

特論 I

Activation of grape production for wines in Yamanashi Prefecture and expansion of Japanese wine industry

Hisayoshi KOGA, Kaori MARUYA,
Yoshinori IMAMURA, Rumi IDE,
Shiwei WANG, Ryosuke INOUE

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1. Background

1.1 Wine production and consumption in Japan

Wine production started in 1870's, just after the Meiji restoration in Japan. The new government encouraged the production of wine and opened grape farms all over Japan. However, Japanese lands were contaminated by phylloxera since 1884. Furthermore, due to the Japanese traditional eating habit, the wine wasn't familiar with Japanese consumers. Therefore, in the Japanese market, real wine was replaced by sweetened wine called "*kanmi-budoshu*". It was around 1970's that Japanese consumers were able to appreciate real wine because of the change of dietary pattern. For example, Tokyo Olympic Games of 1964 and Osaka international exhibition of 1970 might have an effect on the increase in consumption of real wine.

In these 25 years, the wine consumption in Japan has changed rapidly. Through the increase of consumption influenced by the red wine boom due to the French paradox in 1997 and 1998, the consumption of wine has reached the level of 2,500khl. Despite the consumption decreased once after finishing the red wine boom, then it has substantially increased in the past few years. The wine consumption in Japan in 2011 was about 2,900khl. Now, the wine is integrated in Japanese daily life, and the market will expand continuously.

However, in the respect of production of wine, it was very difficult to increase the production of grapes to offset such increasing wine consumption. The reasons of the difficulty were poor experience and poor technique of growing wine grapes under Japan's climate conditions. Therefore, a large part of supply has been provided by the import wine and the production of wine made of imported materials. The market share of import wine is around 66%. And the import of wine which provides both ordinary wine and quality wine has been increasing. The wine made of imported materials makes up around 24% of the total supply. It was continuously improved by large wineries, and it had a big effect on increasing wine consumption as the ordinary wine. The last 10% of the supply is the wine produced by Japanese grapes. This type of wine is called Japanese wine.

