

## Top-quality wine estates on the Moselle in the 19<sup>th</sup> century

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For almost 2000 years wine has been extensively grown on the Moselle and its tributaries. At the end of the first century AD, the Roman rulers ordered first attempts to grow local wines in order to be no longer dependant on exports from the Mediterranean. The extension of the vineyards was particularly intensive in the late antiquity. The southern steep slopes which nowadays belong to the top locations all had already been cultivated. Viniculture even extended into the valleys. Large dominions supplied the wine stocks to the imperial court in Trier and to the legion camps on the Rhine. Also after the Teutonic invasion, forcing the Romans to withdraw, a continuity of wine growing is proven through written sources and archaeological discoveries. Based on a strong Roman tradition, the vineyards were more and more extended during the Middle Ages. The 12<sup>th</sup> and the 13<sup>th</sup> centuries saw a particularly intensive phase of extension. In the mid 14<sup>th</sup> century, however, it came to a setback due to climatic basic conditions. In addition, due to new brewing methods, the competition through better preserved beer became increasingly noticeable.

In the Middle Ages, trading Moselle wines was concentrated on the Lower Rhine, the most important trade centre being Cologne. Merchants from the Rhine metropolis and the Hanseatic League took over the wine from the Moselle and the Rhine stocked in Cologne due to the stapel and sold them on to Bruges, Antwerp, Amsterdam and London. After the decline of the Hanseatic League, the turmoil of the Thirty Years' War, under which the Rhenish wine trade suffered strongly, it were the Dutch, rich through the colonial trade, who dominated the wine trade on the Moselle. Here, in the Middle Ages and the early modern times, the most important wine producers were ecclesiastical institutions, the nobility and wealthy bourgeois lineage. The church was the biggest landowner. In leading position the numerous monasteries in Trier, next to the Elector and his chapter of the cathedral, owned large vineyards in the best locations on the Saar and the middle Moselle. They mainly supplied the numerous convents and abbeys of the neighbouring Belgium and the

Netherlands. The best wines were drunk – according to the older literature – in the monasteries themselves. Only average wines were sold to foreign countries. The poorer tithe and tax wines delivered by farmers was sold to the numerous pilgrims coming to Trier every year. The monastic vineyards were left to the farmers as hereditary lease. As each farmer had to hand in a third of their yield there was only little interest in producing small quantities of good wine. The farmers rather backed mass quantities in order to keep most of it to themselves. For the tenant farmers, there was no scope for personal economic initiatives. Since the end of the Middle Ages first pieces of evidence exist for growing Riesling wines but this vine was unable to succeed for a long time. In the 18<sup>th</sup> century, the Elector again and again passed decrees in which he propagated the growth of quality wines. However, they only prove the ineffectiveness of this repeated demand. It was the so-called Kleinberger vine which was mainly cultivated, a mass quality wine nowadays called Elbling. Still on the eve of revolution Trier, the region's urban centre, was hardly among the booming towns. Trier suffered from its political periphery and its wealthy inhabitants lived from trading wine, grain and timber. In 1802, a French describes the economic structures as follows: “Les vins de Moselle qui croissent dans cet arrondissement sont renommés, et y forment avec le bois de construction la principale branche de commerce. Il n'existe dans l'arrondissement aucune manufacture ni fabrique assés importantes pour en mériter le nom, [...]”.

The political and economic conditions generally changed in the course of the revolutionary wars. When in 1789 the French Revolution broke out the Rhineland too did not remain calm, political protest broke out in numerous towns. However, only through the Austrian-Prussian declaration of war the Rhineland became directly involved in the political events. Prussian had expected to make an easy prey when Austria followed as a coalition partner after the war declaration by the French National Assembly in April. In September 1792, this illusion was destroyed after the unsuccessful attempt by the coalition army to invade eastern France and defeat of Valmy. In return, it was easy for the French to conquer the left side of the Rhine which then was to remain under French rule for the following twenty years.

