

# SALES OF CONCORD GRAPES AS TABLE GRAPES TO COMPLIMENT PROFITS FROM A TRADITIONAL PROCESSING GRAPE

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Since 1984, fresh fruit marketing firms have been actively competing for and paying premium prices for a portion of Northwest Arkansas' Concord grape harvest. The offers for Concord table grapes have ranged from \$465 per ton in 1984 to \$625.00 per ton in 1991 (Table 1). The fresh-market prices would appear to be significantly higher than what was paid for the more traditional utilization into juice and juice products. This paper demonstrates that sales of Concord table grapes will increase grower profits but at present will require conjunction with a juice/processing contract. When considering the addition table grape sales to their marketing strategy, growers in Northwest Arkansas should evaluate the following: (1) restrictions imposed by grade and quality requirements for table grapes, (2) the proportion of total yield that would meet fresh market standards, and (3) contract agreement for utilizing the remainder of the crop in juice processing.

Exclusive of harvesting, marketing, and land management charges, irrigated Concord grape production costs have been estimated to range between: (1) pre-harvest variable -- \$520.00 to \$571.00 per acre; plus (2) fixed costs -- \$610.00 to \$707.00 per acre. Yields have been estimated to range from 6.65 tons per acre with both the Bilateral Cordon and the Umbrella Kniffin trellis systems to 8.55 tons per acre with Geneva Double Curtain trellis. Average total pre-harvest cost for 1987 were estimated at: \$1235.00 per acre, or \$186.00 per ton at 6.65 ton per acre.

Concord grapes going to the juice/processing market are most efficiently gathered by specialized grape-harvester machines. Custom machine harvesting services have regularly been offered in the Northwest Arkansas are for \$35.00 per ton of grapes. An average haul to the juicing plant has been estimated to cost an additional \$10.00 per ton, bringing the total to \$45.00 per ton. At the \$300.00 per ton price projected for the 1991 juice grape crop, profits would be \$69.00 per ton or \$458.85 per acre (yield of 6.65 tons per acre).

While production costs for table grape sales would be the same, harvesting/packing variable costs for U.S. Fancy and #1 table grapes have been reported by one broker to be \$185.00 per ton of packed Concord grapes (Table 2). Box materials and assembly operations provided by the fresh fruit buyer were charged to the grower at \$25.00 for the 100 20-lb boxes required for each ton of packed grapes. In this example, pickers were paid at a piece rate of \$1.00 per 20-lb box, i.e. \$100 per ton for picking. The hand harvest rate was observed to be an average of six 20-lb boxes per hour per person or a daily rate of 36 boxes per picker for a 6-hour day. For example, in an excellent vineyard with 75% of the grape clusters meeting fresh market standards, an average size picking crew of twelve would be expected to pack 432 boxes of grapes per day of 4.32 tons at \$100.00 per ton picking cost.

Distribution and pick-up of boxes for the average sized crew was estimated to require two persons working a 10-hour day. At \$3.75 per hour, the labor costs were \$75.00 and \$15.00 was charged for fuel (tractor and truck) or \$90.00 per 4.32 tons per day or \$20.83 per ton for this function. The average crew (12 pickers, 4.32 tons per day) required a 10-hour day for a supervisor who would instruct pickers, keep books, and assign rows for picking grapes and collecting filled boxes. The inspector was working an 8-hour day checking both grade quality and the weight of filled boxes. At the wage which was paid (\$4.50 per hour), the cost for the supervisor/inspection function would be \$81.00 or \$18.75 per ton. Trucking expenses were estimated at \$40.00 for 4.32 ton daily output or \$9.26 per ton bringing the total to \$184.53 per ton (Table 2).

After deducting the sum of \$186.00 per ton for total preharvest costs of production plus \$185.00 per ton for harvesting/packing costs from the \$625.00 per ton price for Concord, U.S. Fancy table grapes, profits would be \$254.00 per ton (excluding fixed costs for the packing operation). However, there will be limitations placed on the quantities included in the compliment of fresh market sales of Concord grapes. The following should be considered: (1) previously existing juice processing contracts and (2) harvest labor availability.