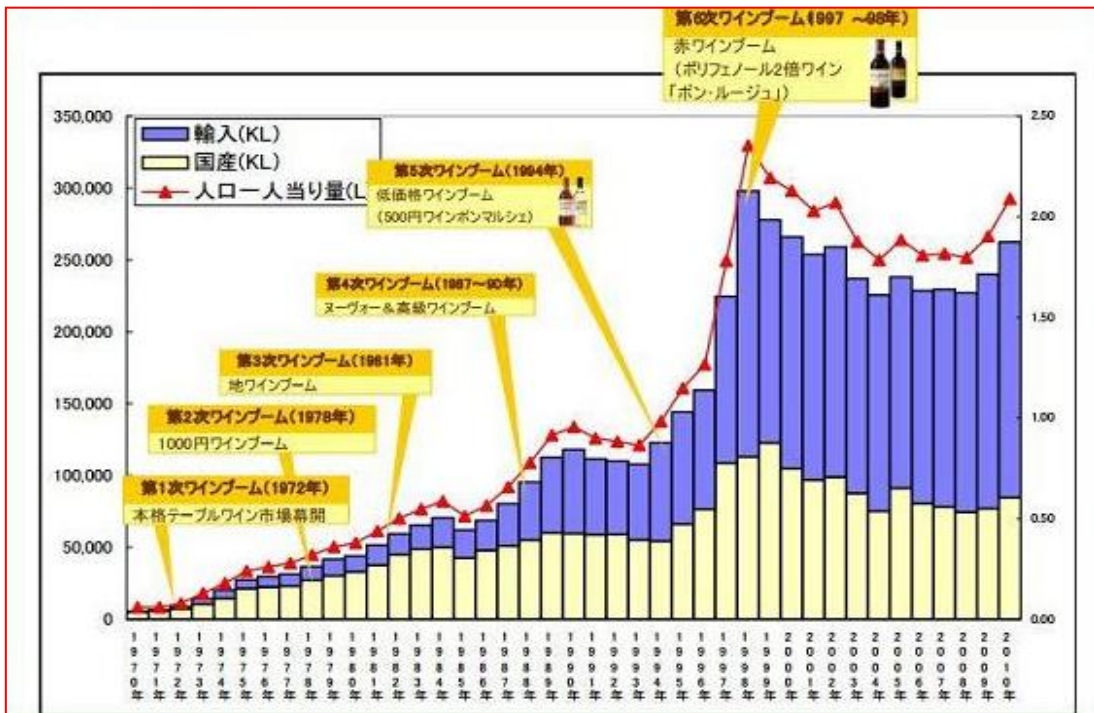


Figure 1 Transition of wine consumption in Japan

Source: Mercian web site

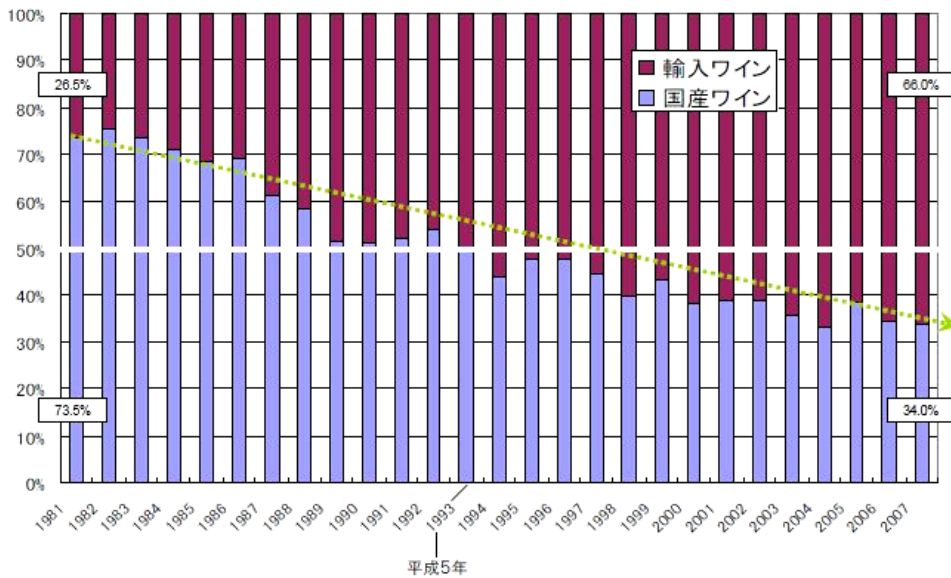


Figure 2 Ratio of consumption of domestic wine and imported wine

Source: National Tax Agency Statistical Survey

1.2 Characters and quality of Japanese wine

As the consumption of wine has been increasing for these 25 years, consumers have accumulated the knowledge about the taste and the culture of wine. As a result, instead of imported wine or blended wine made from imported juice, there has been an increasing interest in Japanese wine, which is high quality and represents the feature of grapes used in the production. In the meantime, the only way for Japanese wineries to survive in a global market was to produce high quality wine. For this reason, major winery companies started to experiment and research to grow grapes for European wine under Japanese climate and soil condition. Small wineries also started to grow grapes for wine, aiming at producing wine made from the grapes based on the production area. Gradually, it became well known that high quality wine requires high quality grapes, and thus, more and more wineries began to grow grapes for wine and decrease purchase from grape farmers.

These changes have dramatically contributed to the quality of wine made from domestic grapes. Since 2003, a contest called “Domestic wine contest” targeting the wine made from just domestic grapes has been held. This event has accelerated the competition between regions and also brought the increase in the quality of Japanese wine.

1.3 Major production area “Yamanashi” and “Koshu” wine

Yamanashi prefecture, which records the largest production of wine in 2008, is one of the major wine producing regions in Japan (Figure 3). Given that in Kanagawa prefecture, which stands second position in wine production, much of the wine is made from imported juice, it can be said that Yamanashi is the center of the wine production in terms of both wine and grapes. Yamanashi holds a grape species “Koshu”, which is peculiar to Japan and started to be grown thousand years ago. “Koshu wine” made from this species has a history of about hundred thirty years. It is said that it was not until Yamada Hironori and Takuma Norihisa applied the fermentation technique of *sake* to wine fermentation from “Koshu” in 1870 that wine fermentation in Japan started. Thus, Yamanashi has developed as a major traditional production area of both wine and grapes for eating raw.

In addition to that, recently it has become clear that Koshu specie is a hybrid with European species (*Vitis vinifera*), not an American species (*Vitis labrusca*)¹. In the environment of increasing interests in Japanese wine, this fact particularly has

¹ In Europe, *Vitis vinifera* and *Vitis labrusca* are grown separately. The former is treated as a species for fermentation and the later is treated as a species for eating raw.

attracted people’s attention to “Koshu wine” made from grapes that are specific in Japan. For instance, in the domestic wine contest it has established “Koshu” category. Moreover, in 2010 OIV² enrolled “Koshu” as a grape species. It means that “Koshu” has been recognized as a grape species for wine fermentation and that Japanese wineries have become able to export Koshu wine with a label “Koshu” to EU countries.

