

# **How the standardised apple came to be**

## **The loss of variation and the continued decultivation of a food**

Abridged version of the study  
“How the standardised apple came to be and how we might regain variety”  
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## 1. Introduction

Current scandals surrounding foodstuffs centred on terms such as ‘BSE’, ‘dioxins’ or ‘antibiotics’ show by example that something is very basically wrong with our approach to food. It has now reached such a stage that we can even talk of a food crisis affecting the whole of Europe. Modern food production, storage and transportation obviously has very serious and far reaching implications which, let us be clear about this, affect humans and which will not be able to be easily rectified.

The aim of this study is to show, using a very simple foodstuff: the apple, just how we have arrived at the modern day form of food production. Which changes have taken place over time? Why has food production become ever more susceptible to crises? Which factors have led to the reduction in the varieties of farm animals and edible plants and to the increasingly uniform, interchangeable and inevitably bland products?

The apple is a food which lends itself to analysis. Its highly symbolic value has remained with us to this day. It has an important history, especially relating to non-industrial and non-professional production and also the industrial production of the last hundred years. The differing uses and differing forms of the apple, in its unadulterated state, can be clearly traced.

From the rural cultures and traditions through the extensive apple varieties of the bourgeois 18th and 19<sup>th</sup> centuries to today’s supermarket offerings - a surprising history which is based not only on the varying usage through the ages but also on the images and concepts of the apple which we humans have developed. The journey of the apple through time and space allows an insight into way in which human usage and man’s increasing interference in the creation of a natural product has affected both the product itself and our lives. In recent times, the apple has become an almost factory-farmed mass-produced commodity which can be produced and reproduced to a standard “quality” (at the cost of its taste) and which needs to be given a artificial identity by means of advertising and its few remaining external distinguishing characteristics.

Taking the apple as an example we can show:

- how variety in Europe, specially in Germany is lost as a sacrifice to progress,
- how the way in which we use a food changes over time,
- how the perceived value of a food is lost,
- which political and economical conditions are of prime importance and
- how this development is directed by planning (often against the will of those affected).

## 2. The beginnings of an apple culture

### 2.1 The apple as a symbol

The apple has long been a thing of wonder for us humans: a beautiful-looking or simply edible apple on a tree cannot be explained, it is dependant on chance and fate and, therefore provides great food for mythological thought. Knowledge about the fruit and its unpredictable behaviour is only passed on gradually. In mythology, the apple is a symbol of immortality or love (Greek and Nordic mythology)<sup>1</sup>, for sin and ruin (Christianity)<sup>2</sup> as well as (global) power and domination (Imperial Orb – in German *Imperial Apple*)<sup>3</sup>. Other such connections can still be found today in various, if hidden, forms. Throughout the centuries there have been

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<sup>1</sup> Laudert 1998, p.51

<sup>2</sup> Fischer-Rizzi 1993, p.16

<sup>3</sup> Zedlers großes Universalexikon 1742, p.65

different modifications (the apple as a symbol of love moved on to become a symbol of the home<sup>4</sup> and immortality is redefined as health<sup>5</sup>). Other meanings, which are used in advertising today, are new arrivals (e.g. the apple as a symbol for freshness, for inexpensive pricing or convenience<sup>6</sup>). Since we have come to only rarely associate the apple with fate and the unpredictability of Nature it is now used arbitrarily and purely as an image (e.g. as a symbol for a town<sup>7</sup> or a computer<sup>8</sup>). The basis for myths and stories about the apple has thus, for the most part, become lost.

## 2.2 How the apple was used up until the 19<sup>th</sup> century

It takes a lot of time for apples to go through the many cultural, social and agricultural changes required before they can acquire that high status of everyday usefulness. The varieties of apple which we know today are all derived from the wild crab apple and dwarf apple varieties, which are thought to have come from Caucasus and the Middle East<sup>9</sup>. Apples reproduce sexually, which means that a new variety is created from every seed<sup>10</sup>. For this reason we see much intervention into the natural development of the apple (by means of random or specific selection) from a very early stage in order to preserve edible varieties.

The development of apple cultivation, which made gradual progress in the Middle Ages, did not result from people exchanging apples. The reason that apple varieties became more widespread is that travellers pass on both trees and knowledge about their cultivation. In this way, urban and country fruit cultivation progress in a parallel manner. The earliest documented impetus comes from convents and parks<sup>11</sup>. There is, however, much support for the belief that cultivation in gardens in and around towns strongly influences the development of the apple.

Beautiful and delicious apples were seemingly a very rare thing in those days. They are documented as being the stuff of valuable gifts in the Middle Ages: the head of a patrician household in Cologne received gifts of 20 apples in 1391 as well as plums and pears<sup>12</sup>. Along with apple cultivation becoming more widespread there is a development in apple culture, not only in the way in which apples are prepared, (for example, drying and winemaking). The apple has also become an object of desire, to be presented on special occasions. Towards the end of the Middle Ages the apple was generally highly valued: apple trees were protected from the public in parks and gardens by high plants<sup>13</sup>.

The 30 Years' War in Germany (1618-1648) marked an important setback as many apple trees were destroyed. This was followed by a new start for both urban and country apple culture, with specific demands from the authorities in the form of regulations and instructions about planting and caring for trees. To this end it is decreed: "*[...] how many fruit trees are to be planted by each citizen and each married son on common land or along roads and pathways. [...] Whoever failed to keep up with the care of his trees was to expect heavy punishment, whether he purposefully destroys the fruit trees or only damages them.*"<sup>14</sup>

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<sup>4</sup> e.g. during the Second World War

