

Whether these specialized tasks will be performed by independent contractors, processors, or by large farmers for themselves hardly warrants comment. They will sort themselves out in response to the economics of the situation. It is sufficient to say that the processor normally will not become involved in the new technology as applied to crops with a long life span, and processors will be more than willing to turn over most of his involvement in the annual row crop picture to the independent contractor or the individual farmer at any time.

SUMMARY

(1) Unions and Agriculture. Each of you must search your minds for an acceptable procedure for resolving farm labor disputes that does not depend on strikes and other economic warfare for its base. This suggests that we must seriously consider some limited form of arbitration as the base for agricultural collective bargaining instead of the industrial formula that strikes and lockouts are the way to end issues unresolved by bargaining.

Technological improvements or not, failure to find a substitute for strikes means that farmers will eventually grow crops least exposed to labor strife and not necessarily those wanted by consumers.

(2) Future Farm Manpower. The movement of farm manpower from farm to city is continuous and irreversible in any future which we can now contemplate. Present and future immigration policies assure that the sources of the traditional replacements are shut off. Efforts to substitute chemical, genetic and equipment inputs for human labor do take this manpower projection into account. However, all of us professionally involved with agriculture must support the temporary importation of seasonal farm labor now and in the future until our new methods

and machines are successful and are widely available.

(3) Processor Assistance. Just as the contract grain-harvest contractor or the airplane spray contractor now performs his specialized parts of the total farming job, so will future specialized contractors perform certain parts of the total farming job with new technology. For annual crops, the processor is and probably will continue to be like the specialized contractor performing specialized farm tasks and/or owning specialized planting, cultivating or harvesting equipment. Both the independent contractor and the processor will do these things for annual row crops because it is cheaper and more efficient for one agency to do so than for each farmer, individually, to handle such investment for a crop he may not grow each year. For crops having a long life, such as asparagus and fruits, the processor isn't likely to become involved, and, except for the largest farming enterprises, the trend logically will be in favor of the independent contractor.

The independent contractor trend shows considerable promise not only for greater efficiency, but also in the possibilities for improvement of employment conditions for the seasonal laborer.

Let me conclude with one final admonition: Processors are aware of the need for changes and support them—but our enthusiasm for the new technology is tempered by caution. We know that many farm products will be altered in some degree by the new technology. We are prepared to accept what must be and to capitalize on the "new look" where we can. But we are also aware that drastic changes are judged by housewives by different standards than those of us who are producers and processors and that we must wait for her final judgment—and hope that she doesn't find us lacking.

IS THERE A POTENTIAL IN WASHINGTON FOR GROWING VINIFERA GRAPES TO MAKE FINE TABLE AND VARIETAL WINES?

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Since the repeal of prohibition in 1933 limited amounts of grapes and other fruits grown in Washington have gone

into the production of wine. With a law that afforded some protection from out-of-state wines, an industry was

established based mainly on dessert wines.

During the 1969 legislative session the state wine law was changed so that the tax on both state and out-of-state wines was nearly equal. At the time the wine law was changed, most of the 8 wineries in the State were producing 70% dessert wines (18-20% alcohol) and 30% table wines (14% or less alcohol). The table wines consisted mainly of generic wines (Burgundy, Sauterne, Chablis, etc.) and fruit and berry wines. A very limited number of grape varietal wines, Concord, Grenache, Semillon, Golden Chasselas, Grey Riesling, Pinot Noir, and Cabernet Sauvignon, were also being produced.

In 1968, both nationally and in Washington, the sale of table wines exceeded that of dessert wines for the first time. Expansion of the market for table wines has been apparent for several years. From 1959 to 1969 there was a 120% increase. This demand is expected to continue as estimates indicate an additional doubling of sales in the next 10 years.

The varieties of grapes generally used for the production of dessert wines are those that are vigorous growers and are

capable of high production and high sugar content. Thompson Seedless, Muscat of Alexandria, Carignane, etc. are representative of this group. While these varieties are grown in Washington they are not as dependable in production and do not consistently develop the high sugar content as in California. Also, because of a more limited growing season, these varieties in Washington are occasionally damaged by low winter temperatures. Much of the acreage of vinifera grapes in Washington is protected during the winter by covering the trunks and canes with soil. Covering grapes increases the cost of production. Because of these reasons grapes grown in Washington for making dessert wines are at a very serious economic disadvantage to those grown in the warm areas of the Sacramento, San Joaquin and Imperial Valleys of California.