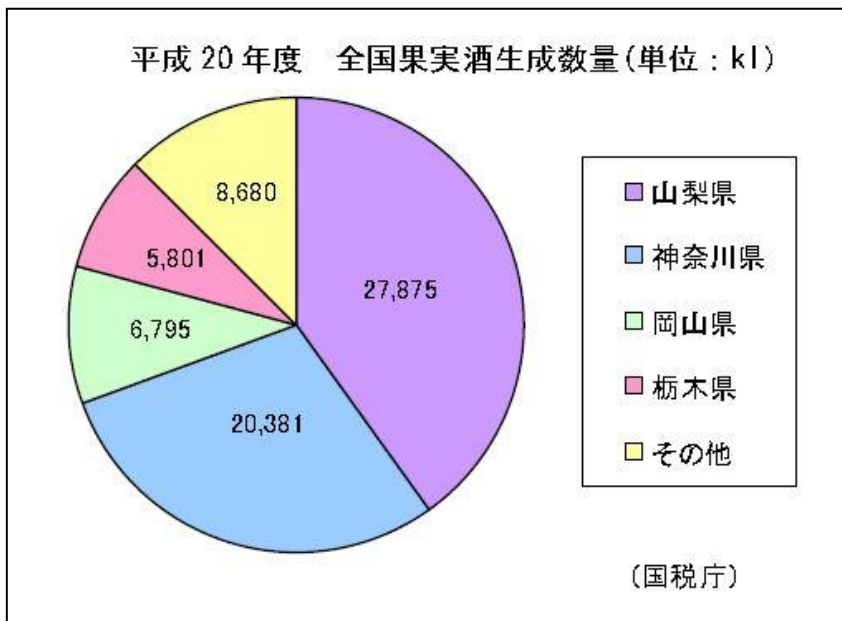


Figure 3 Production of wine by prefecture

Source: National Tax Agency Statistical Survey

1.4 Decrease in production of grapes for wine in Yamanashi

However, despite the fact that Japanese wine has become popular, since 1991 production area of Koshu grape has been decreasing in Yamanashi. The reason of this decrease is said that while wineries find the increase in demand of wine and try to produce more Koshu wine, they face the shortage of Koshu grapes³. The decrease in production can be found not only in Koshu but also other species.

On the other hand, looking at the grape production of each species in Yamanashi, one can find the increase in production areas for the species which are popular and demanded in the markets, such as Pione and Shine muscat. Figure 4 shows changes of the production of Pione and Koshu. In Nagano, Yamagata, and Hokkaido, there has

² OIV stands for Organisation Internationale de la Vigne et du Vin, which is a governmental institution in France that tackles problems related to grape and wine production.

³ Since there are no data about the amount of production of Koshu grapes and how much of them is for wine, it is based on interviews to wineries

been an increase in the production area of grapes for wine due to the recent increase in demand for Japanese wine. Figure 5 shows the transition of the amount of the wine production in Yamanashi and the other domestic areas, including wine made from imported juice. It can be seen that though wine produced in Yamanashi accounts for about a half in 1981, it became 33.8% in 2007. With respect to quantity, wine production in Yamanashi has not experienced a large increase in these thirty years, though some increases can be observed with wine booms.

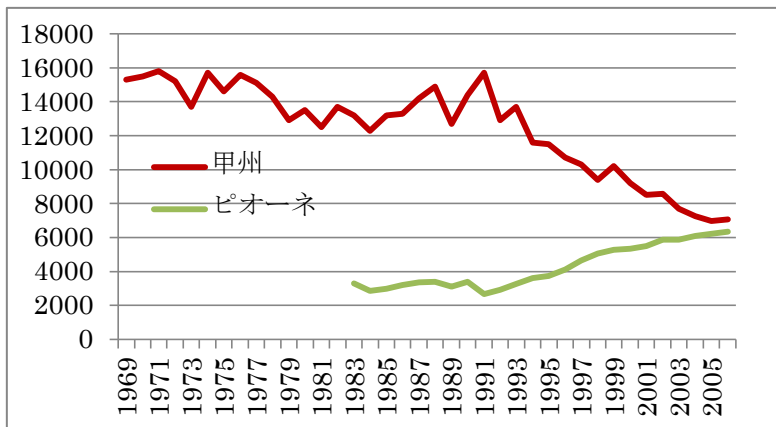


Figure 4 Transition of production of Pione and Koshu

Source: Ministry of Agriculture, Forestry and Fisheries “Statistics on Production and Shipment of Fruits and Nuts”

