

Point Your Fruit Production Efforts Toward Quality

Richard V. Lott

Department of Horticulture
University of Illinois, Urbana, Illinois

pected by those commercial growers who provide the consumer with high quality fruit.

As we approach the end of another fruit growing season, both the commercial grower and the amateur should examine again this matter of the production of high quality fruit. It is only by producing high quality that the greatest profit and enjoyment can be obtained.

Just what is meant by quality in fruits? In simple terms it is that combination of factors which provides the greatest pleasure while eating the fruit. If I may interject a personal note at this point I would describe fruit quality as the accumulative reaction to the eating of fruit daily for over forty years. This period began with the privilege of growing up on a northwest Missouri farm where fresh fruits were available all season long. This fruit was consumed at the peak of flavor and with no thought being given to its early harvest at an immature stage to get a high price from a few city folks.

So I am what might be called a crank on the subject of fruit quality. I believe that every amateur will reach the peak of pleasure in fruit growing only by producing top quality. Also, all available information shows that greatest economic returns can be ex-

A Definition of Quality

For those who may desire a technical definition of quality it may be described as the most pleasing combination of taste, aroma, and texture, or as the Chinese express it, mouth feel. For the calorie and vitamin conscious, the nutritive value of the fruit can be added to its quality characteristics. Please note that condition is not a factor of quality except as it may affect taste, aroma, or texture. A wormy apple may be, and frequently is, a very high quality fruit, but is in very poor condition.

Importance of Quality

Why is quality so important in fruits? The economic status of the fruit industry depends on two groups: the growers and the consumers. Investigations have shown that consumers will pay more for high quality fruit and make more frequent purchases. It seems that once the consumer becomes acquainted with high quality fruits their continued demand is assured. Many growers who operate roadside markets are making a very profitable use of this fact.

We should not lose sight of the fact that there has been an increase of over

twelve million consumers in this country since 1940, and that new ones are being added constantly at about the same rate. They may all be expected to respond favorably to high quality, particularly if they become acquainted with it during their formative years.

Quality Fruit Hard To Find

I have seen the statement that sixty-three million meals are served daily in public eating places in the United States. I would like to compare the difficulty which I too frequently encounter in trying to get fruit with my meals when away from home, with the copious supply during my childhood of jams, jellies, preserves, baked apples, dumplings, cobblers, butters, sauce, stewed apples (what's better than stewed Jonathans in the fall of the year) and fruit pies. How much of the scarcity of fruits in public eating places can be attributed to the lack of quality of much of the fruit that reaches the market? Shall we lay the blame on low quality or must we admit that the shift of population to the cities has brought with it the relegation of fruit to a minor place in the diet to be replaced by the candy bar, the ice cream cone, and the multitudinous soft drinks which are basically only sweetened water. It is my profound belief that a widespread attempt to produce high quality fruits and to make them as available to the consumer as the commodities mentioned above, would result in tremendous increases in consumption.

How Can Quality Be Improved?

Since fruit quality is determined by the grower, let us consider some ways

in which he can affect quality. Each variety has definite quality limits, so varieties should be selected which are known to have high quality potentialities. This usually means at least moderately high sugar content, medium acidity, a definite characteristic aroma and firm texture. Of course, some prefer a tart apple like Jonathan and others a sweet apple like Delicious, both of which are considered to be of potential high quality.

Maturity Important

Maturity is the most important single factor in determining quality in fruits. Any variety reaches its greatest possible quality only when the fruits are at or near maturity at harvest. Furthermore, most deciduous fruits improve very little in quality after harvest. This is particularly true of small fruits, the stone fruits, and most varieties of apples. The use of preharvest hormone sprays on apples is a real help in holding the fruits on the trees until they reach maturity and high quality.

Removal of enough wood by pruning to permit light penetration throughout the tree is a great aid in producing high quality fruit. Weak, shaded wood should be removed. Quality in fruits is definitely associated with a high sugar content, which can be supplied only by a healthful, extensive leaf surface, well exposed to light. Furthermore, apples and peaches need an abundance of light for the development of red color. Trees with too much wood have extensive shaded areas in the interior which produce small, poorly colored, low sugar, low flavor apples which are very un-

profitable. Adequate pruning provides a large proportion of well colored, attractive, high-quality fruit.