During the first years of the occupation of the left Rhenish territory rival military and civil administration organisations alternated very often. The population suffered under

high contributions. When the rule increasingly consolidated itself and adopted legal character it were particularly the inhabitants with large businesses who rose to becoming leading men in politics, economy and society. After Austria ceded all left Rhenish territories in secret articles with the peace treaty of Campo Formio in October 1797, the new building of the administration began according to the French model and the territory was divided into four *departements* in 1798. For the new left Rhenish *departements* the reorganisation of the legal and administrative system which followed in 1798 was also of general importance: it included taking over the French jurisdiction, furthermore the freedom of trade, the abolition of the feudal system and in connection with this the abolition of the tithes. The radical abolition of obsolete privileges together with the new freedom of trade created essential preconditions for the further development of the Rhineland. These actions had only beneficial consequences for the viniculture as it abolished legal obstacles which until then had impeded quality viniculture. During the French period, in addition, property restacking took place to an - until then - unbelievable extend.

Just like in revolutionary France, the firstly confiscated and then expropriated properties of ecclesiastic institutions and the nobility were publicly auctioned off. In only ten years almost 14.000 objects were sold which, depending on the *departement*, this meant around 12% of the entire productive land. "Since the world's first existence there have not been so many sales and purchases like in the last twenty years." Using these words in 1816, the Prussian senior civil servant Johann Nepomuk from Schwerz describes the property restacking in the Rhineland through the French national property sales. The authors Bernard Bodinier and Éric Teyssier too claim in their book titled "L'événement les plus important de la Révolution. La vente des biens nationaux" that the following property restacking based on the national property sales had been the most important event during the great French Revolution. One can of course object that historians tend to consider their research subject as the most important anyway. However, there is a lot to be said for this claim.

The French sales politics were of pure fiscal character. The main goal was to restack a lot of properties as quick as possible. Socially reforming intentions with regard to the distribution of land like at the beginning of the sales in the revolutionary France

were no longer pursued during the Napoleonic period. These auction politics had enormous effects on the buyers. The objects offered were not divided into reasonably priced units and therefore were often very expensive. On top, the auctions only took place in the prefectures of the *departements* and were only reached by many Rhinelanders through a great deal of time and money. One further reason for the voluntary absence of numerous farmers was a certain mistrust and insecurity in dealing with authorities, jurisdiction and administration. Furthermore, auctions purely took place in the French language which was a foreign language to many. If one then also considers the momentum and the hectic rush at auctions it is understandable that particularly financially weak people with little or no education at all did not even dare to participate in these auctions.

The valuable wine properties on the Moselle and Saar too were exclusively bought by merchants from Trier and the surrounding area. These sales were to influence the property structures and the wine production decisively and in the long term in to the 20<sup>th</sup> century and therefore earn our attention. Until the secularisation, the Church owned one quarter of all the vines in the region. At the public auctions around 300 hectares of wine land went to new owners. The ten most valuable wine properties, all being ecclesiastical properties before, were almost entirely bought by wealthy merchants. Only two of these ten properties went to a Parisian army supplier and a consortium of twenty-six wine farmers from a small Moselle village. As the army suppliers usually sold their properties, allocated by Napoleon, also quickly to financially strong prospective customers in the region we can assume that nine tenth of all farms went to the members of the nobility in the area of Trier. Other figures support this tendency. It is provable that only thirty-three wine farmers participated in the public auctions. Very often, they were only able to act if the merchants from Trier bought the big properties in the prefecture, divided them into numerous lots and then sold them again to the poorer members of the population, of course not without gaining considerable profits. In return, the merchants invested these profits in land reaching extensive and valuable estate properties.

With an outstanding personality, the merchant Matthias Josef Hayn from Trier, I would like to explain how businessmen, prepared to take high risks, used the new business conditions and gained enormous fortunes. Just like other local merchants