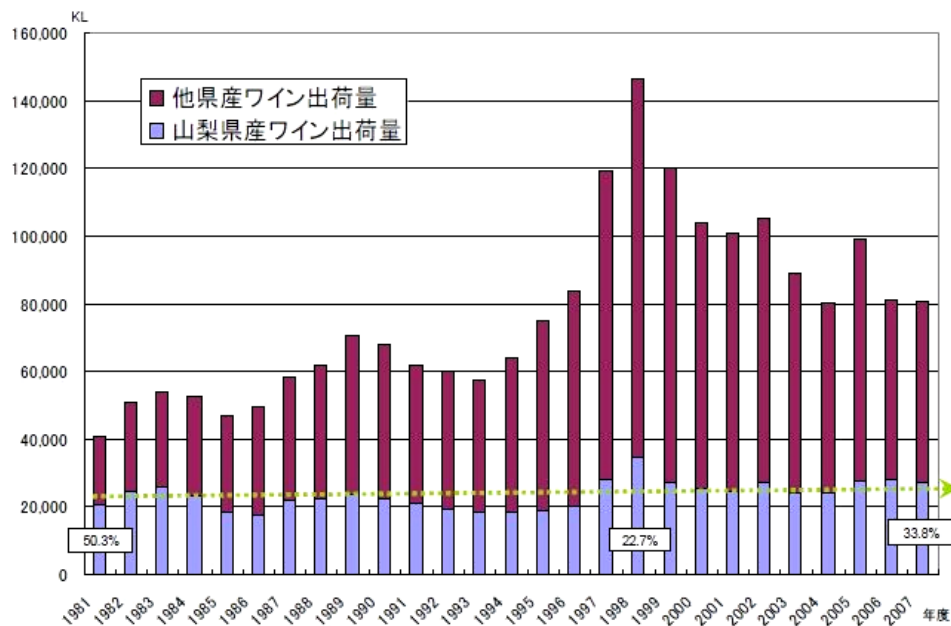


Figure 5 Amount of wine Production in Yamanashi and the other areas

Source: National Tax Agency Statistical Survey

2. Purpose of this research

Recent improvements in the quality of Japanese wine have brought the wine boom to Japan. Nevertheless, the grape production for wine has been declining in Yamanashi prefecture, which is the traditional and dominant producer of table and wine grapes in Japan. In this situation, we try to understand the structure and the problems in Yamanashi, and we are seeking for a strategy to achieve the three goals together: raising the wine grape production in Yamanashi, developing the wine production into the so-called 6th industry, and revitalizing the farming community as well as the regional economy.

In order to seek for a strategy, we interviewed with wineries and farmers in Yamanashi prefecture and surveyed their situation and their thought about wine grape production and Japanese wine production.

3. Interviews

3.1 Interview with wineries

3.1.1 Chateau Sakaori Winery @ Kofu(<http://www.sakaoriwine.com/>)

【Characteristics】

Chateau Sakaori Winery is located in Sakaori-cho, Yamanashi Prefecture. The name of this town, Sakaori-cho, could date from the oldest Japanese chronicle *Kojiki / Record of Ancient Matters*, in which it suggests that Sakaori is the most ancient place name in Yamanashi Prefecture. It is also well-known that the improvement of various grape cultivars is much advanced here, especially the cultivation of the grapes for wine-brewing is brought earliest in Japan in the early period of Meiji.

At the beginning of the establishment of the Chateau, it is aimed to mainly cover the imports and sales of wine and liquor from overseas outside Japan. Then in May, 1991, the present winery celebrated its opening in Sakaori-cho which has a reputation for its scenic beauty. According to the statistics in 2012, about 8400 cases of wine are produced by utilizing 87t of grapes. Meanwhile, it is rather easy to get access to the information on frontier brewing technologies from overseas. 50 a of farmlands, including the ones belonging to the winery, are also utilized to cultivate different species of grapes, such as Koshu, Muscat Bailey A, Chardonnay, Syrah, by which the delicate and elegant Japanese unique wine can be produced.

Besides, as the representative of the winery said on the day of the interview, although

the old Japanese saying, *the bigger ones can cover and replace the small one*, is convinced widely, in the field of the winery, he thinks, the big corporation is seemed not to concentrate more on higher quality than the small one. It also proves that the Chateau is confident in the improvement of the quality and taste of the wine.

The winery is established in 1991, also combined with tourist services, which attracted more tourists than Katsunuma-cho (especially during the period of bubble economy). The grapes *Uehara*, which the winery utilizes as raw materials, are developed by those who are called Sensei nearby Zenko Temple. Uehara grapes are as well transported in the whole nation. In 2012, the grapes for materials purchased are 87 tons, by processing which the winery produced 8400 cases of wine. If tracing the origin of the winery, the parent company specialized in importing wine from overseas outside Japan, established in 1922 (T11), which is one of historic companies which started to send workers for overseas assignment and employs workers from overseas with the development of free trade.