<sup>5</sup> e.g. in toothpaste advertising

<sup>6</sup> e.g. as used in supermarket advertising

<sup>7</sup> New York = Big Apple

<sup>8</sup> Apple Macintosh

<sup>9</sup> Laudert 1998, p.49

<sup>10</sup> Petzold 1982

<sup>11</sup> Herrmann 1966, p.23

<sup>12</sup> Irsigler 1972, p.655

<sup>13</sup> Schröder-Lembke 1984, p.119

<sup>14</sup> Weller et al. 1968, p.11

The availability of scientific books<sup>15</sup> and a variety of gardening literature<sup>16</sup> supported the development of a new apple culture. A significant proportion of the scientific treatises about apples bases its descriptions on medical effects: “ [...] *that the sour apple is good for those/whose stomachs are troubled by much moisture. Those apples with a wine taste/are also good for the stomach/they refresh it/If they have a delicate flavour/they are good for a fever if held in the mouth/refreshing the same./Sour apples fried in butter are also a pleasant meal for a sick person. But if one eats too much sour apple raw/it clogs the stomach and makes one urinate and causes retching and vomiting. Sweet apples soften the abdomen and have a laxative effect/become those who have a cold stomach/and have been bitten by poisonous animals.[Almost all apples have the property/if one mixes the pressed juice with a little saffron and drinks/they banish the poison/and force the worm from the body.] Crab apples stuff the belly greatly/especially the juice.*”<sup>17</sup> [Translator’s note: the original German is antiquated.]

Until 1800 the apple remains part of the direct staple foods for farm and town households. There is a strong relationship between the apple tree and the community (village centre point), the home (garden) or the town (garden or agricultural use within the city walls). Since storage and preservation methods are limited<sup>18</sup> most of the fruit is consumed ‘in season’. It is not usual for people to eat raw apples, in fact they advise against it<sup>19</sup>. The small amount of buying and selling of apples that takes place does so over very short distances, since apples, because of their delicate nature, can only be transported by foot or water<sup>20</sup>.

The period of time between the middle of the 17<sup>th</sup> century and the end of the 18<sup>th</sup> century does, however, serve as an intellectual and state preparation for the great expansion in fruit growing that happens in the 19<sup>th</sup> century (the “Pomological Age”), since it is in this period that decrees, laws and regulations are being drawn up. We also see a systematic expansion of gardens according to bourgeois principles and an increased circulation of information on how to grow apples.

### 3. The “Pomological Age”

Enormous changes take place in the 19<sup>th</sup> century in Europe, specially in Germany since this is the time when the approach to growing apples becomes increasingly scientific. Pomology, or the science of fruit, concerns itself with describing, classifying and systematically categorising fruit varieties and later with fruit cultivation generally. Books about fruit growing as well as common understanding and conceptions about how to care for fruit and fruit trees show us that the impetus for further developments in fruit growing comes from towns. Apples are cultivated according to the ideas and practices of the bourgeois households. An entire culture and even fashion builds up around pomology, influenced particularly by the apple<sup>21</sup>.

Before the changed social, economic and technical conditions of the 19<sup>th</sup> century and their influence on fruit growing are discussed in the next chapter, I would like to consider the science of fruit as well the culture and romanticism which surrounded the apple:

<sup>15</sup> e.g. J.S. Elßholz “Vom Garten Bau“ from 1664

<sup>16</sup> e.g. “Hausväterliteratur”

<sup>17</sup> Tabermaemontanus 1731, pp1416-1417

<sup>18</sup> In Northern Germany apples were mostly made into a sauce and then dried, in the south of the country the emphasis was on fruit wine production.

<sup>19</sup> Zedlers großes Universallexikon 1732, p.802

<sup>20</sup> Liebster 1985, p.144

<sup>21</sup> An early relevant work is the book by Johann Caspar Schiller “Die Baumzucht im Großen aus zwanzigjähriger Erfahrung im Kleinen” 1795

The 19<sup>th</sup> century is considered to be the heyday of fruit cultivation: numerous pomologist societies<sup>22</sup> pomology institutes<sup>23</sup> and associations are founded<sup>24</sup> whose main concern it is to provide its members with cuttings of valuable fruit varieties and to deepen knowledge of this group of plants. Specialist schools<sup>25</sup> and training institutes for tree ‘wardens’<sup>26</sup> are founded, pomological gardens are set up and fruit tree shows<sup>27</sup> are organised. Some famous pomologists who led the way with the systemising and classifying of fruit varieties are, e.g.: Georg Conrad Oberdieck (1794-1880), Karl Friedrich Eduard Lucas (1816-1882) and Friedrich Jacob Dochnahl (1820-1904) who, for example, describes 1263 varieties of apple, 1040 pear varieties, 12 quinces as well as many different types of stone fruits, citrus fruits and berries in his 4 volume “Guide to Fruit” (“*Führer der Obstkunde*”)

Something of a love affair is built up around the apple and even includes the cultivation of artificial tree shapes. Nicholas Gaucher, another famous German pomologist of the 19<sup>th</sup> century, concerns himself in detail with this fruit tree topiary<sup>28</sup>. Typical shapes from this time include pyramids (common and proper pyramids, winged pyramids, spindles and spindle-pyramids, palmettes, palmettes with sloping branches, palmettes with horizontal branches, candlestick palmettes, fan palmettes and cordon shapes).

A very refined culture is built up around growing and using the apple. Especially beautiful examples of the fruit are very highly valued and obviously still very much a rarity. Beautiful fruit is still seen as a valuable commodity right into the middle of the 19<sup>th</sup> century and can either be bought for large amounts of money or hired for a little less. Apples do not only serve as a nutritional food but also, and even especially, as show and exhibition pieces: “ [...] *very many people who do not wish to invest so much money but nevertheless wish to behold these splendid specimens have been known to hire these fruits for evening celebrations for 5 or 10 Frs. It is not unusual for these fruits to be passed from one person to the next, the owner often receiving a tidy sum of money. Usually they are presented simply as a table decoration and for show. A stranger, it was reported recently in a pomological journal, admired the precious fruits at the table of his host and, convinced that the flavour must be equally fine, cut into one of the fruits to verify its quality. He couldn't congratulate his hostess enough. She in turn had not to let her face slip and was required to purchase the fruit subsequently at a cost of 50 Frs.*”<sup>29</sup>

In the 19<sup>th</sup> century, pomology lays the foundations for urban fruit demand as well as for new forms of cultivation and processing in the country. The country fruit growers start to receive demands with respect to quality and clear directives concerning sales structures from the towns. Although the books about apple cultivation on farms mainly deal with descriptions of reliable, tried and tested knowledge about how to treat trees and how to use the fruit, by the middle of the 19<sup>th</sup> century we also start to see the first mention of possible money making potential and the wealth which can be gained from growing fruit<sup>30</sup>. It is suggested that any possible fruit surplus be dried or made into fruit wines and thus be made marketable and profitable.

