUSSELS SPROUTS & FALL CABBAGE



NOTES FOR BRUSSELS SPROUTS & FALL CABBAGE

Variety choice comments:

Differing maturity dates for longer harvest

Cultural information/growing tips:

Classic biennial; must grow vegetative structure before winter; over-wintered plants will bolt in spring without producing

Direct seed or transplant (preferred)

Require shade during germination/establishment; suggest 50% shade-cloth

Side-dress nitrogen once well established

Expect to have to control pests listed below

Row spacing:

Minimum 18" to 24" between rows; 12" to 18" in-row

Pests/problems to watch for:

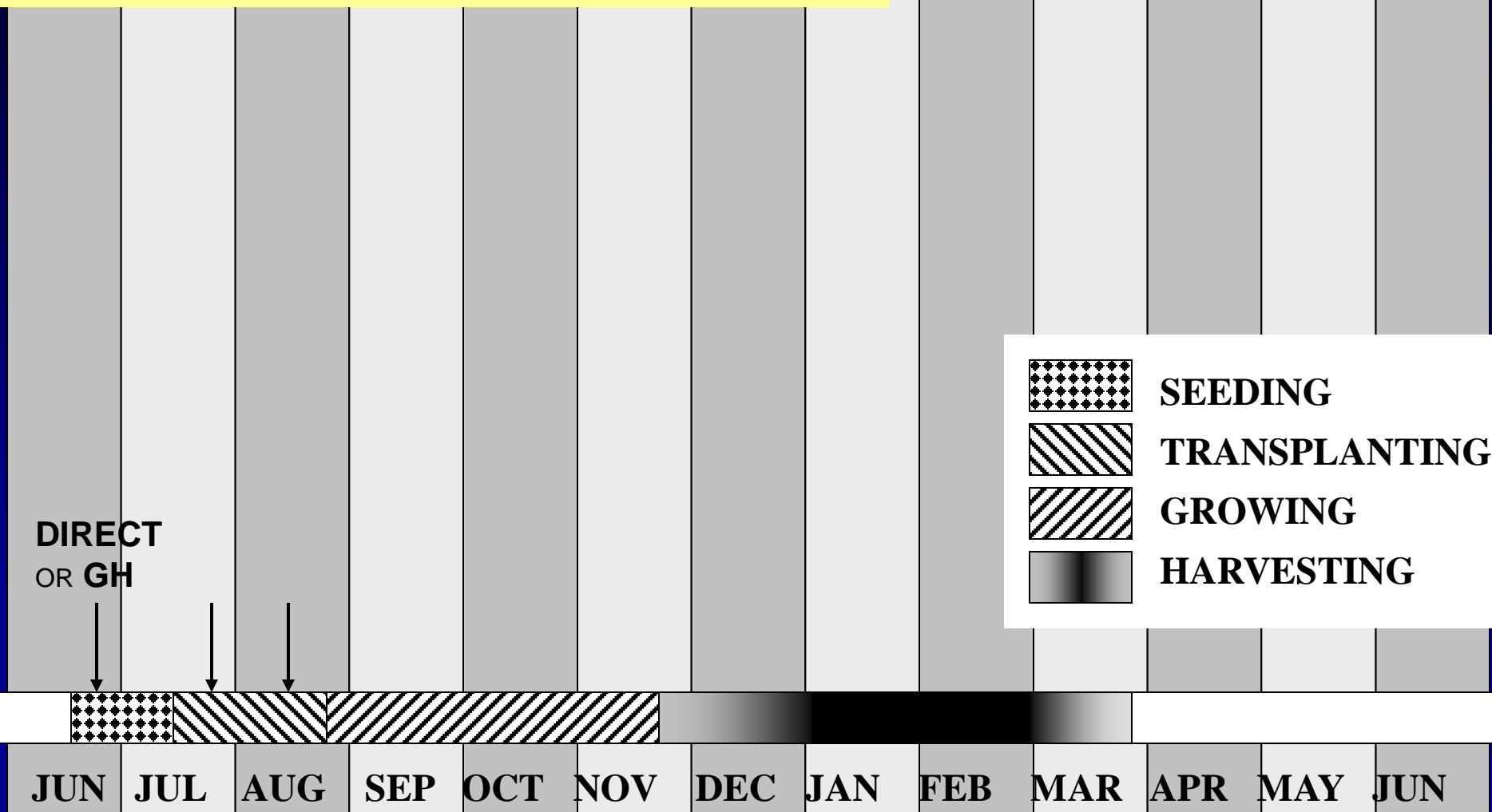
Cabbage aphid; imported cabbage worm, loopers; sunburn

