30.3 Possible future trends

Predicting the future is always very risky, as unforeseen circumstances can totally change the course of events. For example, an incurable disease in cocoa could destroy the industry, whilst the consumption of chocolate might suddenly increase many-fold. One can of course extrapolate present trends in the belief that at least some of them will continue.

It was noted above that large manufacturers are installing larger and faster machinery. These firms have captured a substantial proportion of the market and their products are known internationally. At the same time small specialist firms, normally retailing their own goods, appear to be flourishing in many countries. It is likely that this will continue, with an even greater polarisation into the two types of manufacturers. The use of large machinery makes it impossible for the chocolatier to fully develop the potential of each individual type of bean. Thus, although there may be a variety of "house" flavours, it will be left to the smaller manufacturer to exploit the full range of possible chocolate flavours. It may also be that eventually the chocolate assortment box will be primarily produced by this type of firm, with bars, countlines and so on composing the chief market of the major international manufacturers.

The increasing difference between the two types of manufacture is also likely to be reflected in the two types of chocolate, namely "real" chocolate and coatings. Whilst it seems likely that legislation will remain strict for the former, the latter is likely to extend in its range of constituents and quality. The range of other fats and techniques for their manufacture will enable better products to be made. At the other end of the market, work on chocolate flavour will probably continue with the discovery of several hundred new contributing compounds. The probability is very low, however, of finding an economical alternative which cannot easily be distinguished from cocoa.

In his look at chocolate making into the next millennium, Jeffery (1997) regarded low-fat and low-calorie products as being particularly important. He noted that old ideas, such as the Cadbury (1976) one of using sugar rather than fat as the continuous phase of chocolate, might be revived. Currently, however, the target of having a low-calorie product, with a texture and flavour equivalent to that of normal chocolate, with no laxative or other side effects, has not been achieved on a large industrial scale. Many experimental products are, however, much nearer this goal than they were 10 years ago.

As traditional markets have tended to remain fairly static in size, the search for new markets will continue. As many of these are in hotter developing countries, the developments in heat-resistant chocolate, like the Hershey Desert Bar (which incorporates water and egg white), are likely to continue. There is also the Japanese approach of making chocolate softer from the refrigerator or freezer to increase summer sales. The former communist states in Eastern Europe are

also providing new markets for the large multi-national chocolate companies. Here it is perhaps a two-way exchange, with the newer processes being introduced into these countries to make their traditional confectionery products, which might then be introduced to new markets.

In addition to new markets, chocolate is increasingly being used as a component of other food products, such as frozen desserts, mousses, ice creams and so on. This field is likely to expand. The general liking of the public for chocolate frequently means that the chocolate variant is the biggest seller.

An increase in engineering capability has in the past been reflected by larger machines, for example 2.5 m (8.2 ft) roll refiners, 10 t conches or larger and more sophisticated machinery such as the cocoa mass treatment machines. This increase in machine size may have now reached its limit but, as was noted earlier, improved process control has already played a major role and is likely to develop further. Automatic online instrumentation, neural networks, computer management and expert systems are likely to find increasing roles within the confectionery industry within the next few years. In addition, it should also be remembered that processes which have failed to operate satisfactorily in the past may have done so because the degree of engineering skill then available did not meet the required standard. New developments in materials, machines and process control may mean that old ideas are worth another consideration. Perhaps, for example, the jetmill/ultrasonic system of Mosimann (see Chapter 15) may be viable in some circumstances.

Research and development workers in almost every industry are frequently dispirited when the novel methods which operated satisfactorily in the laboratory or pilot scale area fail to do so under the more stringent conditions of the production line. Little progress will be made, however, unless the industry is prepared to take the financially great risk of trying very different machines and processes. The introduction of new processing technology is likely to prove of benefit both to the confectionery industry and to the many consumers of chocolate throughout the world.

The last two decades have seen the increasing use of online sales for higher-value products. It is particularly applicable to short shelf-life products or niche market ones such as special cocoa chocolates. The ability to personalise a box of products coupled with the formation of chocolate-tasting clubs means that this type of sales are likely to increase.

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