<sup>22</sup> The first pomological society in Germany was founded in 1794 in Hildesheim, Germany. Further societies followed in Altenburg in 1803, in Guben in 1805 etc. (Trenkle 1943, p.12)

<sup>23</sup> The first pomological institute was founded by Eduard Lucas 1860 in Reutlingen in (Trenkle 1943, p.12)

<sup>24</sup> Friedrich 1956, p.12

<sup>25</sup> The horticultural school in Hohenheim was founded in 1843. In 1867 the fruit and vine growing school was set up in Weinsberg, in 1869 the educational institute for Horticulture and fruit growing was opened and 1872 saw the founding of the research and investigation centre for horticulture and vine cultivation in Geisenheim (Winkelmann 1944, p.13).

<sup>26</sup> Tree wardens were responsible for the planting and caring for fruit trees along the edges of streets as well as for harvesting the fruits from parish owned trees. They also advised the general population on fruit tree matters. (Heller 1995, p.31).

<sup>27</sup> The first big fruit tree show took place in Naumberg in 1853 (Trenkle, 1943, p.12).

<sup>28</sup> Gaucher 1891, p.311-397

<sup>29</sup> Rubens 1862, p.95

<sup>30</sup> e.g. Rubens 1862

However, the people living from the land in the country are, for very good reasons, slow at taking up these ideas. Firstly, the village communities are self sufficient and live relatively closed off from other communities<sup>31</sup>. The apple is strongly tied-in with everyday life as well as particular temporal and spatial contexts, making fruit production on a large scale for financial gain impossible. Secondly, the continued lack of good transportation networks in the countryside doesn't allow for the safe carriage and therefore widespread trading of this delicate and generally short-lived fruit.

A combination of agricultural mechanisation and improvements to transport links due to rail and sea routes in the 19<sup>th</sup> century drives fruit cultivation forward. The next chapter shows how this development led – albeit late if compared to other foods – to industrial production methods of and a trade and exchange relationship between the town and country.

## **4. The development of fruit tree cultivation for financial gain**

### **4.1 Removing food growing from the town**

Especially in the second half of the 19<sup>th</sup> century, and because of the industrialisation process, the growth in population and increased interest in property speculation, agriculture and landscape gardening in and around the towns is almost completely suppressed<sup>32</sup>. Food production becomes a matter for the country and farmers in areas surrounding towns are expected to increase their productivity in order to meet the increasing demand. This development is pushed forward by propaganda for the so-called “efficient agriculture” as well as corresponding economical and political constraints and conditions<sup>33</sup>. However, the population, particularly working class in both the towns and the country, remains poorly nourished due to the lack of transport infrastructure and technical capabilities. Improvements are made only very slowly. Public and private town planning concepts from this time (e.g. workers' housing estates, employer-owned housing and allotment projects), which are intended to bring about social improvements in the towns by increasing self sufficiency with respect to food, can do little to improve the nutritional standards.

### **4.2 The apple: the journey from home economics to source of income**

Although agriculture and industry in Europe and in Germany expand greatly in the second half of the 19<sup>th</sup> century, thanks to an increased food demand, technical advancement and economic boom and although international goods transportation develops, due to the railways and maritime traffic<sup>34</sup>, the practicalities of fruit growing experience as good as no change. Right up until the end of the 19<sup>th</sup> century it continues to be mainly for personal use. For farming families in particular, fruit growing and preparation continues to play a significant role in everyday life<sup>35</sup>. A use is found for every variety of apple.

Regular transportation of farm and garden produce over longer distances is very rare<sup>36</sup>. Trade in delicate perishables is particularly rare since much more time and money must be spent making these goods ready for transportation: *“You have to pack the fruits in barrels or boxes and each individual fruit must be wrapped in soft paper and packed in alternate layers of*

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<sup>31</sup> Mak 1999, p.70

<sup>32</sup> Benevolo 1991, p.801; Mumford 1984, p.481

<sup>33</sup> Herath, Kouril 1989

<sup>34</sup> Cameron 1991, p. 284-303

<sup>35</sup> Maria Bidlingmaier provides a detailed description of the use of apples in daily farming life in her dissertation on “The farmer's wife in two Württemberg parishes” (“Die Bäuerin in zwei Gemeinden Württembergs”) (Bidlingmaier 1918)

<sup>36</sup> Koning 1994, p.15

*shredded paper or dry moss or wood-wool and fruit.*<sup>37</sup> On top of this, political trade barriers (Protective tariffs<sup>38</sup>) as well as limited potential for rationalisation of the growing methods<sup>39</sup>, makes extending the market almost impossible. Despite state investment into financially profitable fruit growing<sup>40</sup> and increased propaganda, fruit growing and processing are still firmly rooted in the home domain.

This contradictory situation we see at the end of the 19<sup>th</sup> century does however serve as a decisive basis for the next stage in the development of fruit growing. On the one hand, urban fruit cultivation has reached a high point (“The Pomological Age”), on the other hand however, an attempt is being made to dictate to the country based fruit growers how they should manage their orchards without any consideration of the practical local experience of the time. This movement gleans most of its ideas from the “progressive” industrial development and the economic theories which accompanies it, such as e.g. Adam Smith’s “free trade theory”. Its supporters use political-economic arguments, some of which appear to be very modern (“The threat of international competition”), to propagate the concept of financially profitable fruit growing.