Proper Fertilization Promotes Good Quality

The use of enough fertilizer to insure vigorous tree growth and an abundant leaf surface is a necessary prerequisite to fruit quality. The kind and amount of fertilizer to use must be determined for each locality and, in many cases, for individual orchards. Nitrogen is the element most often lacking, but it is quite probable that in many cases other elements, especially phosphorus and potassium will also be needed. The determination of the available nutrients in the soil should be used as the basis for the fertilizer program.

Growers frequently express concern about the effects of nitrogen on quality. The general statement can be made that the use of nitrogen in quantities adequate to promote vigorous growth and high yields will have no significant deleterious effect on quality. Nitrogen prolongs fruit growth and, consequently, delays maturity; but quality is not impaired if the fruit is allowed to mature before harvest. Although nitrogen reduces red color development in apples the reduction is significant only when unnecessarily large quantities of this fertilizer material are used.

Heavy Crops Should Be Thinned

There is a universal tendency for fruit plants, particularly tree fruits, to set excessively in some seasons. To

PLAN NOW TO ATTEND A. P. S. MEETING AT YAKIMA, WASHINGTON

As announced in the previous issue of Fruit Varieties and Horticultural Digest, the annual meeting of the American Pomological Society will be held at Yakima, Washington, December 6, 7, and 8, 1948. This convention will be in conjunction with the winter meeting of the Washington State Horticultural Society.

The final details of a well rounded, interesting, and instructive program are now being worked out. Some of the outstanding features will be discussed in the next issue of Fruit Varieties which will be mailed to members and subscribers about November 1.

All persons interested in attending this meeting are urged to contact W. D. Armstrong, Secretary - Treasurer, American Pomological Society, Princeton, Kentucky, so that plans may be made to travel to Yakima as a group.

achieve fruit quality under such conditions it is necessary to remove enough fruits by thinning to leave only the amount that will develop to maturity with high quality. Thinning by the use of chemical sprays at or near bloom is a very promising method but must still be considered in the experimental stage as far as universal recommendations are concerned. The alternative is hand thin-

ning, which has been practiced for years in many sections of the country.

Quality Characteristics Should Be Studied

Horticultural investigators can make a great contribution to the knowledge of fruit quality by measuring the quality characteristics of existing varieties and of seedlings from parents whose characters for quality are known. In this way the inheritance of these factors can be studied and the resulting information incorporated into the effort to produce varieties of higher quality and usefulness. It seems quite probable that a thorough evaluation of the variety collections now being assembled by sev-

eral amateurs, would show some hitherto unknown quality characteristics that might be valuable as breeding material.

It has been truthfully said that fruits provide some of the most delectable flavors to be found among foods. But we must keep in mind that these delectable flavors are obtained only when all production efforts are pointed toward the maximum fruit quality. So let the amateur, the commercial grower, and the investigator combine their efforts toward supplying the consumers with fruits at their peak of quality, so that they may enjoy and demand these most delectable of all food flavors.



Strawberry Varieties in New Jersey

By E. G. Christ

Association Extension Specialist in Pomology,
College of Agriculture, New Brunswick, N.J.

The strawberry harvest season begins in New Jersey about May 20 in the southern counties and ends during the early part of July in the northern counties.

The varieties which constitute the greatest acreage are Lupton, Blakemore, Sparkle, Premier, Catskill and Fairfax. Other varieties of importance include Pathfinder, Midland, Joe, Aberdeen, Redwing, and Dorsett. Also a few

Chesapeake are grown on irrigated farms. Most of these might be considered old established varieties. Four of them namely, Sparkle, Pathfinder, Redwing and Midland might be classified as new varieties.

In addition to those varieties mentioned, several others are being planted in small plots for trial and in a few instances on a commercial basis. These include Fairpeake, Temple, Fairland, Robinson, Massey, Redstar, New Jersey 377 and Julymorn.

A few of the old varieties are grad-