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Masters of Agricultural Art in contemporary Japan

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1. Calling on masters of the Agricultural Art

1) Two Different Type of Meijin - "Meijin [名人: a true master]" and "Meijin [迷人: a lost master; a fake master]"

In the recent few years, I have been calling on farmers all over Japan who are called "masters" with my friends who are also farmers.

In the beginning of field survey, I was only surprised at such a story as seeds of watermelon are stuck into its peel, but I became used to hear such stories, and now grew to get the feel of an art of listening comprehension while I have heard stories from a person many times and from many persons. In these days, I have become to be able to understand bit by bit the way of growing crops and the mental attitudes against agriculture that are common among agricultural masters.

What every master says as an art of cultivation is "*nae-hansaku, hachibu-saku* [苗半作、八分作: raising of seedling is eighty percent of cultivation]." They say, "The raising of seedling which is done during the period between sowing and emergence of cotyledon will affect the whole life of the crop." If it would be compared with human beings, it could be "*mitsugo-no-tamashii, hyaku-made* [三つ子の魂、百まで: the soul of a three-years-old boy will last up to hundred years old; A leopard cannot change his spots]." "A heart to bring up persons and a heart to bring up crops are the same."

However, a "fake master" is "apt to judge by an appearance". He is possessed by a hallucination to "bigness always pays". He gives water and fertilizer plentifully and "indulges the crops". It looks as if a baby is given health drinks under the pretext of "nutrient balance". It has become "the same as the current way of bringing up children, which is overprotection."

There was a master who expressed well the point for raising of seedling as "*shimetsukuri* [しめ作り: throttling cultivation]". He said "Seedlings would grow accepting the circumstance as a matter of course if seedlings are grown up under such a circumstance that they are made to fast and bear in a relaxed manner. It is important to draw out the power to live, which seedlings originally have, and to enhance sensitivity of seedlings "

However, human beings cannot bear easily. We would indulge crops in spite of ourselves.

Even if a person himself endures it, but a member of his family begins worrying, and it happens very often that the member irrigates during midnight, saying "What shall we do if we fail?"

Every master says unanimously "marital gratification and good family relations" is a secret to succeed in agriculture. If an opinion of the husband and the wife is different in case of bringing up children, not only children but also seedlings would get lost.

The matter is whether the belief of the husband who is the central pillar of a family is firm or not. And it is important whether members of the family who should support the pillar behind his back can cooperate with him or not. After all, way of agriculture of a farm family seems to be decided by the feeling of the wife.

However, now it is "the era that everybody wants to be conspicuous and to come to the front under the pretext of respect for individuality". The idea such as "unobtrusively" or "behind the scenes" is disappearing. Coming to the front is the world of the greed. And the ultimate greed is "money". Eyes of a man will be dazzled by money and he will be degenerated in a "fake master".

"Going with ambition or going with innocent desire!" True masters say outspokenly. "If it is the thing which is made by exerting the best, the price follows it later." "When there are spiritlessness and deception, it begins and ends in haggling over."

When the true masters say like above, we might have to give up with saying that masters are different after all. However, what if we change a viewpoint to crops-oriented and nature-oriented from self-oriented? The convenience of the crops or nature instead of human is the first. "The law of nature." This seems to be the secret of true masters. In farming textbooks of Edo period, it is called as "*tentō* [天道: the way of heaven; the deity of the sun; the sun; the cosmos]."

2) Why watermelons become "*Chapatsu* [茶髪: orange hair]."

Mr. Ē'etsu Kadowaki of Murayama city, Yamagata prefecture, is a master nice to the second in Japan in cultivating watermelons. He has been told, "Try to produce watermelons whose seeds stick in their peel" by Mr. Hiroshi Ito who is a watermelon master good at No.1 in Japan. It is such a watermelon that its sweetness spreads very close to the peel. Mr. Kadowaki said that he visited Mr. Ito for many years and learned the art. According to him, the rest is only a few millimeters. The following is a story told by Mr. Kadowaki.

The stomach and intestines of human beings are weakened by gluttony, and treatments for cancer and/or adult diseases are over-prescription of medications, and the number of patients does not decrease at all. Crops that farmers are producing are similar. Farmers

are over-dosing fertilizers under the pretext of preparation of soil and then injure the root of crops, and as a result farmers mourn over the frequent occurrence of physiological disorder and/or diseases.

