Flying Club Class—The Economics of Successful Marketing Clubs for New Varieties

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It seems that everyone in the apple industry is either going, or planning to go, club class these days. In popular terms, "It's a no-brainer." If you are not going club class, you are not using your brain. Is it really such a no-brainer? Let's review the evidence.

CLUB MARKETING A LOGICAL RESPONSE

It is obvious that open access to new varieties and new strains of apples in the past has led to oversupply, rapidly disappearing premiums and declining profits. As price spirals downward, it first fails to cover total costs, so normal orchard renewal costs cannot be met. At a later stage, even variable costs are not being covered. Debts pile up. All the grower can hope is that a temporary price spike will bail him or her out before the bank forecloses.

The logical reaction to this oft-repeated cycle is to develop a new variety that can capture a more permanent premium. Next, through a club, control volume produced and marketed at the desirable price point where all club participants can enjoy a sustainable profit. Once in club class, growers can continue to fly happily forever, relatively immune from the vicissitudes of the marketplace. It all sounds so logical and so easy. But is it really?

PARALLELS WITH BIOTECH INDUSTRY

I would argue that there are many parallels between the commercialization of a new apple variety and the process for commercialization of a new biotech drug. The developers of a new drug can, in theory, choose to seek a solution to any one of mankind's many ailments and inadequacies, from cancer to baldness to erectile dysfunction. Likewise, the apple breeder can choose to target any part of the fruit consumption spectrum with a new cultivar. He can seek new market opportunities at any spot on the color, size, shape, sweetness, etc., spectrum. However, unlike the biotech pioneer, the apple breeder is unlikely to find many large unfilled spaces in the product spectrum. Finding a blockbuster winner may be even more difficult than in biotech.

Such targeted research can also be very costly. Sources of capital must be found to fund 15 to 25 years of trials with plant materials that may eventually be groomed into a successful product. In the case of the biotech company, the initial attractant for capital is the buzz that surrounds a new scientific or technical breakthrough that promises a more effective way to solve a human problem. There are often exaggerated promises about how soon the new product will be delivered. In most cases, as product delivery dates continue to slip, a new round of "buzz" has to be created to bring in a new wave of hopeful investors.

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In the apple case, it will be much more difficult to create that buzz for an unknown apple variety. To date, apple clubs have been formed after much of the product development work had already been done by another agency, usually by researchers supported by public funds. For example, Pink Lady® and Jazz already had many years of public funding before their clubs began the process of wooing nurseries, producers and marketers. So, there is still an unresolved issue about whether a private entrepreneur could get the funding to develop a new apple variety from scratch. At the same time, public agencies are becoming more and more reluctant to support early stage development when they are uncertain if they can recoup any of their investment by passing their embryo product over to be managed by a private club.

In the biotech case, even if, or when, a product is developed for a major human ailment, in all likelihood there will already be a competing product in that same market niche. To displace the incumbent treatment, the new product will have to demonstrate that it is superior in a broad array of cases in speed, lasting effectiveness, lower cost, reduced side effects or other attributes. Other similar, new drugs will be coming to market about the same time. It will require a major promotional campaign to inform doctors and patients of the advantages of its product.

Likewise, investors in a new apple variety will have to show its superiority to existing apple varieties, at least to a select group of retailers and consumers. It will take a major promotional campaign to inform retailers and consumers of the attractiveness of the new variety. Depending on the market, such campaigns can cost millions of dollars. Just as in drugs, there will be other new varieties competing for the attention of retailers and consumers.

ECONOMIES AND DISECONOMIES OF SCALE

A problem for all new products is getting the marketed volume to a level where past research and development costs and future marketing and promotional costs can be spread over enough units to get unit costs down. In the apple industry in the past, most districts with promotional programs focused heavily on one variety. For market-leading varieties like Red Delicious, costs in the U.S. could be spread over 100 million boxes. Even when a new strain of Red Delicious was introduced, it brought no added marketing and promotional costs. Most of the added costs were incurred in the orchard. A club variety, even one that reached 5 million boxes of sales in the U.S., would forgo those economies of scale.