Concord grape vineyards in Northwest Arkansas have traditionally been established for and targeted toward juice marketing contracts with the National Grape Cooperative, Inc. Grower members have benefited from this stable market for a 60 year period. However, in recognition of profit potential in the table grape market compliment, growers were allowed in 1986 to make a split of their acreage. In the vineyards thus designated, as much as 80% of their total crop can be harvested as table grapes. At 8% of a 6.665 ton per acre crop, the 0.53 tons of table grape sales would contributed \$135.00 to profits, bringing the total returns to \$557.00 per acre. If for example, the production of table grape marketing were increased to 16% and 24% of the crop, profits would be \$656.00 and \$754.00 per acre. Some fresh market buying firm executives have indicated that the proportion meeting table grapes standards could be as much as 75% from optimum Concord vineyards.

Because of the recent history of relatively low but stable profits from juice processing, the table grape market compliment offers a significant change in the profit potentials for Concord grapes. However, the price for Concord table grapes which is derived from market demand may be sensitive to increased availability (supply) as more vineyards are converted to table grape harvest. This market sector has never been a dominant factor and its strength and depth remains

relatively untested. If there is an increasing shift to table grapes, market outlets and seasonal cooling capacity would need to be increased. Almost immediately, there would be a shortage in harvesting labor for an area where the grape harvest has become almost 100% mechanized. Based on the example of fresh market harvesting and packing (Table 2), labor requirements would be 25.5 hours per ton. In 1991 season, it was estimated that the annual Concord table grape marketings from Northwest Arkansas had increased to 450 tons or approximately 10% of the crop. This existing volume translates into an approximate 11,460 hour marketing labor requirements within a 3-week period. While fresh market sales may present a continuing profitable compliment for Concord grapes, growers must be aware of these and other limitations.

Table 1. Prices offered to growers for packed Concord table grapes (fresh market) compared to prices for juice (bulk, processing market) 1984 through 19887, Northwest Arkansas.

| Years                       | Fresh Market Table Grapes |               | Juice Grapes     |
|-----------------------------|---------------------------|---------------|------------------|
|                             | U.S. Fancy Grade          | U.S. #1 Grade | Processing Grade |
| ----- Dollars per Ton ----- |                           |               |                  |
| 1984                        | \$525                     | \$465         | 170              |
| 1985                        | 550                       | 480           | 220              |
| 1986                        | 570                       | 520           | 221              |
| 1987                        | 550                       | 500           | 240              |
| 1988                        | 575                       | 525           | 296              |
| 1989                        | 600                       | 550           | 300              |
| 1990                        | 600                       | 550           | 300*             |
| 1991                        | 625                       | 575           | 300*             |

Data Sources: 1) Fresh Market Table Grapes Prices: Wholesale Buying Firm Venture Vineyards, Inc., Lodi, NY.

2) Juice Grape Prices: Growers Consensus Reports. Subject to increases after accounting is completed in final settlement for juice products which have been processed and sold. These increases would apply only to acreage planted and produced under marketing contract, with the National Grape Cooperative, Springdale, AR.

Table 2. Concord Table Grapes: Table Grape Harvesting Costs 1987

| <u>Variable Cost</u>           | <u>Rate/20-lb<br/>Box</u> | <u>\$Cost/ton<br/>100 20-lb boxes</u> |
|--------------------------------|---------------------------|---------------------------------------|
| <b>Materials</b>               |                           |                                       |
| Boxes                          | \$0.25                    | 25.00                                 |
| Fuel                           | \$0.035                   | 3.47                                  |
| <b>Labor (Hours/ton)</b>       |                           |                                       |
| Picking (16.67)                | \$1.00                    | 100.00                                |
| Supervisor (2.31)              | \$0.104                   | 10.42                                 |
| Inspection (1.85)              | \$0.083                   | 8.33                                  |
| Distribution<br>/Pickup (4.63) | \$0.174                   | 17.36                                 |
| FICA tax                       | \$0.1069                  | 10.69                                 |
| Trucking                       | \$0.0926                  | 9.26                                  |
| <b>Total</b>                   |                           | <b>184.53</b>                         |

Source: "1987 Table Grape Income and Expense Report",  
Venture Vineyards, Inc., Lodi, NY 14860 and  
Springdale, AR 72764.

\* Fixed costs were not included for facilities needed to support table grape harvest:

- a. Barn or storage for assembled boxes.
- b. Tractor and trailer to collect filled boxes
- c. Truck w/rain canvas to distribute empty boxes and to collect and haul filled boxes to wholesaler.
- d. Picking shears, record book, table, markers, etc.