he at first organised forage supplies for the French army. However, he made his large profits especially through his efforts in the trade in national properties. Within ten years, he bought and sold national properties worth 800.000 Francs. When buying his own properties he concentrated especially on valuable wine-growing estates on the middle Moselle. In total, he bought thirty-six hectares of the 300 hectares of vines sold in the prefecture in Trier. The huge variety of real estates in the prefecture in Trier however still seems to have been unable to satisfy his hunger for land. On top of this, he bought further valuable wine-growing estates from army suppliers who had been given these by Napoleon in 1805 instead of cash in order to compensate his debts. The army suppliers on the other hand of course had no interest in tying such large amounts of valuable land in the far east of France and sold their properties very quickly. Therefore, Hayn travelled to Paris in January 1806 together with Mayor Recking from Trier for sales negotiations and both of them bought real estates worth almost 200.000 Francs within one week. Among them being also the famous – soon named after him – Josephshof in Graach which he turned into a model wine-growing estate. From the army suppliers he bought another eighteen hectares of vines so that Hayn bought fifty-four hectares of vines in the best locations on the Moselle within only ten years. For the commercialisation of his wines he repeatedly undertook advertising campaigns on new markets. He probably also used his Lodge contacts for his businesses. The Lodge of Trier had been founded by leading merchants of Trier in 1805 in which Hayn was highly engaged and especially the prove of for example merchants from Cologne on the visitors' lists of the "Réunion des Amis de l'Humanité" indicates that the Lodge in Trier was readily used by merchants to make business contacts. Hayn on the other hand was a frequent guest of the Lodge in Cologne.

It is further known that he particularly rendered outstanding services to the improvement of the Moselle wines which were not really highly respected. His innovations and his economic dynamic also lead to breeding Marino sheep in a big style. His social reputation resulting from his immense property and his economic success not only gave him his nickname "king of the Moselle" but brought him numerous marks of favour and honouring by the state. Therefore, Hayn was the prototype of one of those successful businessmen in the area of Trier achieving large progress by means of huge increases in production and productivity and economic

and technical innovations especially within the field of cultivation methods and livestock breeding. The wine-growing estates of Karl Ellinckhuysen in Zeltingen, Johann Hugo Reiß in Kröv and Friedrich Handel in Grünhaus Mertesdorf which had originally belonged to the monastery of Machern, the abbey of Steinfeld and the abbey of St. Maximin took over similar model positions. In Prussian times, Hayn and Ellinckhuysen received the title of “Kommerzienrat” for their efforts within wine-growing. Christoph Philipp Nell whose property of St. Mathias in Trier possessed also model character was even ennobled. Characteristic for this group of businessmen on the Moselle is that it did not purely concentrate on growing vines but had several economic foundations.

Not only Hayn but also other merchants and landowners in the region had achieved vast improvements in quality since the beginning of the 19<sup>th</sup> century. They rigorously pursued the adjustment from Kleinberger vines to Riesling vines whereas the smaller wine farmers only made this expensive change during the century. The vines were consequently fertilised. Therefore, all wine farmers and wine producers possessed large areas under cultivation for forage plants in order to carry out the stable feeding consequently. In addition, after the French revolution, wealthy land owners began to bind their Riesling vines low so that they could use the heat stored in the slate soil for the growth of the vines. Furthermore, they made sure that there was enough space between the vines for absorbing the sunlight which disadvantaged the quantity but brought an increase in quality. The poorer wine farmers continued with growing Kleinberger using the disadvantageous “Hochbauweise”. A contemporary describes this as follows: “The grapes until now still remained usually four to six feet high from the ground and the vines almost looked like a forest which neither sun nor light was able to influence”.

During the French period the wine from the Moselle region still had to compete with the sun spoiled products from the Empire. When the Rhineland then became a part of Prussia after the Congress of Vienna golden years followed for the Moselle wine. As Prussia had not possessed any wine regions worth mentioning before and began to tax foreign wines with high import fees in 1818, the Moselle wines experienced an upturn unknown up until then. The large masses of the produced wines could still be sold during even bad vintages without any problems due to the existing tax system.

Therefore, buyers are supposed to have almost invaded the Moselle villages in October 1822. Such a favourable economy did of course not create any kind of incentive to try to improve the quality with the wine farmers who were quite resistant to changes anyway. On the contrary, now even unsuitable land and soils were turned into vineyards. The area under cultivation grew by one third which is particularly remarkable for the narrow Moselle valley. In 1828, the boom quickly changed into a crisis. Prussia now pursued its politics for a German customs union in order to economically prepare the political nationbuilding. Southern German countries joining this union were able to sell their wines under the same conditions as the Rhinelanders sold theirs in Prussia. The sales of Moselle wines dropped abruptly, entire villages became impoverished. At first, the wine farmers regarded this as a consequence from bad vintages, many not realising that this was a structural crisis. Hardly affected by this and the following crisis in the 19<sup>th</sup> century were the buyers of large ecclesiastical properties and their heirs. They possessed enough financial savings and were more resistant against the often changing economic conditions than the less wealthy smaller and average entrepreneurs. Furthermore, they were secured by several economic foundations. Even in critical years they were able to sell their tuns at reasonable prices or they just waited for the market to improve again.