Brussels sprouts time-line & varieties:

Jade cross hybrid

Bubbles

Vancouver, Tasty nuggets



**DIRECT
OR GH**



SEEDING



TRANSPLANTING



GROWING



HARVESTING

JUN JUL AUG SEP OCT NOV DEC JAN FEB MAR APR MAY JUN

Brussels sprouts on July 26



Bubbles

Jade x

Vancouver

Rubine

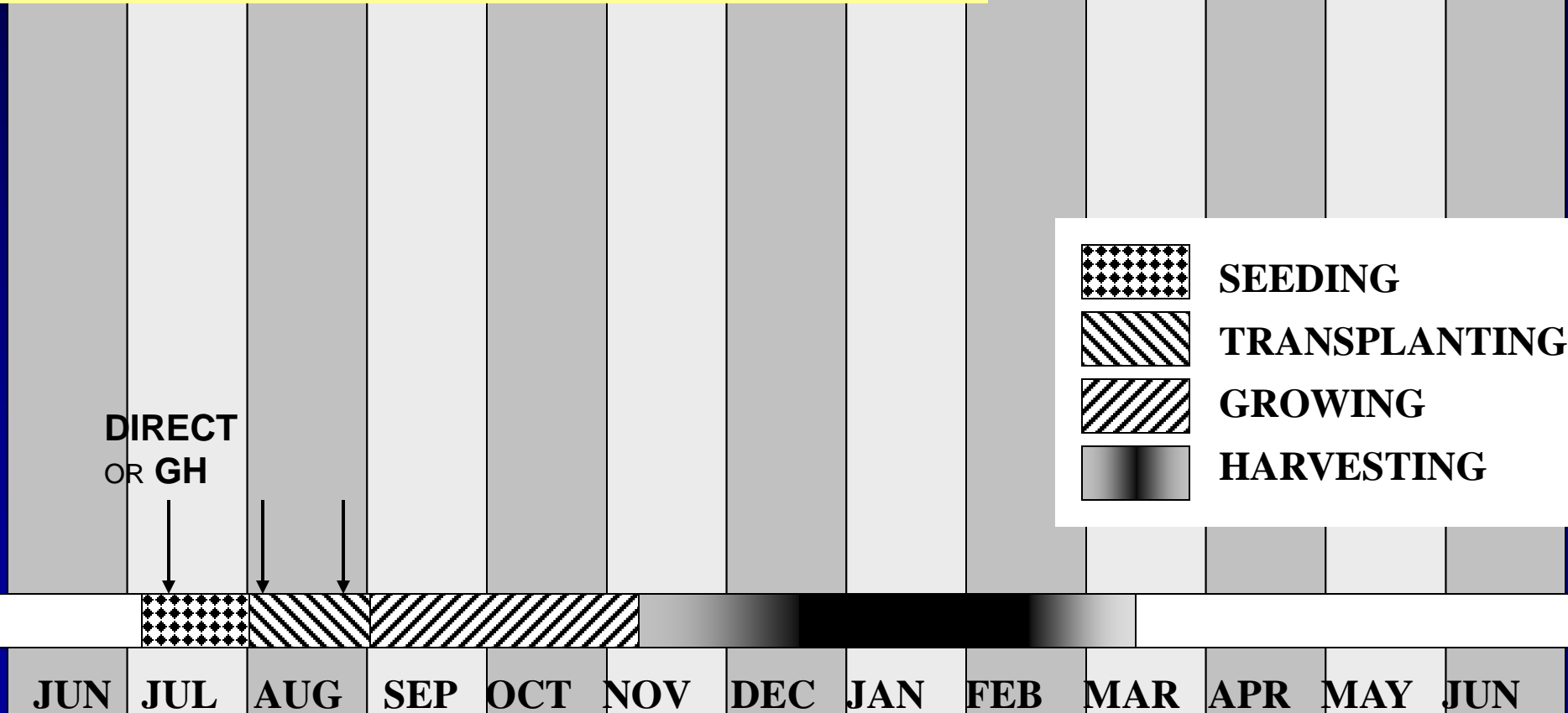
Fall cabbage time-line & varieties:

Savoy ace hybrid

Charmant

Blue thunder; Flat Dutch; Copenhagen
market; January king

Red dynasty



NOTES FOR FALL BROCCOLI & CAULIFLOWER

Variety choice comments:

Differing maturity dates for longer harvest

Cultural information/growing tips:

Although biennials planting date not so critical as harvest is immature flower parts

Direct seed or transplant (latter is easier in summer?)