We can easily understand if we replace the growth of plants with that of human beings. Firstly, when plants are given too much fertilizer, fruits will not be born even if flowers bloom. The female flowers, which will not bear fruits, bloom boldly, and male flowers will be weakened. The female flowers, which will bear fruits, bloom bashfully, and maturity of male flowers goes and pollen increases. We can understand strength of the root by the shape of leaves and by such an indicator as whether leaves are standing or lying and which root, i.e., taproot or fibrous root, is dominative.

When we compare plants to human beings, fibrous root and taproot can be regarded as the small intestine and the large intestine. The former is the root through which nutrient is taken up and the latter is the root through which water is absorbed. This taproot seems to be less in case of the crops which are modified by human being for easier cultivation. It can be said that the Japanese crops are in critical situation.

It looks as if taproot is cut by voices of adults (over-fertilization), and fibrous root, which is spread newly on taproot, is damaged by voices pursuant only to a manual (fertilization which does not consider the convenience of the crops). As a result, the crops (*chapatsu* youngsters), which (who) have lost their convictions on living straightforwardly, will be produced. When content of nitric acid in a plant becomes high, chlorosis of the leaves (*chapatsu*) takes place. They are just like refusing to go to school. They would snap due to stress.

For example, watermelons tend to suffer from anthracnose by which leaves turn into dark brown, if chemical fertilizers are overdosed and the temperature is kept high during the period of raising of seedlings. When seedlings are grown up in such an environment, firm taproot would not be formed, and it would become weak due to high temperature in summer and get impossible to absorb nutrient. At the end, the plants suffer from fertilizer burning and then become "*chapatsu* (orange hair)".

It is the same for human beings. If a youngster is raised in an overprotective environment, he/she will not thrive afterward. In my house, we are accepting children who are feeling difficulties in interpersonal relations and/or not attending school, but they are obedient children if trustful relations can be built up and then we are getting through to each other. In this case also, the problem is with the parents. There are less conversation between the husband and wife, and in most of the cases the demands of the parents on the child are separate. Under such circumstances, firm taproot (convictions) cannot be grown up. For both crops and human beings, raising/nursing is

important.

For plants, everything hinges on raising of seedling, as it is said "*nae-hansaku, hachibu-saku* [苗半作、八分作: Raising of seedling is eighty percent of cultivation]", while for human beings it is said "*mitsugo-no-tamashii, hyaku-made* [三つ子の魂、百まで: The soul of a 3-year-old boy will last up to 100 years old; A leopard cannot change his spots]". If we will bring up children's dreamful individuality (taproot) in early childhood, he/she (plant) can develop aesthetic personality and attain greatness. If strong root (taproot with much hairy root) is established, plants can bear even abnormal weather and will not suffer from diseases, and then can grow up into the healthy one. Human beings who eat such plants would become healthy, too, wouldn't they? He {i.e., Mr. Kadowaki} always tries to respect the personality of a man (a seed of crop) which he (it) has originally, and bring him (it) up in natural way.

The above-mentioned is what I have compiled from the stories heard from Mr. Kadowaki all the time. I have been often made to think over the state of my family and my own way of life, while hearing. The following is what he has been emphasizing recently when we have been making *Kandameshi* tours together.

The reason why we have to bring up firm taproot during the period of raising of seedlings is to enhance the ability of plants to catch the signal of the earth, which Mr. Yokio Sakai suggests. If we indulge plant, it would not be able to catch the signal of the earth and thus it would wither when it encounters abnormal weather. According to Mr. Kadowaki, *Kandameshi* is also related to this signal of the earth, and he is trying to put seeds of watermelon in snow and let it catch the signal of the earth.

In case of human beings, intestines correspond to taproot of plants which catch the signal of the earth. Human intestines have weakened like the taproot. It is an aspect of the current Japanese people.

And there is another point. Mr. Kadowaki is trying non-tilled cropping of rice in recent years. It is not actually easy to draw out the stock of his rice from the paddy field. Rice which he has sent me is so strong that I have felt tired while chewing. From the experience of this non-tilled cropping, Mr. Kadowaki describes the following perspectives.