In total, it should have become clear that wealthy buyers of former monastery properties – different to the masses of small wine farmers – succeeded in improving the quality and the reputation of the Moselle wines. In the mid 1920s an according historical PhD, still important today, on wine-growing on the middle Moselle was published. The author Felix Meyer comments on the property conditions as follows: “Most of the nowadays wealthy properties date from these days” – he speaks about the French period – “the old wealth of the Moselle. Whereas the distribution of properties is generally indeed democratic these properties stand out as successors of the ‘dead hand’ just like rocks out of the masses of plot estates”. These top wine-growing estates developed due to revolutionary measures. Today, the best wines in the region still grow there.

## **Wine adulteration in the Middle Ages and at the beginning of the early modern times in Germany**

By Lukas Clemens

Today, state regulations, increasingly those by the EU, create basic conditions which shall protect specific wine qualities. This way, the consumer is meant to be protected and he or she is meant to be guaranteed a certain minimum quality. At the same time, wine farmers are obliged to keep to specific wine criteria. Against the background that a multitude of factors decide over the wine's quality, modern quality protection can obviously always only regulate some elements which are decisive for the quality of a wine. At the moment, quite a few are under the impression of an over regulation and demand – also with regard to the globalisation of the wine markets – a larger self responsibility for the wine farmers and to leave the decision on wine qualities mainly up to the market as well as to competition. Others insist on state standardised wine-growing policies which lay down minimum quality and punish violations of state standardisation. Just the current discussion makes clear that no durable agreement on the numerous elements of qualitative wine production exists. With regard to the wine scandals this means that here exposed and punished violations of state standardisation regarding wine-growing cannot refer to constant and also always valid quality criteria. In the case of wine production, what is considered to be true and what false is subject to the cultural change.

Whereas this principle must be watched with regard to the regulation of state sanctioned standards and power monopolies this is even more the case for pre-modern centuries where neither standardised legal protection existed nor executive authorities accepted on all sides. In a multitude of legal collections of different quality – from the Carolingian Capitularies to the high medieval municipal statutes, from legal regulations for the *Reich* to the municipal police regulations for the *Reich* of the late Middle Ages – regulations for the wine-growing and wine preparation can be found. The examples discussed in the following refer especially to the western and

south-western areas of the *Reich* and mainly take in the view of the development until the 16<sup>th</sup> century.

Adulteration, deception and fraud

During the Middle Ages, one was basically capable to distinguish between legal and illegal and between pure and adulterated with regard to food as well. The perception of pure unadulterated wines was at least not unknown in the Middle Ages and was very often explicitly expressed. For example, in 1417, it was decided at the *Hansetage* in Rostock and Lübeck to ask the wine trade centres of Cologne, Strasbourg, Bingen and Frankfurt to only negotiate Rhine wines (quotation) “as God lets them grow”. At the same time, one can find similar requirements in the decrees of Basel and also the imperial wine decree by Maximilian I. in 1498 only allowed wines which (quotation) “were natural”.

By tradition, one way of wine preparation was considered as improper (inadmissible) wine forgery, i.e. adding water to wine. However, in practice it was not at all frowned upon during ancient times and the Middle Ages to make wines rich in alcohol more digestible by adding water to them. Thus, Hildegard of Bingen is supposed to have recommended watering down strong wines like the so-called Franconian Wein but to not water down wines low in alcohol.

