

Antony (Tony) Frank Kavelaars,
1856 River Road, Richmond, B.C.

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Born June 4, 1931 in Zevenb-Hoek, South Holland . . . grew up on a farm . . . attended agriculture school nearly 2 $\frac{1}{2}$ years at Rosendaal . . . From September through April . . . worked on farm summers for experience . . . classes were on mixed crops . . . farming future not good in Holland . . . choice of moving to Australia or Canada.

1952 - came to Ontario.

Late 1952/53 - worked for Matt Kennedy, vegetable grower, Cloverdale . . . then to Lulu Island Peat Company, then construction work, six years as a carpenter . . . 10-11 years in millwork at Crown Zellerback plant, Vulcan Way.

c1960 - bought 4 $\frac{1}{2}$ acres, cleared brush which cost \$1,000, drained land, dug hand ditch 4000 feet to empty water on back land in June . . . planted blueberry bushes, red currants, 34 varieties of apples from Okanagan, Holland and New Zealand, few pear trees.

Borrowed money and built everything himself, greenhouses . . . first year good . . . last year had fire in March, lost apple trees couldn't spray in time . . . spraying problem because of wet climate . . . a family project with wife, 3 boys, 3 girls all working in it for allowances . . . Richmond not good apple growing climate . . . rain, high water table in winter.

Apples: types (1) Star Early, best apple good for apple sauce.
(2) New Zealand variety, has 30 trees
(3) Spartan, good.
(4) Golden Delicious, 100 trees, dwarf trees.

Shallow rooting type necessary - phasing out apples.

Red Currants (100 plants)

1 variety from Holland - sold beginning of July.

1 variety is Grape Currant, a cross with a grape. Sold beginning of September on No. 5 Road stands. Fly comes beginning of June, lays eggs on plant, egg (worm) eats into centre of branch down to bottom . . . much bush around . . . use protection spray one or two days beginning of June only, if rainy then lose currant.

Black Currants - 100 plants. Hard to take care, namely hard to pick . . . pay 75¢ an hour (half of what you get) . . . if wet, currants get moldy.

Blueberries - one acre in back . . . Ransom variety grown on peat . . . soil is open down below . . . ditch put in every 150 feet around property.

Fertilizer used: 3-10-10, phosphate of ammonia, calcium nitrate, potassium nitrate mix. Uses dolomite lime because soil is short of magnesium. Sends greenhouse soil samples monthly to district horticulturist, Kelowna.

Long English Cucumber - major crop for 3 years . . . starts getting propagation house ready first week January - 1000 sq. feet . . . set temperature within to 80° . . . water temperature at 200° . . . if temperature drops switch goes on and restarts pump.

Flats are seeded, temperature 85° - 95° . . . 24 hours later seed is up . . . another 24 hours put in pots on table - temperature is around 76° . . . pots kept there 3 - 4 weeks depending on sunshine.

Meanwhile big greenhouse is steamed, sterilized . . . soil is brought to 180°F for half an hour . . . takes 4 hours to handle area 20' x 120' . . . use special cloth and seal edges . . .

fishnet goes over . . . this is tightened and steam raises the cloth . . . then general cleanup . . . clean all windows, eliminate fallout . . . costs \$75 just to clean glass.

Soil is worked up a week prior to planting . . . soil temperature at 70° so fertilizer can start releasing . . . plants spaced in . . . 98 female varieties and 50-50 varieties ("Sporo" variety is 50% male flowers, 50% female flowers) . . . one week later string is tied to bottom of plant, attaching it to overhead guy wire (7' high) . . . when plant reaches the top, top of plant taken out, side shoots taken out according to weather . . . get 3 to 4 good cucumbers on stem . . . pick every other day . . . cucumber required to weigh 3/4 to 1 pound . . . are cello wrapped into boxes of 1 dozen . . . after growing 1 month soluble fertilizer added . . . too much salt damages plant . . . use salt meter . . . if indicator says 75 it means salt level is at the top . . . if 30 - 40 have sunny weather and must feed heavily to build up . . . need sturdier plant and less disease than in plant with high salt content.

System of soluble fertilizer using plastic bag . . . control on valve regulates amount of of fertilizer . . . usual is twice the strength of the soil . . . cucumbers require pruning . . . female variety needs less pruning . . . temperature and humidity quite high but if too high can ruin plant so need lots of ventilation (clock control) . . . cucumbers planted January 1, last planting August 1 (continuing growth depends on outside market . . . new plants for fall crop Sept. 1 - produce till end of October until beginning of December - depending on Indian Summer . . . consider heating bill compared to sunshine . . . longer days help

light sensitive plants . . . in Europe plants are produced year round using CO₂, by burning kerosene or natural gas, like a jet fan system . . . Kavelaars only cucumber grower in Fraser Valley to use jet fan.