At the end of the 19<sup>th</sup> century and beginning of the 20<sup>th</sup> century more and more space is taken up in contemporary fruit growers’ manuals and textbooks by information about this “progressive” approach. The impression that this creates is that growing fruit for profit is already a very widespread practice<sup>41</sup>. The reality is however, and one need only look at the daily lifestyles of the time, very different. In the case of fruit growing we are dealing with confident country traditions with respect to both usage and economics which are resistant to accepting industry-orientated progress<sup>42</sup>. Although the foundation stones for production centralisation and for a reorganisation of the market have already been laid in the last quarter of the 19<sup>th</sup> century in the form of state support, fruit growing is still far from being established as a proper trade in its own right. The time tested experience of the country population along with the still very complicated procedure required for storage and transportation of fruit build a strong barrier to modernisation.

## **5. The apple on its way to being an “industrial product”**

### **5.1 The theory and practice of fruit growing**

The development of fruit growing in the first half of the 20th century can be traced back to a combination of different economical and political changes. Once again, as in the 19<sup>th</sup> century, theory remains far in advance of social reality. On top of this, theory removes itself even further from the long proven practices in orchard husbandry. It is not the case of the apple needing another “more purposeful method of production” but rather the method of growing apples is brought into line with the social images and ideas. This is a procedure which is to leave neither the appearance or diversity of variety untouched.

Ideas about fruit growing and trading are linked to the theories of classical national economics which were developed in the 19<sup>th</sup> century. Prompted by government, fruit farming is intensified and specialised, there is a stricter division of labour<sup>43</sup>. Especially within the framework of war preparations and during the Second World War there is a huge increase in

<sup>37</sup> Noack 1895, p. 108

<sup>38</sup> Liebster 1984, p.192

<sup>39</sup> Growing fruit is a work intensive manual occupation which cannot easily be carried out by machines.

<sup>40</sup> As of 1894 fruit growing receives a legal base, thanks to the agricultural tradings department. From this date on it is affiliated to and supported by official legal bodies (chamber for agricultural trade). (Friedrich 1956, p. 18; Wolf 1989, p. 40).

<sup>41</sup> C.f. Noack 1895 or Ulrich 1911

<sup>42</sup> Cf. Bidlingmaier 1918

<sup>43</sup> E.g. Ulrich 1911

productivity: the aim is to increase Germany's self-sufficiency and to use the increase in competitiveness to help build up a large German economic sphere after the war is won<sup>44</sup>.

However, the apple lags behind in its development when measured against these standards since the "Fordistic production concept"<sup>45</sup>, due to the nature of the apple, can only be applied in a very limited manner. One reason for this is the lack of demand for traded apples<sup>46</sup>. The large, range of different apple varieties, which is so valued and cared for by the populace, does not allow for widespread trading. Most people still harvest and use their own apples. If there are any remaining they tend to be exchanged for other goods and services locally. The apple is still very strongly linked to domestic self-sufficiency. Even when advertising tries to promote apples from a health point of view there is little increase in demand. There is a contradiction between the attitude of most people towards the apple and their image of a mass-produced commodity. The way in which we buy apples today (from supermarkets and grocers) would have appeared very strange to people in those days.

## 5.2 The allocation of space for orchards

Since living conditions in the towns were mainly poor for most people, emphasis was placed on reforming the standard of living and the town planning models in the first quarter of the 20<sup>th</sup> century (e.g. Ebenezer Howard's Garden City Movement developed in England in 1898). Part of this scheme involved increasing the amount of parkland and incorporating space for physical recreation and food growing. Two reformed approaches to urban development arise from this<sup>47</sup>. Both have a specific influence on landscaping and garden planning within towns: one of them is a living and housing reform which produced ideas for the so-called "Horizontal Garden City" (e.g. small housing estates and terraced housing with gardens for growing food); the other is built up around the concept of the more functional architectural approach or "Vertical Garden City" (high-rise housing blocks with the landscape serving as a backdrop). The "Athens Charter" which advocates separating living, working, recreation and travel is often cited as a model.

There is no room within the framework of this functionalistic model for the provision of areas for town-dwellers to practise self-sufficiency, areas, which previously had been taken for granted. It is intended that food now be provided in specially designated parts of the countryside. Apple trees thus lose much of the importance they once had in the towns.

## 5.3 Attempts at streamlining fruit growing

These new town planning ideologies are also reflected in fruit growing: from the 1930s onwards there is a great efficiency drive, the momentum for this being society's strong belief in technology and progress.

It is typical for the literature in Germany of that time to focus on what was known as "clearing out" or limiting varieties<sup>48</sup>. However, the authors do not specify clearly which varieties are to be selected. The main concern is that the fruit be beautiful to behold<sup>49</sup>. This modern way of thinking is almost diametrically opposed to traditional experience-based knowledge which is founded on local and regional varieties. Although some of the elements of the national

<sup>44</sup> E.g. Phillips, Kunz 1936 or Trenkle 1943

<sup>45</sup> The term "Fordistic" is based on the process of assembly-line industrial mass production which was introduced by Henry Ford (1863-1947). The principle is that of using machines to produce goods as quickly and cheaply as possible. The workers are paid high enough wages to be able to buy the products that they make (Bollerey, Fehl, Hartmann 1990, p.71)

<sup>46</sup> Pfeiffer, Kurek 1922, p. 11

<sup>47</sup> Cf. Bollerey, Fehl, Hartmann 1990

<sup>48</sup> E.g. Phillips, Kuntz 1936; Gross 1940; Trenke 1942 and 1943

<sup>49</sup> Deutscher Obstbau, September 1941, p.161; Winckelmann 1944, p.47



socialist “blood and earth” ideology seem to stand in the way of such a modernisation, modern thinking does in the end gain the upper hand and the ground is prepared for further specialisation and competitiveness.

During the Second World War increased productivity at any price is the order of the day. There is increased external control led by the state and technology alongside the introduction of norms and standards<sup>50</sup>. Due to the unification of organisations and the high level of obedience throughout society fascism offers fruit growing theorists an unexpectedly high level of determining power. Within the framework of wartime logistics (and due not least to a large number of exploited foreign workers) fruit trading experiences a massive leap in rationalisation and efficiency linked to the sales and supply structures. Fruit growing and trading is controlled centrally under the Third Reich (the Reichsnährstand, the body formed by combining all agricultural and horticultural organisations, is influential) and for the first time different levels of trading are separated according to official law.