Municipal decrees again and again allowed controlled adding of little amounts of water too. One example of this may be the town charter of Schlettstadt dating from 1374 which permitted that each tun of wine could be watered down with two measures of water. If one wine showed any deficiencies it was possible to add up to four measures under the supervision of an official wine middleman. If the wine middleman under oath declared that larger quantities of water were necessary in order to make the wine more drinkable their addition was permitted. The own house wine was also often watered down. This, for example, comes from files on a wine adulteration court case in Idar-Oberstein which took place in 1593. According to these files, the accused married couple was caught watering down their wines in their cellar. The husband defended this by pointing out that he had only prepared the wine for family use because otherwise the wine would have been too strong for the children, i.e. too rich in alcohol.

This action was of course considered as adulteration if the buyer had not been informed about it and the seller through this made an unjustified profit. In this way, watered down wine is already being complained about in the old testament. The type of punitive miracle disseminated in hagiographic sources testifies and condemns according usage already in the 6<sup>th</sup> century. Gregor von Tour reports about a taverner from Lyon who bought wine, watered it down, doubled his profit through multiple sales until a punitive miracle forced him to repent and to end the deceit. Also in the following centuries, one believed taverners capable of deceit and adulteration and they were repeatedly suspected of watering down wines, to sell poor wines as good quality or to blend different kinds of wine without the according label. Such a certainly not unfounded mistrust by the way was also aimed at the group of wine merchants. The wine decree by the *Reich's* assembly at Freiburg in the Breisgau in 1498 as well as the *Reich's* police decree from the 16<sup>th</sup> century complain about the fact that ship's workers and carters drew off wine from the barrels entrusted to them and added water to the resulting loss.

Even if such actions, once discovered and proven, were considered to be criminal, generally accepted, abstracts adulteration criteria are unknown. With regard to the different legal traditions and legal circles this is hardly astonishing. A clear distinction between adulteration and deceit only developed during the 19<sup>th</sup> century. All the same, adulteration offences and problems connected with them had been discussed within the forming jurisprudence since the 12<sup>th</sup> century including the canonisation as well as the roman law. Connected with this, it became possible in principle to judge fraud according to the fact whether it had been caused deliberately, unknowingly or by mistake.

Consequently, one must expect that the levels of consciousness and willpower and with this also the fact of wilfulness against such until then dominating legal customs were discussed on a higher reflection level. These occurrences are tightly connected with a quantitative and qualitative upturn of the economy and the trade in general as well as with the emergence of new ideas on quality and economy.

During the 13<sup>th</sup> century, the export orientated trade and industry centres in Europe develop a tight system of standards aiming at ending any kind of adulteration of goods. Now, municipal decrees repeatedly contain bans on undeclared wine manipulation. To mention some early examples, the decrees by the Swiss towns of Fribourg in the Uechtland (1249), Thun(1264) and Burgdorf (1273) banned a general watering down of wine. In Landshut (1256) and Augsburg (1276) blending wines was not permitted, in Neuruppin (1256), in Würzburg (1265) and in Schaffhausen (1291) the use of blending substances was made a punishable offence.

The legal discussion as well as the legal practice mainly dealt with the establishing of certain facts. Fraud was particularly considered as a criminal offence if it caused financial damage or even life and limb were at risk. The worry about the public interest too had more and more developed into an important legal right since the 13<sup>th</sup> century which also reflected in the fields of wine production and wine sales. In the late Middle Ages comparable goals were justified with the efforts for the benefit of the public.

#### Financial damage

In practice, controversial facts resulted particularly from that grey area where wine qualities were changed without the knowledge of the buyer, i.e without the consumer's knowledge and acceptance of additives to the wine. If wine farmers or merchants deliberately improved poor or even bad wines without the buyer's knowledge in order to prevent economic losses or to make higher profits, then this was considered as illegal practice. Thus, wine adulteration could have drastic consequences.

One especially hard court decision was made in Überlingen in 1471 where a convicted persistent offender was imprisoned for life with bread and water. The ban on blending wines documented already in early municipal decrees from the 13<sup>th</sup> century and the watering down was punished in two cases with exile as well as the threat of drowning if the delinquent was caught again within the town boundaries in the town of Strasbourg in 1353. Very often, the blending with brandy was also not permitted, in practice obviously a common procedure.