Recently, Japanese wine has been focused on in Japan since the boom of interests on Japanese food in the worldwide. Also, it is affected by other factors such as the significant improvement of brewing technology, more contributions from young brewing engineers, and the increasing of wineries due to the releasing for tourism policy.

【Existed Problems】

According to the statistics related to supplies of grapes, 53t of 87t are from the local JA (Japan Agricultural Cooperatives), the other 34t of 87t are from the farmlands which has signed a contract with the winery, such as Ikegawa's farmland. It seems a fact the supplies from farmlands in the contract are more of excellent credit record and higher quality than those from JA.

As well, with the development of the technologies of grape growing, Team Kisvine and I-Vines come into being in order to advance these technologies, including Ikegawa's farm. However, the majority of farms does not decide whether they prefer cultivating grapes for wine-brewing or grapes as fruit. Recently, it demonstrates that some farmers nearby Zenko Temple in Kofu-shi show great interests in grape-cultivating technologies, and yet it is still the fact that there are more concerns on the technologies on cultivating grapes as fruit.

3.1.2 Marufuji Rubaiyat Winery @Katsunuma (<http://www.rubaiyat.jp/>)

【Characteristics】

The Marufuji Company started with wine-brewing in 1882 (M15), and after acquiring the liquor manufacturing license 8 years later, the tradition of wine-brewing has lasted until now. The brand Rubaiyat is named by famous Japanese poet Hinatsu Kosuke in 1899 (M15).

Presently the total area of the farmlands belonging directly to Rubaiyat winery is 2.3 ha, and the annual production of wine is approximately 100kL, which is rather larger than other company related to Koshu grape. Except for these farmlands above, there exist 2ha of farmlands signing contract with Rubaiyat directly, and 1.5 ha of farmlands from relatives or friends to the company, which reveals to the sufficient supply sources for wine-brewing.

Actually, Rubaiyat did not start with the aim to produce delicate and delicious wine but originally the aim to make profits by satisfying popular daily taste towards wines in Japan. The aim was transferred into high-quality production just about 40-50 years ago, which continues to the present. Now not only does the company focus on the manufacture of wine with refined taste, but it also attaches great importance to cultivating and selling both wine-brewing grapes and fruit grapes.

【Existed Problems】

Currently, 1/3 of the grape supply is from the company's farmlands, while 1/2 is from the farmlands of relatives or friends to the company, and the other is wholly from JA cooperatives in local. It is an unavoidable fact that some farmlands are likely to stop the contract with the winery because of the situation of just short-term contracts with farmers, which could be seen as a potential risk on the sustainable supply for Koshu grapes.

Generally, In Yamanashi, the misunderstanding gap between winery and farmers are relatively so deep that the brewing production is affected negatively.

3.1.3 Grace Wine Company @ Katsunuma (<http://www.grace-wine.com/>)

【Characteristics】

Grace Wine Company is established in 1923, which covers the manufacture and sales of wine, liquor and soft drink, as well as imports of liquor from outside Japan. Aimed to be regarded as the most representative Koshu wine in Japan, Grace Wine Company is taking every challenge to step into a higher stage. Although the experiment conducted from 1990, to try on the Europe-style hedge cultivation for Koshu Grape, was once failed, the Misawa farm realize the dream to cultivate Koshu Grape by hedge in 2002 at the time of the farm's opening.

Besides, according to the statistics in 2013, the amount of Koshu Grapes takes up 164,118 kg among the total amount of 243,064 kg, which are supplied by JA and farmers signing contracts with the company.

Today, the solid belief held by the company is to concentrate on the tradition of Koshu Grapes and provide people at table with continuous joys and comforts..

【Existed Problems】

The cultivation of Koshu Grapes is being faced with the problem of aging as any other traditional industry in Japan. Thus, it is urgent to conduct a reform of consciousness towards both wine manufacture and farm cultivation. On the one hand, if signing contract with farmers directly, it seems difficult to create a sense of trust and affinity each other, on the contrary, which always results into a burden. On the other hand, it is also a sensible method to develop laborsaving technology and management, which is extremely possible to contribute in wine production in the future, for example, it is an excellent proof of progressing on laborsaving that more and more people show interest towards the Grace Cultivation Club, which is promoted by Grace Wine Company recently.

3.1.4 Ktsunuma Jozo @Katsunuma (<http://www.katsunuma-winery.com/>)

【land use】

As well as cultivating the Muscat Berry A and Koshu in his field, Mr. Aruga have a contract with farmers in other distant regions, Okayama Prefecture and Isehara of Kanagawa Prefecture. Production of wine of the last year is 3600 tons. He has launched a new wine brand.