Shade is needed during germination/establishment in hot weather; suggest 50% shade cloth

Do not stress cauliflower, otherwise they 'button'

Side-dress nitrogen once well established

Expect to have to control pests listed below until November

Row spacing:

Minimum 18" to 24" between rows; 12" to 18" in-row

Pests/problems to watch for:

Cabbage aphid; imported cabbage worm, loopers

FALL CAULIFLOWER TIME-LINE & VARIETIES:

Wentworth (73)

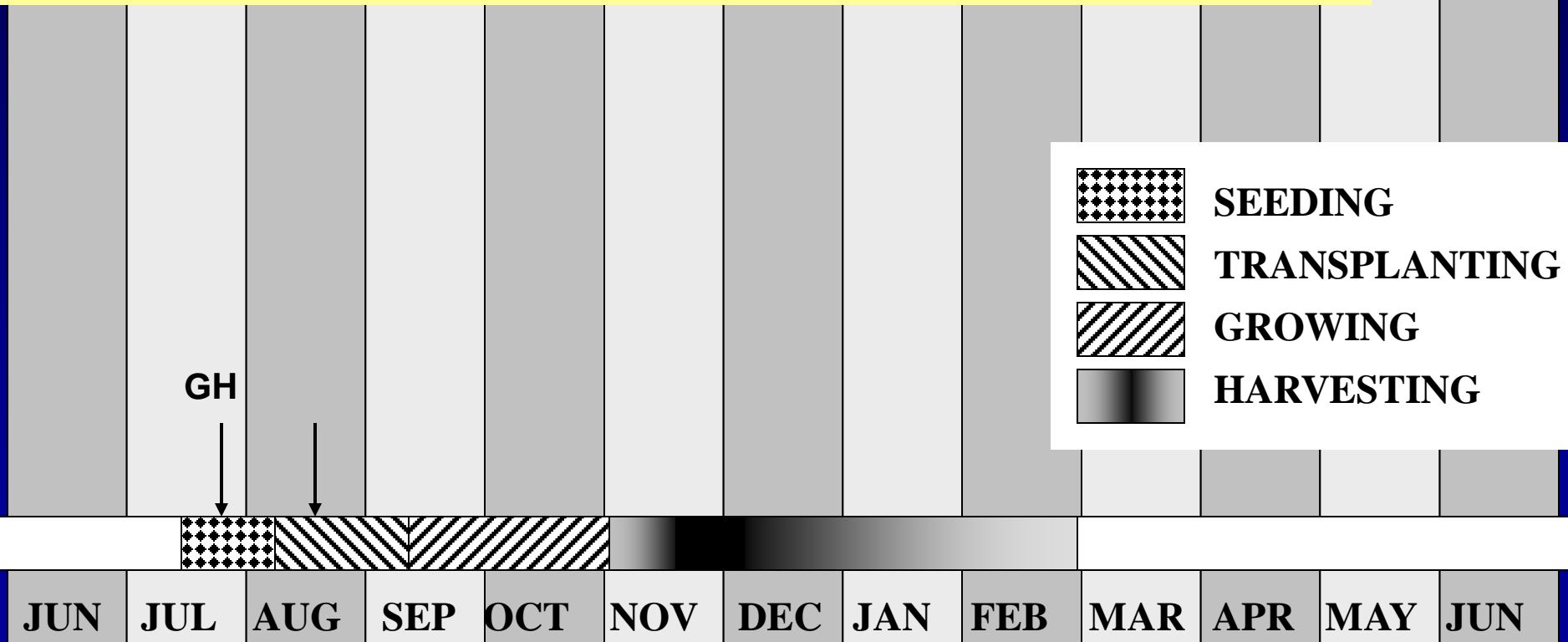
Minuteman (51)

FALL BROCCOLI VARIETIES

Premium crop X (62)

Goliath (76)

Diplomat (100)



	SEEDING
	TRANSPLANTING
	GROWING
	HARVESTING

NOTES FOR FALL CARROTS

Variety choice comments:

Variety depends on soil type

Cultural information/growing tips:

Can save seeds of non-hybrid varieties (problem of space and 'weeds')

Classic biennials; must grow root before onset of winter

Do not transplant

Must be thinned! Suggest sequential thinning

Row spacing:

Broadcast, or typically 6" between single rows (suggest 3 rows on 24" bed); thin to not less and 1½" to 2" in-row

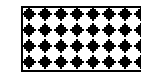
Pests/problems to watch for:

Carrot root aphid !!