Under the conventional agriculture, farmers have tended to put a lot of fertilizer and/or pesticides in paddy fields and to plow deeply. When plants suffer from a disease, farmers have tended to medicate the plants immediately with thinking that the disease is due to germs. They are thinking any type of agriculture is fine if organic manure is used. The soil of paddy fields will become aggregate structure soil, which has good vertical percolation, if the fields will be kept untilled for several years. Farmers are not

aware of the matter that the root, which is the most important, is damaged.

He wonders if the way of agriculture by the recent time, which is depending upon deep tillage and heavy fertilization, has still followed the way of the time of food difficulty that was aiming at increase in production and high yield but facing shortage of agricultural materials. When not fertilized much, even only a little fertilizer surely worked well. However, much fertilizer is being still applied, though now it is the era that the fields have been heavily fertilized. If it is organic manure, it is good anyway. It is a human-oriented "reckless" agriculture. Agriculture in the future would turn into crops-oriented or nature-oriented agriculture. It would move toward the direction of no-fertilizer, no-pesticide and non-tilled cropping.

I became to think, while hearing stories from Mr. Kadowaki, that here would be the rudiments of the next agrarian system which can be called as cosmic agrarian system. A lot of earnest farmers gather around Mr. Kadowaki, who is accommodating, frank and speaks straightforwardly. It is wonderful if a farmers' group such as "society of agricultural artist" would be established and "the heart of agricultural art" is widely disseminated to the world.

3) Agriculture plows a heart

While visiting various farmers, who are good or bad at agriculture, in an area, I have been able to understand that "crops grow up according to the character of the person". For example, I wonder why they are so different in appearance, though they are the same green peppers. A farmer said "There are various characters/personalities such as the character of soil, character of weather, character of crop and the personality of a person. It is the best if each character/personality just corresponds with the others". It can be said after all, "agriculture is the man's way of life itself." The crops are the person's and the family's works. Even the paddy fields itself can be recognized as the ancestral works of the family.

When tampered by hands of a person who is going to "plot", the works will be contorted. We have fallen into "the illusion that human beings can manage everything", and "the more tampered, the more trees will be on the rampage." "Though human beings tell lies, plants never do. If we cut corners, it will be disclosed immediately." We would be trapped in a vicious circle of artificiality that "it cannot but become artificial because of trying to save labor forcibly."

And another archenemy is "greed". "If greed dominates, it is bad." "Greed runs faster than us." "A person who does not have belief will try to assert himself more than others."

What is the knack of agriculture? Everybody says that it is easy. It is to "trust crops with its growth", "draw out power of crops", "observe the complexion of crops, and take the next action", "adjust men to crops", "work crops-oriented rather than self-oriented" and "if crops get closer to nature, we can save labor" as well as "if time is taken and effort is made, crops will react", while we need to cease thinking about conventional agriculture under which fertilizers and various materials are being used.

"Crops will catch a disease because there is stress, not because there are disease-causing germs". As "crops suffer from diseases when the flow in the body is stagnant", if we will get out from "a misconception of nutrient balance" and "remove the stress" from crops, then the way of cultivation will "move toward non-fertilization and non-tillage as a natural consequence". In short, we have to change fundamentally our point of view on agriculture.

However, it is not easy to get out from our own habit. "Preconception, common sense and past experiences will disturb". And "A farmer does not need to bear the blame" even when he fails in cultivation. It is not easy to have a supple mind such as "it is natural to fail", "be unarmored and be open", "nature is always different, farmers are first graders every year".

"What to do with the invisible parts is what is agriculture. Therefore sensitivity is important." We should "see the invisible parts rather than seeing only the visible parts", "change our point of view from outside appearance to the internal flow" and "bring up crops by seeing its entirety".

It would seem to mean not only that we should see the underground parts rather than parts appeared over ground, but also that we should see the movement inside of plants in addition to the surface appearance and see past and future in addition to the present. The process through which such invisible parts become visible might be able to be said nourishing, fostering, raising or bringing up.

In such way, farmers would be inspired with the pleasure and joy of agriculture. "A farmer has to perform a number of different tasks from carpenter works to fiddling with machines and farming itself. It is just like a hundred occupations. Agriculture is what human wisdom integrated into." "Agriculture is a occupation which can give impression", and "crops/plants also are artistic works." There are the persons who can confidently say, "The richness is only in the wisdom which is born from agriculture."