【characteristic】

At the exhibition tournament in the world, Japanese Koshu wine produced by his company won the silver medal. But it is not possible for him to get awarded in Japan because his style is different from other Katsunuma's farmer, meanwhile the exhibition

regards his wine as a different way from Japan. He is aiming to produce wine by taking advantage of the different land from Europe. He believes that sandy location such as Isehara is suitable for wine making.

【problem】

It is the most serious problem that it lacks successor in this region. He is considering that it is impossible to overcome it in the situations of low efficiency and low profitability of grape cultivation. For this purpose, it is necessary to study the grape characteristics itself and how to grow grapes, which is certainly not easily realized. The current situation of grape cultivation depends on intuition or knowledge shaped in the long-term.

Koshu provides a wide range of taste, so a common image is not established in the world and Japan. He considers that, to be able to sell the world Koshu by creating common image recognition. Since it is necessary to make up how to brew from cultivation from scratch, it would take long to realize that best situation.

3.2 Interview with farmers

3.2.1 Mr. Hosaka (farmer and JA stuff) @Nirasaki

【land use】

Area of grape cultivation is 1.8ha and 40% of that area is used as cultivating wine grapes.

【characteristic】

Cooperatives control the region wholly, it is to stabilize the total yield. In addition, by distributing a good seedling, they enable the entire region farmer to cultivate good quality grapes.

For farmers who have good skills, agricultural cooperatives purchase grapes at a high price specially. The unit used for purchase is set with a base weight or a base area. Each 4 new entrants share the field of 10ha in this region. He also gave these new entrants the opportunity to learn the cultivation method while raising grapes, and he is also a farmer. He knows the point of making grape at the quality of the mean value or more. It is possible to make lower labor costs by seizing the key point, thus he never gives fertilizer to his land.

【problem】

Farmers in this region have worked with the big company such as Mercian and Suntory. Production of grapes has been repeatedly increased and decreased at the average interval of 10 years. There is also a time of red wine boom when the demand for red wine only goes up. It has not been so difficult for farmers to change the style of

cultivation with the trend until now. But as a result of the aging of the farmers, the number of farmers who would stop the cultivation of grapes has been increasing. So he believes that there are some important things other than increase the production when considered in the long term. One of those is the importance of controlling the amount. Each farmer has a different target of quality of the grapes, so his guidance would become difficult.

3.2.2 Mr. Ohno (farmer) @Katsunuma

【land use】

Eaten raw grapes are cultivated in the area of 1.2 ha, on the other hand, wine grapes are cultivated in the area of only 6a. The area of table grapes is covered over by the plastic roof such as house which prevent from rain. And kiwis is also cultivated because they do not need much care, in other words, they do not become ill easily.

【characteristic】

Mr. Ohno developed the main grapes eaten raw called "Shine Muscat", which is tetraploid varieties without seeds in the fruit. In Katsunuma, the price of grapes is determined by the difference of the land and the sugar content of grapes. So, he stuck in the sugar content of grapes. In addition, he stuck on how to extend the branch which is changed in the way of cultivation in particular shelf style. He seems to have changed the shipping method by the quality of the grapes. Good-quality grape is shipped to department stores and home delivery for family ordering. Bad-quality are shipped to the agricultural cooperatives. The grapes that cannot be distinguished as good ones are sold at a lower price and processed into juice or ingredients of jelly.

When you buy the grapes for wine, you should think about the size of grapes. The smaller size grain is better quality the wine has, because the amount of mineral is not changed by the size of grapes. Water makes fruits larger. All shipments of wine grapes are for Grace Wine in contract farming.

【problem】

It is not necessary for Mr. Ohno to concern about the delivery of his grapes, since he entrusts Grace Wine Company with all the process of grape procurement, however, the cost of shipping is a big problem. Because he has brought up many kinds of grapes for eating and wine-brewing, the time for each harvesting is different. So it's greatly difficult to determine when to hire a part time people. In particular, if you want to ship to agricultural cooperatives, it's more difficult because you need to change the harvest time in accordance with the agricultural cooperatives even if you ship grapes of the same breed.

The main problem is that it lacks the successors. Although some of young people with hopes and interests may come here, it is possible that they will leave because there are few rich farmers who can afford young people for several years. It's even so difficult to act as good farmers themselves because they have nothing, the land, machine, and knowledge. The region of Katsunuma has also same difficult situation.

3.2.3. Mr.Ishii (farmer)

【land use】

Mr.Ishii is a full-time farmer, who only grows grapes for selling. At present, he cultivates 95 acres of farmland, and about half of the land is used for growing grapes for table grapes. The other half is for grapes for wine-brewing.