In other cases, the blending of wines with cider or pear wine was made a punishable offence. In the Swiss town of Murten, according to the decree from 1393, it was not permitted to add pear or apple juice to the wine; the threat of punishment amounted to five pounds. The book of statutes of the city of Trier written down in the 16<sup>th</sup> century included the ban on adulterating wine with pear wine, (quotation) “which very often happened and can still happen”. With regard to manipulating the colour of the wine different opinions have been handed down as some Alsatian examples indicate. Thus, the customs law of Schlettstadt from 1521 reads as follows that the import of berries, (quotation) “with which the wine is coloured, was explicitly intended. However, in 1560, their import to the towns of Oberehnheim and Rufach was not permitted on the grounds that they would be used for colouring the white wine. Here, an arranged action by the Alsatian towns obviously seems to have been established. This way, the tendency of deceiving the consumer was to be prevented.

#### Protection of life and health

During the course of the 14<sup>th</sup> and 15<sup>th</sup> centuries a careful handling of the practice in wine cellars can be observed and with this an increasing awareness of potential health hazards. Not least because the preserved wine books we know contain a multitude of recipes for wine preparation. Only in more recent studies it was possible to prove that many of the ingredients used in medieval cellars which at first seem rather strange did not at all fail their aim and quite a few of these cellar procedures could have been based on long-term experience. The improvement with milk and protein for example was an old method worthwhile applied in cellars which had been considered as safe for centuries and whose effects are indeed known and comprehensible. In the year 1422, for example, a wine decree from Frankfurt allowed the use of milk and clay for the house and peasant wine. Not permitted however was the serving of foreign wines which had been treated with mustard. The cooper responsible for preparing the wine were also only to use milk and/or clay. The wine serving statute in Nördlingen from the year 1442 banned the stirring of yeast whereas the additives used from time immemorial like salt, milk, water, clay and eggs were permitted after the finishing of the main fermentation.

Next to the accepted methods of the wine treatment there existed of course series of measures whose use had not been standardised for a long time, whose effects had been rated differently and measures which were subject to regulations connected with the newly developing quality ideas particularly since the 15<sup>th</sup> century. This way, in the year 1402, a committee of the council in Frankfurt put together an extensive list of additives which would be used within the wine preparation: among them clay, eggs, protein, sulphates, tartar, mustard, roasted salt, milk, brandy, almond milk, wheat flour, ashes made from dyer's woad, loam, egg or mussel shells, copper or zinc sulphates, ginger, rice, warm bread, juniper, pebbles, alum, sloe and mugwort.

Again and again, alum was used for preparing wine which intensified the colour, added freshness, clearness and a piquant taste to the wine and in addition intensified the colour of red wine. Until the discovery of the occurrences at Tolfa within the Papal States in the year 1462, large quantities of alum were imported as minerals from the Orient and were used in many ways as medical and economic purposes. Naturally, its effect during the wine preparation was assessed in different ways. Whereas the use of alum had been repeatedly recommended for the purification of wine in medieval technical treaties it was not always clear however if this kind of treatment was healthy. This is made clear with a much considered ruling by the court of Ingelheim dating from the 11<sup>th</sup> of December in 1400. According to this, a female wine farmer from Kaub had added alum to half a tun of wine belonging to her. When merchants came along and discovered the alum they did not want to purchase the wine. One of the men present, an official wine inspector reported the case, the wine farmer was arrested. In return, one of the jurors at the local court house turned to the court in Ingelheim which was to decide whether the women had forfeited her life or not. Perhaps it was suspected that the incident had been some case of poisoning. The ruling by the court proves that the question on health hazards had been an important criterion. The court decided to scrape the alum into a glass of wine. The defendant was sentenced to drinking the fluid. If it stayed without any effects the wine farmer was to remain without punishment, if however she poisoned herself, this would be her sentence. The women from Kaub obviously survived this "ordeal" without any damage because alum, as far as the wine has not been treated with sulphur, is in small quantities harmless. Even unhealthy substances as lead acetate or white lead were used to sweeten the wine as explained for example in the wine

book of Bitburg dating from the mid 14<sup>th</sup> century. Some times wine additives are not permitted according to municipal decrees as for example the wine decree in Ulm from 1499 which forbade the wine farmers from Ulm to add ashes made from dyer's woad, lime, mustard, bacon, pear and apple juice as well as white lead, mercury, touch-me-not, or vitriol to the wine.