Grades and quality standards are introduced in the 1940s. These standards are not linked to daily human needs or even to demand but to economical criteria such as large harvests, hardiness and appearance<sup>51</sup>. When the quality standards are introduced there is no attempt to hide discussions admitting that the “inner quality” of apples is no longer of any importance, the main concerns are now the external appearance of the fruit and the ability to produce large amounts of consistently similar goods<sup>52</sup>. This marks the move into mass production. In essence what happens is that the principles and methods which are introduced later in post-war society are pre-empted by the war economy, noted for its strict controls, its strong divisions of labour and its mobility.

## **6. How the social market economy creates the industrialised apple**

Germany is rebuilt after the war according to market economy and liberal criteria, particularly influenced by economic models from the USA and Great Britain. The Marshall-Plan commits Germany to close economic co-operation with other European countries and to building up a list of trade restrictions<sup>53</sup>. The people of Germany welcome this industrialisation which is quickly pushed through in the following months and years. There are many factors which support this: orientation around the winners of the Second World War (especially the USA), economic growth and its first successes which show the Germans that they are “someone” again, and a general media-led support of progress.

These principles of industrialisation are also carried over into agriculture and fruit growing, falling back on the structural basis of the 1930s and ‘40s. They form an excellent starting point for realising the “progress” which has been sought after, even for the apple.

### **6.1 The loss of appreciation for the apple**

Despite having tried for about 100 years to relate apple growing more closely to industrial production methods and to create a “modern” apple, it is not until the 1950s and ‘60s that we see a radical change in how the apple is appreciated and in the culture built up around the fruit. The apples which are around at that time and the long held traditions surrounding these

<sup>50</sup> The coming together of the German horticultural economy (deutsche Gartenbauwirtschaft) which was decreed in 27 February 1935 marked the first step towards market regulation in the national socialist sense.

<sup>51</sup> Differentiation are made between Class 1A (select eating fruit), class A (eating fruit), class B (economy) and class C (processing fruit/for industry). Class A also groups according to four size categories: very large (70mm diameter minimum), large (65mm minimum), medium (60mm) and small (55mm). Trenke 1942, p.91.

<sup>52</sup> Winckelmann 1944

<sup>53</sup> Cameron 1992, p.235-236; Weimer 1998, p.27-30

fruits do not take well to this change. Take for example small garden plots and kitchen gardens: although the trees and apples are still there, any kind of interest in them is considered antiquated, homespun and old-fashioned<sup>54</sup>. The apple has no place in the up-and-coming economy; it's a discontinued line which can't compete with the likes of Coca-Cola. There is no way of avoiding a complete change anymore: the apple, as it stands, cannot fit into the modern way of life: it doesn't come from a new factory (like e.g. the car does), and you would never find one at a rock 'n' roll party.

The change in use of, and attitude to, space, brought about by functionalistic town planning also contributes to the change in the way people see the apple. Fruit trees are given their own specific space: they no longer have a place in urban life although they were once intrinsically linked to it and even if they are to be found in towns they are practically ignored. Location and space are becoming much more flexible and interchangeable resources as the transport infrastructure is dramatically built up— geography plays a much lesser role, both in the market economy and people's perceptions. Fruit trees disappear almost entirely from towns. In the country, private vegetable and kitchen gardens become increasingly obsolete, whether because of the way in which working for yourself (unproductively) has become less valued or because it is easier to buy fruit and vegetables which have been grown in the countryside.

## 6.2 External regulation and how it put an end to autonomous traditions

The most decisive changes to apple growing are achieved in a period of only 20 years during the 1950s and '60s due to cultural change, new government fruit growing regulations and completely new methods for marketing apples. Previous methods and traditions are pushed to the periphery, almost pushed to extinction in some cases. What comes out at the other end of this process is the "modern" apple, one that has a place in the industrial age. The first prerequisite for this is that the way of producing apples finally has to undergo radical change.

Due to the increased economic links with other countries market economy considerations move into the forefront of fruit growing methods<sup>55</sup>. So that German fruit growers are not too greatly disadvantaged against growers from other countries, German fruit growing is subsidised by the government, a practice which is later adopted by the EEC<sup>56</sup>. Orchards of small fruit trees are planted (plantation fruit growing) and it is intended that the allegedly economically non-viable private growers and small concerns become things of the past<sup>57</sup>.

In order to encourage competitive production, international comparisons are carried out and these comparisons always show Germany in an unfavourable light<sup>58</sup>. However, German fruit growers, as long as they are part of a large subsidised concern, need not fear the competition since the market is strictly regulated by the common market structures for fruit and vegetables as well as more liberal trading practices within the European Economic Community (later European Union). Instead of trying to keep government intervention to a minimum (which corresponded to the liberally orientated economics which were officially adhered to), the opposite is the case: an increasing number of government institutions take over control of the market. In a similar way to the situation within agriculture generally, the fruit growing industry experiences a great amount of intervention into the flow of goods from producer to consumer as well as pricing structures. (E.g. subsidies from central marketing organisations or

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<sup>54</sup> Bücking 1993, p.96

<sup>55</sup> de Haas 1957

<sup>56</sup> Stork 1964, p.173; Pickenpack 1974, p.84

<sup>57</sup> de Haas 1957, p.38

<sup>58</sup> de Haas 1957, p.21

in the form of financial rewards for destroying surplus production.)<sup>59</sup> All large concerns which apply methods with the sole aim of increasing production gain from this system.

As well as these influences which are exerted on fruit growing at an international level, a further intensifying is encouraged by even more “modern” planning ideas such as e.g. consolidation of farmland<sup>60</sup>. Although until the 1960s events within the market were determined by small suppliers, and the additional income that fruit growing provided supported entire lifestyle and social structures (e.g. topping up a pension or a low income from a badly paid job in industry by selling home-grown fruit.) this is all about to change. Government policies, rules, regulations and, not least, financial subsidies combine together to reduce the number of small growers to almost none. However, this is of no interest to anyone apart from those directly affected: what is now required is an even more regionally concentrated system of intensive fruit growing which specialises on a few “marketable” apple varieties<sup>61</sup>.