Clubs might also forgo economies of scale in the orchard. For example, a club that wanted to reach maximum sales of 5 million boxes would need 5,000 acres in production (assuming each acre had a peak yield of 1,000 packed boxes). That acreage could be provided by five growers with 1,000 acres each or 1,000 growers with 5 acres each, or any other combination. The managers of a club may be wary of committing too much acreage to a few hands. They may feel that 50-acre allotments scattered across different growing districts will reduce weather, disease and other risks. However, the administrative costs of managing 100 growers will be a lot higher than those of managing five growers.

The implications of this at the orchard level are also significant. For example, suppose an orchardist with 500 acres believes in the club approach. He gets a license to produce 50 acres of Jazz and 50 acres of Pink Lady®. What does he do with the other 400 acres? Does he end up with ten different club varieties? If he does, this

will lead to numerous diseconomies as he attempts to manage ten different varieties instead of one or two.

CHOOSING A DESIRABLE PRICE POINT

One of the classic truths of economics is that even a monopoly supplier cannot set both price and quantity to be marketed. Whichever the monopolist chooses to control, the existing demand curve will determine the other. Perhaps because most growers define their recent problems as low prices, much of the discussion about club marketing has focused on the goal of ensuring a high price, say $30 a carton, that will give member growers a comfortable profit margin. However, a price goal of $30 may be compatible only with sales of 2 million boxes of a particular new variety. Can the licensing, production and marketing fees charged on 2 million boxes cover all the costs of the club? For example, 2 million boxes might generate a budget of $6 million to cover all the costs of administration, development, marketing and promotion for the new product. On the other hand, the desirable price point may be set too low for the envisaged quantity so the club could increase its volume target. However, that happy situation will tend to be rare.

Another decision to be made in choosing a desirable price point is whether it should be an FOB price or a grower-level price. For example, suppose a club chooses a price point where FOB revenue is maximized. In Figure 1 below, FOB revenue would be maximized at 4 million boxes, at a price of $20 per box. Note that only 2 million boxes could be sold at the $30 per box price. However, assuming that packing and other club fees cost $10 per box, the grower-level demand curve would be below the FOB demand curve.

When FOB price was $30, growers would get $20. When FOB price was $20, growers would get $10. Grower-level revenue would be maximized at 3 million boxes. The division of the revenue would also be affected. At 3 million boxes, growers would get $45 million in revenue and packers and club managers would get $30 million. At 4 million boxes, growers would get $40 million and packers and club managers would get $40 million. Given the nature of growing and packing, growers would also get more net profit at 3 million boxes and packers and managers would get more net profit at 4 million boxes. Clubs will need to find a satisfactory way to keep all parties happy, something that has eluded the conventional industry.

FIGURE 1

Hypothetical demand for a new club variety (US $42/lb box).

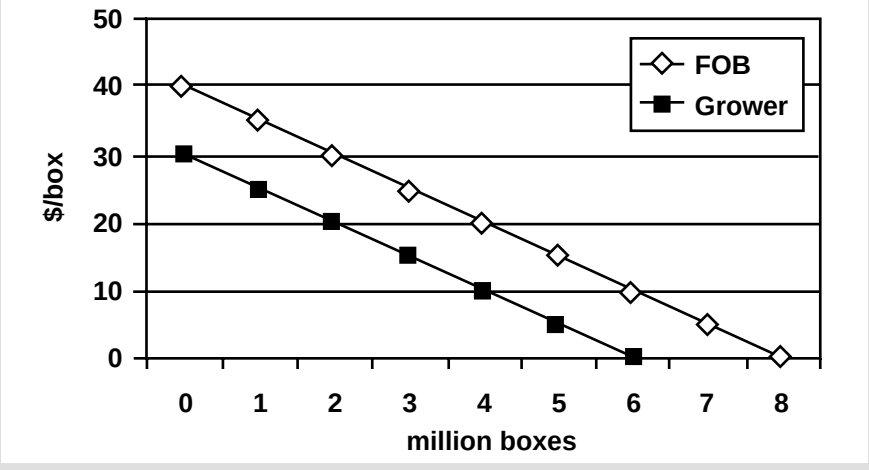
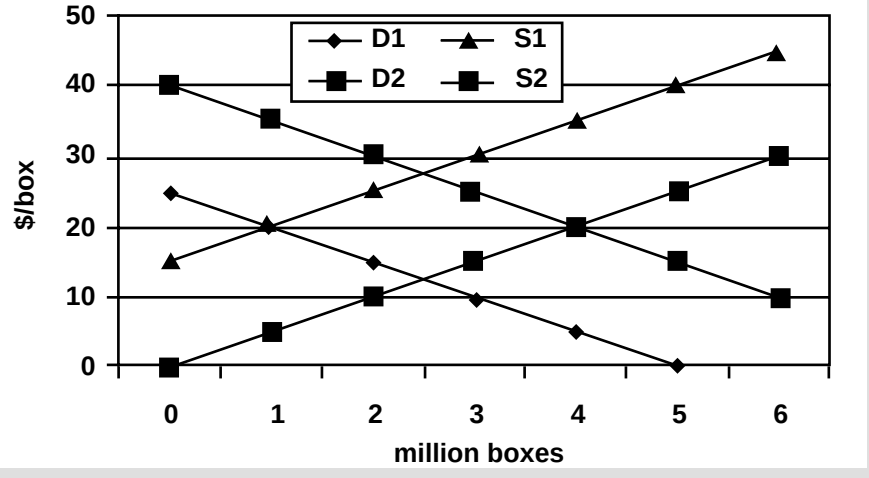