They say without any hesitation, "It is better to think simply rather than think difficultly". Because "Nature tells human beings while changing, doesn't it? We can understand if we become serious." "Learn from a law of nature." "Wild plants are living

by themselves." "All living things are based on a relationship of mutual trust." "Crops are pleased with what I am doing." "Prune the branches of fruit trees while saying that I am sorry."

It can be concluded that "agriculture is the same as bringing up child after all, and it is love" because of "conveying warmth of the heart to hands, and then to the crops."

"If there is no dream, it is not agriculture." "It is important to be composed and be in no hurry." Though "marital gratification is a secret to succeed in agriculture", actually "those who is obtrusive" or "those who take only short views" has increased. As a result, there are many people who quit agriculture within few years even if they succeed in agriculture temporarily.

Foolish people who seek models only in Europe or America, which is paid attention to only in the phenomenon like economic rationality, efficiency and quantity of chemical fertilizer/pesticide, smashed Japanese agriculture.

A lot of farmers have also been self-lost. However, there were the researchers already in 1970's who said, "agriculture is agriculture" (Shirō Morita) "agriculture is art" (Heiji Fujii). How forgetful we are!

There was a farmer who clearly said to me that "A farmer is prayer" and "Agriculture plows a heart". Such a way of life is called as "*tentō* [天道: the way of heaven; the deity of the sun; the sun; the cosmos]" in farming textbooks of Edo period.

2. Learn from 20 Years' Experience of Brand tomatoes

1) *Rōnō* [老農: experienced farmer; aged farmer; skilled farmer] of Present-day

In this section, I would like to introduce stories of farmers of the Nara basin, with whom I have been kept company for many years. Many of them are "braggarts" and have confidence. If I say half-baked opinion, they make a cutting remark like "it can not be accepted in actual site." A person like me would just be despised if it were old times.

Because there are many braggarts in the Nara basin, this area was not established as large-scale agricultural production district and the joint shipment also did not progress since old days in this area. Even in case of watermelon, strawberry and tomato, the farmers in this area always take the initiative all over the country, but the market are taken over immediately by the other prefectures because farmers in the Nara basin do not unite.

However, that may be what was good. Because there is an area where acted on the instruction of government and became large-scale production district, but has been

collapsed after 10 or 20 years later. Nobody compensated but only the debt remained. Farmers in Nara are obstinate. It is useless even if someone try to tempt them by optimistic words. They are not self-lost. They already think about the next move. Decisions are on farmers themselves and village community.

My relationship with Mr. Kaneyoshi Horiuchi (born in 1931) of Nakajyō, Yamato-kōriyama city, is since January, 1985. Start of the relationship was that I have begun to investigate the history of the area as a request from Mr. Horiuchi, who was involved in a citizens' movement at that time. More than 15 years have already passed since that time. It is long association. We have started "Yamato Nōdankai [やまと農談会; Yamato Agricultural Roundtable]" once a month since April, 1993 in order to discuss about the real intention about the agricultural problems. Even though the group is small, we could continue it, while I have been being said "Professor, you are a hasty person. You have to be more patient when you keep company with farmers." In addition, we are having lively discussions on agriculture with drinking beers after the study meeting using the local archives as study materials, which is held once a month at the Harumichi community center. Feeling Mr. Horiuchi, who is now more than 70 years old but looks still young, like a friend, I pick an argument with him. He is a really "teacher" for me. He is constantly on the move with the care of his village and area, citizens' movement, and as an organizer of producers of Harumichi brand tomatoes. Of course, he can move only because of his wife's support behind his back. In the Nara basin, there was a famous *Rōnō*, Naozō Nakamura in the first half of Meiji era, but it can be said Mr. Horiuchi is a "*Rōnō*" of present-day. I just appreciate the precious relationship.

I would like to render down here Mr. Horiuchi's memoirs of his 20 years' agriculture by using mainly a pamphlet issued in a meeting celebrating the 20th anniversary of Harumichi brand tomatoes, held in May, 2000.

2) An irremeable path

When I (Mr. Horiuchi) have entered into business relations with the consumers' cooperative society 20 years ago, young labor forces were leaving the village one after another, and it was the time of the beginning of 3-chan agriculture, which is the form of agriculture managed only by Jī-chan [ジイちゃん: grandfather], Bā-chan [バアちゃん: grandmother] and Kā-chan [カアちゃん: mother]. On the other hand, the establishment of large-scale districts for a specific agricultural product was promoted in order to meet the demands by mass retailers such like superstores and others, and only the quantity of shipment to the wholesale market was the matter.