FALL/WINTER CARROTS TIME-LINE & VARIETIES:

Nantes-type half-long

Danvers-type half-long



SEEDING



GROWING



HARVESTING



JUN JUL AUG SEP OCT NOV DEC JAN FEB MAR APR MAY JUN

NOTES FOR FALL LETTUCE

Variety choice comments:

Head vs butter head vs leaf vs cos, etc.

Color and leaf type (grow several varieties simultaneously)

Cultural information/growing tips:

Direct seed or transplant; direct seeding using drip tape is easier in summer?

Sequential sowings needed to get extended harvest

Shade improves stand establishment; suggest using floating row covers or 50% shade cloth

Initially thin to 2 plants per location

Row spacing:

8" between rows; 3 rows on 30" bed; thin to about 8" between plants

Pests/problems to watch for:

Slugs, snails; birds

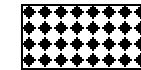
FALL LETTUCE TIME-LINE & VARIETIES:

Baja MI; Esmeralda; Odyssey

Mighty red oak; Red Express; Red derby MI

Vivian, Green towers

Green Ice, Royal oak leaf



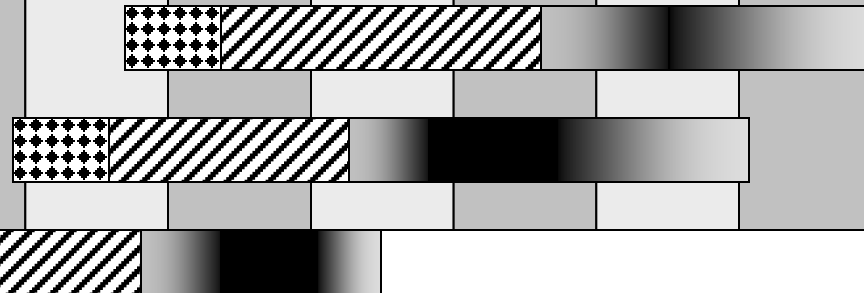
SEEDING



GROWING



HARVESTING



JUN JUL AUG SEP OCT NOV DEC JAN FEB MAR APR MAY JUN

RUTABAGA, TURNIPS, & PARSNIPS



NOTES FOR RUTABAGA, TURNIPS & PARSNIPS

Variety choice comments:

Limited selections available

Cultural information/growing tips:

Classic biennials; must grow vegetative structure before winter;
over-wintered plants will bolt in spring without producing

Direct seed (root crops) and thin to stand

Require shade during germination/stand establishment; suggest 50%
shade-cloth

Side-dress nitrogen once well established

Store in ground in winter

Row spacing:

Minimum 18" to 24" between rows; approx. 6" in-row

Pests/problems to watch for:

Cabbage aphid; imported cabbage worm, loopers on Brassicas

Whitefly on parsnips

TIME-LINE & VARIETIES:

RUTABAGA

Purple top

TURNIPS:

No selection

PARSNIPS:

Harris model

Hollow crown



SEEDING



GROWING



HARVESTING



TURNIPS



RUTABAGA



PARSNIPS

JUN JUL AUG SEP OCT NOV DEC JAN FEB MAR APR MAY JUN



**PEAS &
FAVA BEANS**



NOTES FOR PEAS & FAVA BEANS

Variety choice comments:

For peas intended use (snap, sugar, shelling) and vine height

No such thing as a pea that tolerates over about 80 F

Mildew resistance in pea is useful

Avoid 'leafless' varieties

Cultural information/growing tips:

Cool season plants; must mature before weather warms in spring as plants do not tolerate much over 80 F; avoid moisture stress.

Direct seed or pregerminate peas; direct seed fava beans

Tall pea varieties typically have higher yield, but require supports

Keep seed of both crops

Fava beans make excellent winter cover crop

Row spacing:

Peas: minimum 40" between rows; approx 4" in-row

Fava beans: 30: to 40" between rows; 6" in-row (need support)

Pests/problems to watch for:

Black bean aphid on fava beans some years; birds & mildew on peas

PEA TIME-LINE & VARIETIES:

Shell peas: Alderman (= Tall Telephone)

Mr. Big

Snap peas/sugar pod ??

FAVA (BROAD) BEAN:

??