The potential for the production of grape varieties for table and varietal wines appears much more promising than that for dessert wines. Outside of California, Washington contains one of the larger areas that appears to be promising for growing viniferas suitable for making varietal wines. Also, growing conditions



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are very favorable for the production of labrusca, certain American hybrids and certain French hybrids that are used in wine making.

Investigations by Washington State University researchers over the past six years have shown that many of the grapes that make the fine varietal wines are much better adapted to Washington conditions than those used for making dessert wines. The reason for this is that a

number of them mature early and are low to moderately vigorous, allowing for full vine maturity if given good management.

Varietal wines must have distinctive and desirable characteristics. For the best dry table wines the grape musts should contain 19 to 23% sugar and 0.65 to 0.9% tartaric acid with a pH of 3.5 or less. Must analyses obtained for some of the better vinifera wines produced experimentally without amelioration in Washington follow:

Variety	Year	Calculated tons/acre	Soluble solids %	Titratable acidity %	pH
White Wines					
Chardonnay	1967	4.0	21.3	0.76	3.6
White Riesling	1969	8.8	21.6	0.84	3.2
Semillon	1968	8.6	21.1	0.86	3.3
Grey Riesling	1969	2.0	23.2	0.91	3.4
Gewurztraminer	1969	6.1	20.3	0.97	3.5
Chenin blanc	1969	9.0	21.6	0.95	3.3
Sauvignon blanc	1969	7.9	24.1	0.77	3.4
Red Wines					
Cabernet Sauvignon	1968	4.3	21.7	0.86	3.6
Limberger	1968	8.4	22.4	0.90	3.4
Pinot noir	1969	7.7	22.8	0.75	3.8
Gamay Beaujolais	1969	8.8	22.7	0.77	3.8
Merlot	1968	9.1	21.8	0.74	3.5
Zinfandel ¹	1969	6.5	23.7	0.90	3.5
Barbera ¹	1969	6.2	24.0	1.11	3.6
Grenache ¹	1969	13.7	22.1	0.82	3.4

¹ Should be grown in the most favorable areas and will need protection.

Grenache has a very distinct bouquet and can be used for the production of red or rose' wines.

The potential for growing grapes in the irrigated areas of Central Washington for making fine wines is summed up as follows:

ADVANTAGES:

(a) Large acreages of well-drained sandy-loam soils are available in areas having up to 210 frost-free days.

(b) Adequate quality water is available for irrigation and, with the naturally low precipitation, moisture levels can be precisely controlled.

(c) The long clear days from April through September provide an abundance of sunshine.

(d) Warm days and cool nights are favorable for growth and production of quality fruit with an excellent balance between sugar and acid.

(e) The favorable grape areas have extensive southern slopes for maximum exposure to sunlight throughout the growing season.

(f) Grape vines can be grown on their own roots as neither phylloxera nor nematodes have been a problem to date.

(g) Should winter damage occur, own-rooted vines will allow restoration of the vine and production the following year.

(h) Generally, European (vinifera) grapes are injured by below-zero temperatures. The following varieties successfully survived a minimum of -11 degrees F without covering this past winter and bore a good to full crop in 1969: Reds—Cabernet Sauvignon, Gamay Beaujolais, Pinot noir, Limberger and Meunier; Whites—Chardonnay, White

Riesling, Gewurztraminer, Melon, Helena and Chenin Blanc. Eight of these varieties, not covered in December, 1964, survived -7 degrees F producing a full to partial crop in 1965. Five varieties (Pinot noir, Limberger, Meunier, Chardonnay and Chenin blanc) produced crops of 1.6 to 8 tons per acre.

(i) Very few of these varieties have been planted commercially in Washington, so it is possible to establish new vineyards with virus-free stock.

DISADVANTAGES:

(a) Weather records for the past 46 years show that, one year in three, winter temperatures will be -7 degrees F or colder; and that, one year in six, minimum temperatures will vary from -12 degrees to -20 degrees F.

(b) All but the hardiest, well-matured varieties are susceptible to below-zero temperatures and require protection for good annual production.

(c) Vineyards of the fine wine varieties will need to be established.

(d) A reputation for the making of fine table and varietal wines will have to be established.

(e) To establish a fine table-wine industry requires a long-term investment.

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