Usually, he and his wife work in the field, but sometimes the workloads are so high that he hires some workers during the hard work period like harvesting. He started growing only table grapes on 30 acres 12 years ago as a side job. And then, he became a full-time farmer two years ago, and he has expanded the area of his farmland. Meanwhile, locally it is a fact that the number of people who give up farming has been increasing, so he decided to rent their land and turn into growing grapes. This year, Mr. Ishii also rented 18 acres and planted *Koshu* grapes there.

【grape dealings, problems】

Formally, Mr. Ishii ships wine grapes to wineries through the intermediation of the agricultural cooperative in Katsunuma area, but in fact, almost all of his grapes for wine have been directly purchased by *Grace winery*. He thinks that farmers need to try growing better quality wine grapes as the same level as table grapes, to sell higher price to the winery. But it is the fact that few farmers try to do so, because there were some troubles between farmers and wineries on dealings and their relationship was destructed before. He started growing wine grapes rather recently after the troubles, so he grows wine grapes positively.

4 Proposals

According to the investigations conducted in Yamanashi Prefecture, it can be concluded that the culture of Japanese wine, especially rooted in Yamanashi, can spread to the whole Japan and as far as the whole world. Generally, 3 suggestions are promoted as below.

1. Market expansion based on constructing a relationship with consumers.
2. Establishment of research centers on developing technologies for wine-brewing

grape cultivation.

3. Exploration of new modeling suitable for young farmers and brewing engineers.

On the 1st suggestion, it means the relationship between wineries and consumers. First, as the subject of present situation. It demonstrates that the cognition towards Japanese wine is not enough compared with those from overseas currently. Essentially, the price of wine made of grapes produced in Japan is relatively higher than those made of imported grape juice, thus it is difficult to dominate in the price competition, coinciding with the fact that there exist a quantity of high-quality imported wine at an inexpensive price. Against this background, it is necessary to create some repeater guests who tend to pay attention to consume higher quality wine repeatedly. Additionally, it is indispensable to attract more supporters who can resonate in the story that the local style of wine is able to be produced even at high cost, towards developing Japanese wine. Therefore, it can be concluded as 3 specific solutions to increase contacts with the investors who are likely to invest Japanese wine and attach great attention to food and wine quality.

a. To stimulate on wine tourism.

b. To involve more amateurs who are likely to become evangelists, especially those related to media.

c. To promote the cognition of non-Japanese towards Japanese wine.

As well, with the situation of the investigated wineries that the amount of tourists is increasing annually, it seems possible to develop cultivation club or tourism. It is fact that numerous people visit Yamanashi especially in the season of grape picking because it is near from Tokyo. Particularly, through attraction towards interests of wine grape cultivation, it tends to be that people can also visit to grape farms outside the seasons for grape harvest or young wine production, which is a merit that table grape cultivation cannot result in. We believe that the Koshu wine is likely to be sold well even at some department stores in Tokyo, due to the delicious taste.

In the addition, it is also possible to attract more interests on Japanese wine, which is being a widespread hotspot. Several newspapers and magazines have been continually reporting Japanese wine as special features; meanwhile Yamanashi Prefecture has also started to advertise with the catchphrase “Akeyo, Koshu! (Prosper, Koshu!)” since 2012. There still exist some problems to raise the name recognition, which is critical for the development of Koshu wine. On the one hand, there are various wineries producing Koshu wine, which causes some deviations so that it becomes difficult to ensure the consistency of the products. On the other hand, the indication also tends to confuse

consumers, which cannot be detailed here.

Furthermore, there exists rather promising possibility to promote the cognition of Japanese wine overseas. In 2013, Japanese cuisine was officially inscribed on the World Intangible Cultural Heritage by UNESCO, which is being spread worldwide currently. Thus, it is necessary to formulate new strategies coordinated with the promotion of Koshu wine which fit in well with Japanese cuisine. During the interview in the wineries there, it is said that it is planned to get more European people to drink Koshu wine.

In this method, it is thought that the augmentation of cognition and investment towards Japanese wine turns to be an engine which can ensure the long-term growth that Koshu wine as well as other Japanese wine grow up into world class wine represented by technologies of high quality.

On the 2nd suggestion, it is relevant to the cultivation of grape wine which is used as raw materials in Japanese wine production. The present situation demonstrates that the technology which matches the climate and edaphic conditions in Japan has not yet been developed. As is said in the interview, because Yamanashi is a traditional production base for table grapes, farmers have been showing more interests on the research about cultivation of table grapes with discretion, coinciding with the great self-confidence on it. On the one hand, there seems to be a common misconception that traditional Koshu grapes in Yamanashi used to be cultivated mainly as table grapes and only those rest ones which partially decay would be utilized to produce wine. The changes of times, written in the background, results in that it is expected to improve excellent Koshu grapes as wine grapes. However, the majority of farmers do not show a positive attitude towards taking time to cultivate wine grapes.