FAVA BEANS

PEAS



SEEDING



GROWING



HARVESTING

JUN JUL AUG SEP OCT NOV DEC JAN FEB MAR APR MAY JUN

SPINACH



NOTES FOR SPINACH

Variety choice comments:

Heat/bolting tolerance

Mildew resistance

Flat versus savoyed leaves

Cultural information/growing tips:

Cool weather plants; will bolt as soon as warm weather arrives in spring

Keep well watered

Use floating row covers

Sequentially harvest mid-age leaves & allow to regrow

Row spacing:

8" between rows; 6 " in-row

Pests/problems to watch for:

Green peach aphid, mildew.

Slugs and snails!!

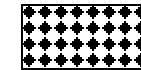
SPINACH TIME-LINE & VARIETIES:

Teton hybrid

Melody hybrid (savoyed)

Tyee (semi-savoyed)

Giant 157 hybrid (vigorous, flat)



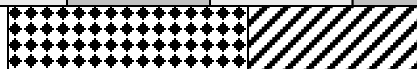
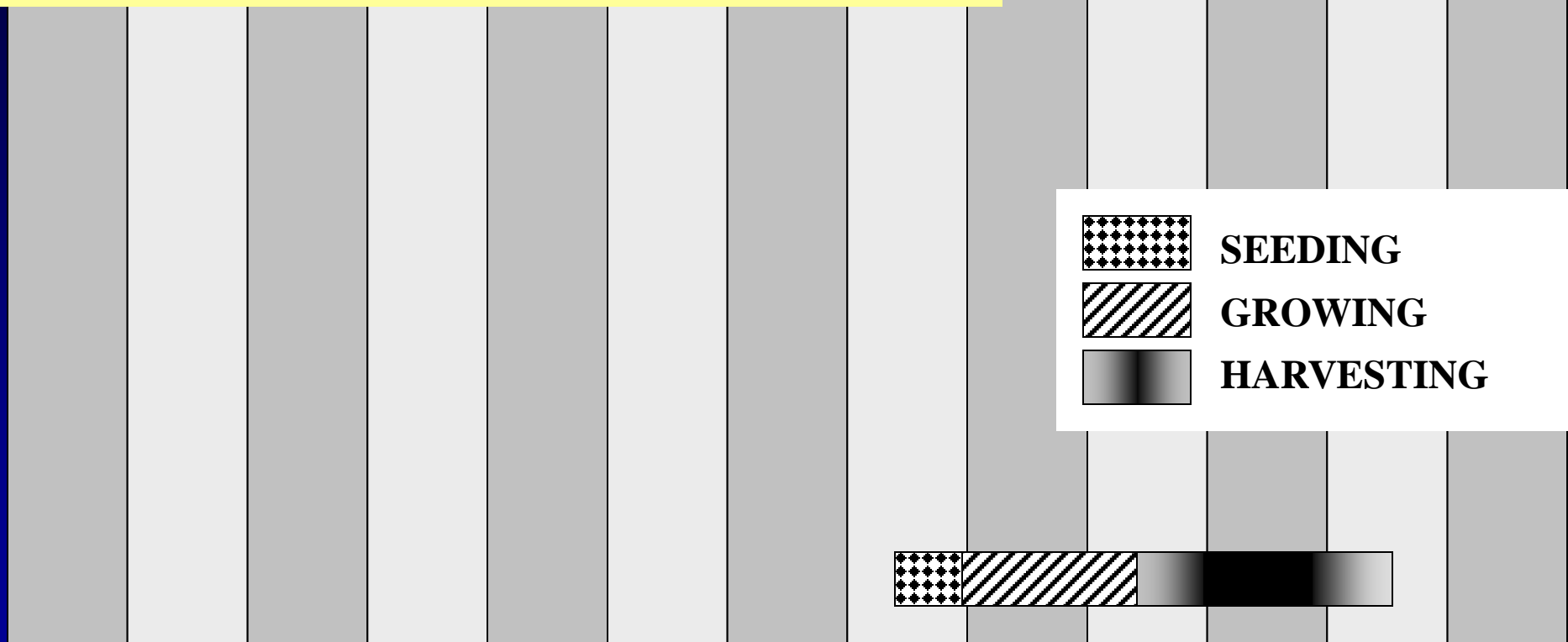
SEEDING



GROWING



HARVESTING



JUN JUL AUG SEP OCT NOV DEC JAN FEB MAR APR MAY JUN

Miscellaneous vegetables

- **Rocket (Arugula)**
- **Radish**
- **Rhubarb**
- **Artichoke**
- **Asparagus**
- **Celery**
- **Sweet potato**

Herbs

- Parsley & cilantro
- Basil
- Dill
- Oregano
- Sage
- Mint (beware)
- Thyme
- Lemongrass