During the 15<sup>th</sup> century, the references to the use of sulphur for the wine preparation increase. Some sources dating from that time particularly call its use an innovation. For example, the decree from Nürnberg from the 15<sup>th</sup> century or Conrad Celtis who regarded this method a temporary innovation. The job title of "Schwefeler" found in the income tax lists of Trier dating from the second half of the 14<sup>th</sup> century however leads one to assume that these methods were already a little older. On the one hand, the wine barrels were cleaned and disinfected by burning sulphur in them and on the other hand, the sulphur was added to the wine itself in order to stop fermentation and in order to save the wine some residual sugar. During the 15<sup>th</sup> century, the method of using sulphur was still differently judged and handled. Some municipal decrees as for example the one in Schlettstadt from the years 1410 and 1462 as well as the one in Nördlingen dating from 1468, forbade the use of sulphur. Not the least through the pursuit of the town of Nürnberg, a certain dosage of sulphur was declared legal in the second half of the 15<sup>th</sup> century; whereas a "Süßreserve" produced through using sulphur was strictly forbidden. The wine decree which had been issued in Rothenburg ob der Tauber in 1487 fell back upon the according standardisation, granted a single sulphurisation of the barrels with a lot of sulphur per tun and ordered the obligation to report any such treatment of barrels. A decree issued in Freiburg in 1498 confirmed the sulphurisation granted in 1487 and furthermore permitted half a lot of sulphur for the transport. Since the issuing of these wine decrees the sulphurisation of wines with controlled quantities, obviously not considered unhealthy, was basically permitted. With this, an important innovation concerning cellar techniques was legally sanctioned which created new possibilities of preservation particularly for the white wines in German speaking areas. A long phase of experiments had preceded in many wine cellars where experiences with unhealthy amounts of sulphur or sulphurisation had been made.

The efforts of securing wine qualities becomes increasingly comprehensible since the 15<sup>th</sup> century, the 15<sup>th</sup> century was marked as a “century of wine scandals within the *Reich*. In many places spectacular trials in connection with wine adulteration occurred. This seems to have been aimed at securing the trade with qualitatively pure wines and the resulting proceeds as well as being aimed at securing the protection of consumers. Increasingly municipal and finally increasingly sovereign authorities particularly opposed additives in the wine production which were considered as unhealthy; in Franconia and the Upper Rhine according regulations included already regional decrees. As shown already by some examples, the standardisation of legal standards with legal regulations against wine adulteration followed in Rothenburg ob der Tauber in 1487 and finally, in Freiburg, at the *Reich* assembly in 1498 which repeatedly were taken up again in regulations of the 16<sup>th</sup> century.

The consumer was not only to be protected against financial disadvantages but especially protected against health defects. Thus, it seems as if one consulted medical experts before passing municipal decrees which were to regulate the wine preparation. Contemporary dietetic thoughts cannot have been without any influence on the regulations of wine decrees were particularly the protection of pregnant women was mentioned repeatedly. Furthermore, the police regulations in the *Reich* of the 16<sup>th</sup> century make clear that the quantities of unhealthy additives was generally considered more an offence and was therefore also punished more severely than the pure reduction of quality.

The legal punishment of different wine adulterations during the late Middle Ages and the early modern times was very heterogeneous and included a large range of sanctions which could reach from purely arbitrary punishments over punishments of honour, prison sentences and imposed fines as well as life sentences and the death penalty.

Whereas the wine decree of Rothenburg in 1487 ordered in combination with a fine the destruction of all adulterated wines in the case of a wine adulteration offence, the police regulations from the 16<sup>th</sup> century provided for harder sanctions in the case of wine adulteration. The punishments provided for in the regulations put wine

adulteration already within the field of criminal law. Unfortunately, there is a lack of sources which allow an opinion on to which extend the intended health care and consumer protection mentioned in these standardised sources could actually be carried through and to which extend adulteration could be stopped. Perhaps numerous complaints from the 15<sup>th</sup> and 16<sup>th</sup> centuries can be interpreted to the effect that opportunities for carrying through standardised punishment against wine adulteration were rather few.