### 6.3 The apple: mass produced and reproducible

The plantation method of fruit growing which the government forced through marks a radical break from the past: it is based on principles which in the 1960s were still only relevant to industrial production. With its mechanical equipment and clear division of labour, plantation farming comes closest to the ideal of production bordering on the industrial. In order for this to be realised there have to be substantial subsidies for those growing appropriate varieties of apple, for plant stocks, equipment, and for building storage warehouses. Alongside this extensive advice and training sessions are put in place for “farmers with no idea about fruit growing”<sup>62</sup>. The logic that is usually associated with business management approaches within the industrial mass production sector is applied to fruit growing. The result is a drop in production costs for the larger concerns with “progressive” technology, and a shift in production costs from work expenditure over to capital expenditure<sup>63</sup>. Specialisation, use of technical resources and ever larger concerns are now worthwhile.

They have finally succeeded: most of the apples which are eaten today are mass produced. However, the price we have to pay for this increase in yield and size of concern is a rising dependency on technology and pest control. The efforts in this area seem to have paid off, since contemporary literature boasts: “[...] *from an economical point of view there has been a valuable contribution to the wealth of society as a whole which would not have been the case if the wide range of technical production assistance had not been utilised*”<sup>64</sup>. Whether or not individual concerns survive depends however on whether they are attached to large-scale production and trade organisations, since they are no longer able to compete alone across such large distances.

### 6.4 The apple as a commodity

The transformation of the apple into its “modern” state would never have been so successful had there not been such a radical change in marketing at the same time. Right up until the 1970s there are still many small trade units to be found which offer small producers some sales potential<sup>65</sup>. However, in the 1960s we start to see the kind of centralised marketing

<sup>59</sup> Pickenpack 1974, p.32; Weimer 1998, p.84

<sup>60</sup> Stork, 1964, p.195

<sup>61</sup> Pickenpack 1974, p.32; Frick 1985, p.26

<sup>62</sup> Der Erwerbsobstbau 1959, Nr.7, p.141

<sup>63</sup> Hilkenbäumer 1964, p.293; Stork 1964, p.29-30

<sup>64</sup> Friedrich, Rode 1996, p.11

<sup>65</sup> Jaeger 1969, p.33

approaches which are taken for granted today being very firmly pushed through. The reason that is given for needing a production and marketing system which is as intensively and efficiently organised as possible is the combination of falling fruit prices and increased wages<sup>66</sup>. However, the process doesn't develop anything like expected since – at least this is what is said – fruit growers don't have the right attitude<sup>67</sup>. The real reason for the fruit farmers having no interest in a centralised marketing approach is the extra cost: storage, processing and marketing the fruit had always been an integral part of their business and had been carried out (free of charge) by family members.

In order to force through this trade centralisation despite everything an attempt is made, rather cleverly, at increasing the output of particular fruit varieties. Trying to trade many different apple varieties which have different lengths, breadths and weights gets in the way of smooth, and therefore inexpensive, operations. Efficient smooth-running is achieved at the production end of operations by recommending a select few “marketable” varieties and providing the necessary hardware for centralised services in the form of large crop containers and suitable transportation<sup>68</sup>. At the same time, wholesalers are recommended, for economic reasons, to specialise on a few apple varieties and to work more closely together. Any such co-operation is subsidised by the state. Wholesalers however only achieve greater market economy importance if they are able to turn over large, homogenous amounts without the individual fruits having to be inspected<sup>69</sup>. As long as the fruit trade continues to base itself around small quantities and a wide variety of products with a whole range of different manifestations, large-scale storage, processing and marketing organisations struggle to become established. However, with the aid of persuasive arguments and hard facts everything is being done to make these ideas reality.

The alleged need to expand and to combine forces with other traders for marketing purposes as well as an increased share of the market and achieving competitiveness on a larger scale is used as the reason for setting up the European Economic Community: *“If, for example, a company limits its product volume to match its traditional market area it will thus, in contrast to its competitors who choose to expand, also relinquish the chance to grow as well as to have a balanced and flexible product range. This will result in the competition having the upper hand.”*<sup>70</sup> Over the next months and years the size of sales areas clearly increase: from the 1970s onwards, heavy goods vehicles are used for transportation<sup>71</sup>. As time goes by, ever-larger goods vehicles are put on the road in order to be able to meet the demands of international fruit trading, which is the next aim.

## 6.5 The apple as a retail product

In the 1970s, as industrial apple production becomes a given and large-scale commercialisation allows for reasonably priced product ranges, the number of self-service outlets and retail chains selling fruit increases dramatically<sup>72</sup>. Since these shops, in contrast to specialist grocer's stores, can achieve increases in turnover by centralising their supply structures and by expanding their product range, organised food retailing starts to become one of the most important contributors to the market volume of fruit and vegetables<sup>73</sup>.

<sup>66</sup> Der Erwerbsobstbau 1959, Nr.7, p.141

<sup>67</sup> Der Erwerbsobstbau 1965, Nr.3, p.41

<sup>68</sup> Hilkenbäumer 1964, p.240; Der Erwerbsobstbau 1965, Nr.3, p.43

<sup>69</sup> Jaeger 1969, p.193-196

<sup>70</sup> Pickenpack 1974, p.88

<sup>71</sup> Pickenpack 1974, p.79

<sup>72</sup> Der Erwerbsobstbau 1970, Nr.1, p.1

<sup>73</sup> Pickenpack 1974, p.24

Direct marketing of apples (from farms, at weekly markets, from roadside stands or to bulk buyers) has become something of a rarity today. The majority is sold indirectly and the importance of individual sales channels is almost impossible to work out since there is as good as no data on the flow of goods<sup>74</sup>. Central sales and marketing organisations are still being financially supported (by the European Union). This is supposed to make it easier for the industry to react to a process of concentration development within the retail industry and to promote the producer's market position<sup>75</sup>. Retail trading companies tend, however, to go directly to foreign suppliers for their apples, because the quality and grading of the goods is considered to be better<sup>76</sup>. This is how the retail industry dictates the quality of the goods which appear on the market today.