FIGURE 2

Hypothetical shifts in supply and demand for a new club variety at FOB level.



A more sophisticated method of choosing a desirable price point might want to take both revenues and costs into account as volumes changed. For packers and managers, the decision will be relatively simple. They tend to have declining costs over most of the viable quantities they handle as fixed costs are spread over more units. Larger volumes will mean more profits.

However, for growers, average costs tend to slope downward until diseconomies of scale arise, and then turn upward. The point of maximum profit will occur where marginal cost equals price. For growers in this example, that will probably occur at a volume of less than 3 million units. In addition, the more small acreage allotments involved, the lower the volume at which the point of maximum profit for growers will occur. This issue, too, needs to be addressed.

HITTING DYNAMIC TARGETS

In the dynamic setting in which new product introductions occur, matching supply and demand at a desirable price will be much more complicated than in the static examples previously discussed. One key to a successful product launch is that the demand for the product grows at the same pace as the volume available.

For example, in Figure 2, the supply curve for a new variety will shift to the right as trees come into full bearing. Figure 2 shows initial supply (S1) and demand (D1) intersecting at 1 million boxes at a price of $20 per box. After several years, as plantings reach full bearing, the supply curve has moved to S2. More product is available at any given cost. At 4 million boxes, to achieve a price of $20 per box, the demand curve would have needed to shift rightward to D2. At a $20 price, that equates to a shift rightward of 3 million boxes, or 300%.

The challenge clearly is how to shift demand rightward since, once the planting decisions are made, the supply will automatically increase. However, shifting the demand curve requires wooing more retailers and consumers to your product in the face of stiff opposition from existing products. It requires investment in marketing research, merchandising, promotion and trade representation. The actual amount needed will vary with the strength of the opposition faced. In addition, a chicken or egg situation can arise. Higher promotion costs can be financed only by imposing higher fees on growers. Such higher fees will shift the supply curve upward and require an even bigger shift in the demand curve to meet the $20 FOB price.

Another problem related to promotion in a new product situation is that the expenditure will need to be front-loaded. That is, the heaviest expenditure will have to take place before the heaviest volume of product is available. The club manager can either charge these costs to growers as they occur (which may deter growers from joining the club) or recover the costs over the years of product expansion by charging the same average fee each year. The problem with the latter approach is that some of the promotional costs will have to be drawn from capital, either from the club sponsors or from borrowing. How these costs are assessed will alter the amount of risk that each of the parties is bearing.

COPING WITH CROP VARIABILITY

Year-to-year variations in crop yields from the same acreage base due to weather factors create an additional challenge in balancing demand and supply. In the early crop years, a variation of 50% above or below trend is common (Fig. 3). A reasonable average variation might be plus or minus 20% of normal. Thus, in a year when, under normal weather conditions, expected yield per acre would be 500 boxes, actual yield could vary from 400 to 600 boxes. Assuming the club had 5,000 acres planted, the marketed volume would vary from 2 million to 3 million boxes. Using the demand curve in Figure 1, FOB price would be $30 in the short crop year and $25 in the long crop year. The respective grower prices would be $20 and $15. That $5 shift in average price could have a sizable impact on grower profitability. Of course, such price shifts could also result from changes in the supply of competing apples or other fruits.