Related to the cultivation, there exists much unknown on how to cultivate Koshu grapes, proven to be able to produce high quality wine, and European grapes in Japan, that is the present situation. Although bringing in some technologies learnt from Europe, it suggests they cannot all succeed under the wholly different conditions of climate and adapho-climatic conditions in Japan. Thus, it cannot become widespread to establish farmlands to cultivate grapes, which results in that various wineries and a part of farmers limitedly interested are aiming to develop the cultivation technology suitable to the conditions individually. But some successful cases are just individual ones which cannot to popularize to others.

The detailed solution to solve the problem is to unify the current dispersed experimental

farmlands and research centers, and budget for the research in reasonable scale. At present, although some technologies are being processed for wine grapes in the Yamanashi wine center and other experimental farmlands, more attention is paid to cultivate other fruits such as peach and table grapes, at the same time the budget is relatively small. If combining the existed experience on grape cultivation in the local with its common parts which can at least be certified by scientific methods, more technologies seems to be able to be improved there. Additional, it also accelerates the promotion of quality in this whole area, which sustains the production and management in the future.

On the 3rd suggestion, about the relationships between farmers and wineries, there certainly exists the problem that it lacks successors to inherit the grape cultivation skills with the trend of aging in the local. Which also becomes the main agricultural subjects on both wine grapes and table ones. The difference between table grapes and table grapes is how the wineries and farmers deal with them. Although there are advantages to reduce labor hours greatly for cultivate as raw material, the disadvantages are still obvious, such as low sales price, cultivated area difficult to be increased and obscure profits.

There were still some conflicts on the sales price of grapes between farmers and wineries in the past, despite of the longest history of grape cultivation in Japan. The farmers remain to feel that the wineries are unconvincing due to the history that wineries once violated these farmers. Therefore, it lacks the motivation to strengthen the wine grape cultivation coinciding with the distrust of wineries. As a consequence, more people have a negative opinion on wine grape cultivation that it takes less time and labor to cultivate Koshu than other grapes so they choose Koshu, rather than the positive opinions that they intend to improve better quality of wine grapes. This situation can explain why the yield of wine grapes in Yamanashi is decreasing when the demands for Japanese wine are increasing.

Initially, wineries also tend to build up friendly cooperative relationships with farmers after realizing the importance of wine grape cultivation from the past failures. But from the 1st and 2nd suggestions, because the markets of Japanese wine will continue to expand while cultivation of better quality grape seems unable, the situation will turn to be so difficult that a sales price of grapes goes up with the increasing price of Japanese wine. Thus, it cannot conclude that it is suitable to get all the farmers to cultivate wine grape simply.

Besides, it is not so profitable for young farmers to cultivate wine-brewing grapes, thus more new employees prefer to resign increasingly. Additionally, the other side of low workloads for grape cultivation is that low price makes low sensitivity to increase grape yield and promote young farmers' motivation, which are all demerits for wine industrial development in the local.

In order to solve these problems, it is better to combine young farmers who are willing to make wine with grapes they cultivate, with the winery which values high quality of wines as a team work. It is necessary to scale up the yield of wine-brewing grape for high-quality wine production, the methods of which are as below,

- a. To boost the price of wine-brewing grapes to a proper degree.
- b. To attract reliable purchasers
- c. To make farmers willing to sell the grapes they cultivated for wine production.

As for those of old ages, it is of inconvenience to change their opinions towards point c above, but it is still possible to involve more young people to cultivate high-quality grapes for brewing with ignoring the situation of low profit. Especially, it seems easier to increase the willingness for young farmers to ensure their income by increasing channels of distribution if they feel difficult on grape sales.

There is a good example to prove the solution to build new models suitable for young grape farmers. Team Kisivin is founded by Mr. Ikegawa Jin, who has an experience of grape cultivation over 30 years, cooperated with other members from graduate schools and other farms. The name of Kisivin originates from their belief, the grapes you want to kiss can be made into wine of high quality. Ikegawa once said that it is indispensable to enhance the strength of Koshu wine to attract grape farmers' interests on wine brewing because only top grapes can be produced into top wines. (Sourced from Yomiuri news http://www.yomiuri.co.jp/e-japan/yamanashi/feature/kofu1283432963437_02/news/20100905-OYT8T00651.htm)

It seems that the taste of Koshu does not exist, so it is essential to call on more customers gradually, who can develop an affinity with the story that Koshu wine is made with Koshu grapes. Meanwhile, it is expected to improve the collaboration between grape farmers and wineries in Yamanashi, to concentrate on brewing wine of high quality.