Concentration development within the food retail industry is, at the time of writing, not yet complete. The perceived need for completion is based on price and profit advantages and on increasing competitiveness within the internal European market due to optimised market share and market occupation policies<sup>77</sup>. Since retail organisations now collect and distribute goods from and to their local branches themselves and have their own wholesale facilities they can exert considerable influence on the variety, range and appearance of the apple. In turn producers who are in a position to fulfil specific transport demands (technological and time) and to balance transaction costs with efficient production technology are also able to profit. In other words: The winners in this policy of international procurement as practised by the retail industry are once again those concerns whose production and marketing is based on mass quantities and homogenous goods, i.e. those who operate in accordance with the industrial example.

## 6.6 The quality controlled apple

The first 20 – 30 years after the war have, we acknowledge, brought some changes that are unique in the history of the development of growing and trading methods. At the same time we have seen radical changes to the cultural traditions surrounding the apple. The product itself - the apple – doesn't remain untouched by these developments either. The apple has had to adapt to suit modern sales patterns, i.e. become "compatible to business". Although the apple was to be found, in both its raw and processed state in the shops in the 1950s, it wasn't at that time created in the same way as other industrially produced goods (e.g. washing powder, which is always available in the same quality and quantity). It is not until the end of the 1960s that the situation changes in a way which is unimaginable in the 1950s: a "new" product has been created, which looks equally good on shelves in retail outlets almost everywhere. How can that be?

From the middle of the 1950s fruit is sorted and graded according to official grading systems<sup>78</sup>. This grading is based on both quality and on the size grading systems which were introduced in the 1940s. The grades are legally binding and are linked to the grading systems of export countries, since the plan is, to reach international agreement on fruit and vegetable quality standards. These quality standards are supposed to be in the interests of both the consumer and the producer: "*Classification according to grades and classes are intended to guarantee the consumer good quality and to provide a distinct range of different quality classes. They should protect the producer from his goods being under-valued.*"<sup>79</sup>

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<sup>74</sup> Neumann 1997, p.99

<sup>75</sup> Neumann 1997, p.102

<sup>76</sup> Lingenfelder 1996, p.91

<sup>77</sup> Tietz 1992, p.193

<sup>78</sup> Fruit and vegetable grading was legally introduced on 3. July 1955

<sup>79</sup> de Haas 1957, p.396

EEC Quality Standards are in place in West Germany from 1 January 1967<sup>80</sup>. Fruit and fruit products are only allowed to be traded amongst member states of the EEC (later EU) if they comply with the quality control standards. The quality standards for apples are revised several times in the following years (e.g. 1972 and 1989). What is interesting, however, is that they are only ever altered when new members are admitted to the European economy. The changes to the standards which are made in 1989 are due to the EEC being expanded to the South which brings with it changed demands on the consumer and wholesale markets: *“In order to take into account these new demands the quality standards have to be amended.”*<sup>81</sup>

We have now reached the point where these standards define, right down to the last detail, how apples which enter the market should look. All apples have to be reproducible in large quantities, even down to exact shadings. The quality of the fruit is decided according to external characteristics such as size and colour.

Thus we can see that with apples – as with other goods – national and international agreements about quality standards are the deciding factor when it comes to creating ever larger markets. This results in an increasing limitation of varieties and definition of appearance. In representative farming areas, for example, the range of different varieties is typically down to a maximum of 6 in the 1970s<sup>82</sup>. Towards the end of the 1980s the apples available in Germany are mainly ‘Golden Delicious’ (which is mainly imported from Italy), ‘Cox Orange’ and ‘Boskoop’<sup>83</sup>. In the whole of the European Community the number of different varieties grown is limited to only 10, half of which belonging to the ‘Delicious’ family or derivatives thereof<sup>84</sup>. Due to the internationally recognised standards not only have the apple varieties been reduced and standardised but the ‘genetic pool’ has also been reduced dramatically. Even into the 1990s the ‘Golden Delicious’ and its derivatives do not become any less important – its characteristics make it most suitable for industrial production and wholesale marketing.

## 7. Discourse on the manifestation of the industrial apple

It is unavoidable at this point to look into the question of how, in the face of international trade and competition as well as increasing regulation by national and international administrative bodies, people have changed their perception and attitude towards this everyday product, the apple. By this I mean the “image” which we have of the apple, how that image came to be and how this image relates to the external appearance of this product, a product which has gradually lost its direct connection between cultivation and use, a connection which was once tantamount to the development of customs and traditions surrounding it.

The apple is, as we have seen in the previous chapters, because of its characteristics, not naturally suited to industrial production methods and mass marketing procedures. Before it could become a product suitable for world trading it had to undergo changes. Just as the men and women who cultivated the fruit, the apple put up a long resistance to these changes. It is not until that period of time when many different developments coincide that the apple finally succumbs to change also: when society shows general enthusiasm and support for the new industrial culture, when clever propaganda and subsidies lead to the size of concern and methods of growing which no longer allow for a wide range of different varieties and when trade and economics give it a product image, (a new, consistent, smooth product which is

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<sup>80</sup> Dassler 1969, p.138

<sup>81</sup> EEC regulation no. 920/89, p.2

<sup>82</sup> Erwerbsobstbau 1976, Nr.8, p.117

<sup>83</sup> Obst und Garten 1988, p.29

<sup>84</sup> Wegner 1989, p.22

available always and everywhere – an industrial product befitting of affluent society). When all this happens, and not before, the characteristics and properties of the apple finally begin to change.

Especially since the 1950s and alongside the completely changed production and marketing methods (and the completely changed apple, too) something, which can best be described as a new “image” of the apple, has been created. Precisely because the apple appeared to be so old-fashioned after the war it could be given a new identity which had hardly anything in common with its original character and which is almost completely unconnected to its customs and uses. The original all-encompassing concept of the apple which included looks, smell, taste, customs and use is reduced down to a purely optical image.