The problem of crop variability affects marketing plans in other ways. When crop is inadequate to meet demand, some retailers may stop stocking (and consumers stop purchasing) the new variety. Winning back those customers will be more difficult. When crop is excessive, the managers will face different choices. They can step up promotion, hoping for a quick boost to demand, with obvious cost implications. Or, they can allow the market to find its own price. Or, they can attempt to divert the surplus product to another market. In these latter two cases, they will be reverting to the conventional marketing approach which clubs were intended to avoid.

BREAKING EVEN

For any innovator, a crucial statistic is at what volume or in what time period he/she can expect to break even on his/her investment. This will be an issue for growers, nurseries, packers, marketers and the club owners and managers of new apple varieties. Nurseries have to commit to the investment first. In addition to license fees and normal nursery costs, they will incur additional costs for learning and adaptation. Their breakeven point will depend on the number of trees they can sell for new planting or replacement.

Growers will have the amortization costs, production costs and harvest costs of any new planting in addition to the various tree licenses, production fees and marketing fees charged by the club managers. The sponsors or managers of the club will have more discretion over the factors that affect their breakeven point, such as how much they invest in marketing and technical research and promotion and how much they charge member growers. However, they, too, will have to balance the need for revenue with the need to retain members.

The problem of choosing a breakeven strategy in any new venture is accompanied by substantial risk. However, in an enterprise such as new apple variety development, the investor is subject to additional risks from crop variability and biological uncertainty. Consideration of all these risks has to be incorporated into any breakeven decision. In general, the higher the risks, the more capital an enterprise will need to invest in order to survive.

WHEN MORE CLUBS CAN FLY

We have already discussed the effect at the orchard level as more acreage is controlled by clubs. However, if clubs come to control an increasing share of apple production, the nature of clubs themselves is likely to change. If clubs do not deliver the promised benefits, their negotiating strength will slip. On the other hand, if they are wildly successful, they will attract imitators from inside and outside the apple industry. In this situation, the marginal cost of entry for each new club is likely to rise in such areas as marketing and promotion. At the same time, as more clubs come on line, they will have to bid against each other to recruit the more desirable growers and warehouses. One could well envisage a future cost-price squeeze among clubs similar to the cost-price squeeze that growers have faced in the past. The margin for error in setting adequate price targets, controlling evolving supplies and managing demand will narrow.

LONG-TERM IMPLICATIONS OF CLUBS

Club marketing of new apple varieties will prove to be a lot more complicated than is widely assumed. Most clubs to date have adopted a variety that was already in an advanced stage of development. It is not clear where the capital will come from to fund future varietal development that new clubs will need. Clubs are likely to need to win customers away from existing products and to face competition from other new products already in the pipeline. Clubs will face diseconomies of scale in marketing relative to existing generic programs. Depending on how they allocate acreage to member growers, they could also introduce diseconomies at the orchard and packinghouse level.

Choosing a desirable price point for the new variety will not be easy when little is known about the future course of demand. Whether the desirable price is set at FOB or grower level will affect grower profitability and how revenues and risks are shared between growers, packers and sponsors/managers. Once acreage is planted, supply will inevitably grow. It will be a challenge to keep demand growing in step. That challenge will be increased by crop variability due to weather. Similar factors will make it difficult to determine when a grower can expect to break even on his/her investment and begin to get positive returns. Finally, as more apples are marketed under controlled clubs, clubs themselves could face a cost-price squeeze if the supply of clubs rises faster than the demand.

LONG-TERM RESPONSES

There needs to be much more research into the economics of club marketing and much more open debate about the outcomes to date. The idealistic vision needs to be given a real-world face, warts and all, for growers to make wise decisions about the role clubs might play in their future.

FIGURE 3

Fresh pack of Washington Braeburn and Jonagold, 1990-2002.