Tomatoe growing

Humidity difficult to maintain so three types of sprinklers used:

- (1) Six feet apart in bottom, for fertilizer and water.
- (2) Soaker hose, long plastic tube 2" diameter, holes every 6 inches, stream of water 1/16" water comes out.
- (3) Overhead sprinkling system 7' - 8' high every 20 feet turns on 3 to 4 times daily to cool greenhouse down.

When temperature gets too high exhaust fans go on, bring in fresh air . . . steadily all day during summer.

White Spine Cucumber

Short, stubby type, must have been in greenhouse to get fruit . . . 8 to 10 inches long, 3 inches diameter, rough skin . . . grown on Vancouver Island, grows 50,000 - 100,000 sq. ft. . . . can't compete with Mexican and Californian import.

Long English Cucumber - 12" long type, 1½ inches diameter, skin is bitter free . . . these cucs shipped into Vancouver now at \$2.60 a dozen . . . stores paying \$4.00 a dozen . . . customers paying 69 cents apiece . . . eat whole cuc. including skin . . . introduced into B.C. 10 years ago by two Dutch growers . . . originated in England . . . in 1972 B.C. produced 2600 cases of Long English . . . in 1973 up to April 1st, 4000 cases produced. One other Long English grower here - Martin Koop on Blundell Road . . . previously Dick Noord, Westminster Highway.

Diseases of Long English - botrytis . . . from high humidity in plant yet it needs lots of water and humidity . . . new spray: chemical taken up by root system of plant works in plant itself

. . . can spray on as well . . . very safe for humans . . .
needs two days after spraying before picked . . . spray is "Benlate"

Insects

(1) Red Spider Mite . . . to control deliberately introduce
parasite which lives with mite, cheapest method now in Europe . . .
Dr. Gerber, Cloverdale, going to England to bring some back to
start control here . . . Red Spider multiply rapidly in dry air
close to heating pipes. Smoke type of Miticide now used . . .
when ignited acts like a smoke bomb . . . cans put in greenhouse
lit by a special match . . . turn off fans . . . leave smoke 2½
hours . . . Miticide totally envelopes plant - kills all eggs
. . . continue process every 14 days all summer.

(2) White Fly - worst . . . bad in June usually . . . use another
type of smoke generator, an insecticide called "Parathine" . . .
wear masks, protective clothing, dangerous for 5 to 6 hours.
With both smoke types can pick cucumbers the next day, not wait
as with sprays.

Slugs . . . eggs don't kill by steaming . . . put slug bait out
all the time . . . slugs eat surface roots, stem . . . newer
fungus smoke generator being developed.

Tomatoes - good market in Richmond, so started greenhouse,
30' x 100' long with double layer of sheet plastic covering whole
roof . . . edges sealed . . . air forced between the two layers
. . . seeded mid-February in propagation house . . . potted
March 1 . . . put in plastic house the end of March . . . picked
in May. Variety is mostly Vendor . . . seeded in February . . .
Fall crop harvested in August . . . tries growing some Holland
varieties in greenhouse . . . some outside for local stands,
just a few hundred plants.

People here like a big solid tomatoe . . . in Holland they like a small round type . . . import from Mexico and California are quite small, so no trouble selling big tomatoes here.

1972 volume sales here was 1,000 pounds . . . production was good with greenhouse tomatoes producing 17 pounds to a plant and outside 8 to 10 pounds in short season.

Marketing

Tomatoes and cucumber by broker who sells for commission to wholesaler - better controlling grade and price . . . Marketing Board now being established for both products.

Tomatoes: producing 12% of total B.C. production on average . . . in June producing 80% because of greenhouse peak.

Kavelaars is president of Fraser Valley Greenhouse Association . . . growers are mainly Japanese and Chinese in Fraser Valley and are quiet and depend on president . . . wants Marketing Board to control all vegetables imported into B.C. . . . too much U.S. . . . consumer paying too much for product . . . should eliminate middleman.

Yield on tomatoes is 10 to 15 pounds a plant depending on soil and grower . . . old greenhouse soil has diseases, is worn out . . . steaming, cow manure helps . . . most important elements still in his soil.

Most important elements to add to soil for growing tomatoes and cucumbers:

- iron and magnesium)
- Manganese) minor elements
- little boron)

- Phosphate)
- nitrate) major elements
- calcium)
- potash)