If the apple was characterised by a comprehensive collection of traditions and uses up until the 20<sup>th</sup> century, then from the 20<sup>th</sup> century we see the emphasis being placed on its external appearance. The characteristics which are sought after are those which can be measured, such as size and colour. Later on more abstract criteria such as e.g. the “optimal” sweet-sour ratio or a high vitamin content start to play more of a role<sup>85</sup>. All the reports and remarks about quality which are made by producers’ organisations, the industry or the EU have one thing in common: they make no mention of flavour. Flavour has, then, become almost irrelevant to our perception of the apple. The many differing measurements of quality which were once important and linked to the traditions surrounding the apple have also been reduced down and are similarly unimportant.

Since advertisements mainly use visual images to impart information, apples must, above all, look good here, too. Rather than individual features being promoted, as once was the case, it’s the whole picture that is now given priority. Surprisingly, the way we now see the apple is due more to advertising for other products (e.g. toothpaste or cleaning products) which use apples to represent certain concepts, than direct marketing of the fruit itself. Any apples which do not have the looks that are portrayed in these advertisements risk being rejected by critical consumers. The esthetical sensitivities of the consumer are influenced to such an extent that we now only consider apples to be edible and good for us if they are blemish-free. We have even got to the stage where adverts enthuse about characteristics which the apple no longer has: apples are artificially made to look natural by transposing them into lush landscapes or grandmother’s kitchen. More and more the apple is becoming a product of its own artificial image. You never see a picture of an apple in its actual production surroundings (large intensive plants) – the apple is always shown in isolation, as if it had appeared from nowhere.

## **8. Possible ways in which to recultivate the apple**

Looking back over the history of the apple we can see that modern methods of fruit production have led to a dramatic reduction in the number of different varieties as well as creating fruits which look and taste similar. This reduction in variety (which has also affected other edible plants) means that our future food options have been considerably limited.

In order to preserve genetic variation gene banks have been set up. However, this method of ex-situ-storage<sup>86</sup> causes substantial elements, such as the ability to germinate, to be lost. All seed and plant specimens must therefore be regenerated (i.e. planted out and used) at some point<sup>87</sup>.

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<sup>85</sup> Kobel 1954, p.234; de Haas 1957, p.13-14

<sup>86</sup> Storing elements of the genetic variety outside of its natural habitat.

<sup>87</sup> Bundesministerium für Ernährung, Landwirtschaft und Forsten (Ed.) 1996, p.41 (Official publication of ministry for agriculture, food and forestry.)

This is proving to be difficult, since over the last 50 years a large part of the culture of food growing, preparation and processing which was developed over hundreds of years has been destroyed. Both the apple and the people whose lives were connected to it resisted these changes which were intended to create “modern Ford production methods” and the apple is able to develop and flourish due to the interaction between a variety of uses, traditions, specialised growing and processing methods and considerations of location and season. It is only recently that it has become possible to produce apples in large numbers in a reproducible consistent form for a global market.

Alongside economic pressure, rules and regulations set up by state bodies and expert officials have contributed to the development of the standardised apple. In order for mass production and large-scale trade practices to be able to function at all, accidental and chance elements linked to growing and trading in apples have to be eliminated as far as is possible. This also has its effect on the apple itself, since it has many different characteristics according to its different varieties. The industrialised apple is a highly administrated apple and one shouldn't hold out much hope that any new regulations would lead to a richer variety of apples. Rather – and this is the message that we are getting from recent attempts at restoring tradition orchards – what is needed, if we want to re-introduce a wider range of varieties, is a change in our attitude towards the apple.

The apple has not become the standardised object is purely because of its cultivation methods and marketing forms: the image that we have constructed is at least as important. As long as there was a direct link to the apple via its uses and traditions, image and reality obviously had a constructive influence on each other. The increased amount of distance and mediation which was brought about by administration had caused these links to be broken and our image of the apple has become arbitrary and disconnected. We now have a way of looking at apples which is expressed in terms of standards relating to size, colour and unblemished skin.

Today, we consider the apple, in its standardised form, to be something typical and natural although it is in fact strictly regulated and controlled and thus has nothing to do with accidents of nature or traditional ways of life anymore. This product which has been created by experts has almost entirely pushed traditional and cultural utility values out of existence.

The obstacles to the development of a new rich variation in our apple stocks are mainly due to the image that we now have of this fruit: the more this image, which is far removed from reality, becomes established in the minds of more and more people the more likely it is that the apple will be able to be even more uniform in its make-up. This in turn points to an even more dramatic reduction in the number of available varieties and a streamlining of characteristics and properties than has thus been the case. It is not only the industrial and large-scale production and processing methods and the changed way in which apples are used in the home that are responsible for the reduction in variety and disappearance of particular qualities. Nowadays it is the image that we, the consumers, have built up in our minds, an image based on the predominant attitudes and approaches within society, which is most influential.

However, the fact that the apple has become such an administrated creation and is defined purely by its appearance could also offer a great opportunity: the better an apple looks the more it loses its inner qualities, especially flavour. Once again the American apple industry is leading the way: We've done it! We now have the perfect apple, “ [...] a health food that would look as dazzling as an ornament on a Christmas tree.”<sup>88</sup> However, “in trying to create the perfect apple for major supermarket chains, these farmers say, they have sacrificed taste to cosmetics.” The hunt is now on for a solution which many farmers see in a return “to the days before supermarket chains dictated uniform size and colour.”

<sup>88</sup> “‘Perfect’ apple pushed growers into debt” Article in the New York Times, 4.11.01



It is doubtful whether this is going to be possible. Because, alongside this standardised taste experience we have also created a standardised usage. It's not so much the apple itself that is in danger (old apple trees can still be found) but it's rather the fact that we have forgotten so many of the uses that we once had for the apple – so much of our knowledge about different uses for the different varieties has been lost over the years. Since apples have become uniform and replaceable there are no more stories to be told and so no more passing on of information.

Variety – and the apple has proved this – can only be created if we have concrete relationships to the fruit, small-scale orchards and decentralised traditions and customs relevant to our lifestyles. In other words, by turning our backs on the kind of industrial farming methods intended for a global market, which demands a consistently similar reproducible product.

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