Under such situation, I was feeling uneasiness about the future, which would not be

bright if we remained the same. While feeling like this, what the Managing Director of Nara Citizen Cooperative Society said in a sectional meeting of youth and manhood of Harumichi Agricultural Cooperative came as a refreshing surprise. The director said that consumers are demanding "safe and tasty agricultural products". I have been surprised because I was only keeping in mind wholesale market at that time.

Immediately, I along with the other two farmers decided to begin "*sanchoku* [産直: a system under which agricultural products are directly sent to consumers from the production area/farmers]" on a trial basis by using one portion of our green houses. However, from a slip-up of talks with the shipment cooperative to which we belonged, we had had to accept the "gross quantity dealing" instead of small quantity dealing with the consumers' cooperative society. Since it became impossible for us to return back to the original shipment cooperative, I must have moved ahead. The planted area was 35 a., and the planted variety was "Kyokukō [旭光: morning sun light]". I feel that my colleagues and myself could continue the tomato cultivation for 20 years, as there were cooperation and effort of the executive and general members of consumers' cooperative society at that time.

3) Effort to produce safe and tasty tomato

At that time, the price of tomatoes was based on standards such as size, shape, color, glossiness and others. In order to minimize the damage during transportation, it was common practice to harvest tomatoes while they are still green. Nobody was thinking about the taste of tomatoes.

When I visited Mr. Kazuo Ando, who is a scientific officer of Yamato-kōriyama extension center of Nara prefectural government, Mr. Ando extended his helping hand to us empathically. After this, we had begun to study about cultivation of safe and tasty tomatoes. Visiting the agricultural experimental station at Akashi of Hyogo prefecture, we had been taught tips for making tomatoes tasty, which are to reduce the soil moisture as much as possible and put the minimum fertilizer only when tomatoes require. Then we have been trying to produce tasty tomatoes, with which sweetness and sourness harmonized, by reducing amount of supply of water, making effort to prepare soil using good quality of manure, and replacing chemical fertilizer with organic manure. Since 1990, we have replaced the variety with "Momo-Taro [桃太郎: Momotaro is the name of a very popular variety of tomato, whereas momo means peach and Taro is a representative of boy's names.]" in order to meet the market demand.

Now, "full-ripened tomato", which is the tomatoes ripened on the branch, became a pronoun of Harumichi brand tomatoes, but there were difficulties at the beginning. The

reason is that the fruit cracking often happened. Due to this problem, to throw fruits became more than to harvest, and the fields became so crimson and stinking that it was difficult to move.

Though there were difficulties, I think I could succeed to establish something new way of the cultivation of full-ripened tomato. Recently traditional vegetables are in the limelight. Traditional vegetables are the vegetables which cultivation techniques has been established by predecessors who are called as *Tokunōka* [篤農家: exemplary farmers] and who improved varieties through taking advantage of vital force of plants and/or power of nature. I think, it can be said that "Harumichi brand tomatoes" also stores power of nature abundantly, having natural shape as it is ripened fully on the plant.

I was trying to avoid gray mold, late blight and other diseases, which take place due to mold such as leaf mold, by making inside of the green house dry. Against bacterial wilt, solar heat sterilization and grafting technique have been hired. By these methods, I could reduce the frequency of pesticide application to eight times which is one-third of a general farmer's case.

On the other hand, I had tried to cultivate tomatoes with applying completely no pesticide for three years. But this ended in complete failure. In order to stop using hormone, which is used to avoid fruit drop, I had tried to use bumblebees (*Bombus terrestris*) as a pollinator and Boonboon-maru which is a small equipment and gives vibration to inflorescences for pollination. But I had given up to use them because I found that the sugar content of tomatoes became less. Since 1999, I am trying to conduct experiments on prevention of disease and pest with using natural enemy under the guidance of extension center.

In the past 20 years, there were failures and successes, but I am thinking that I have been able to enjoy thoroughly the whole point about agriculture and pleasure of agriculture while making a creative effort to aim at producing delicious and safe tomatoes.

4) Effort to increase profit

However, as far as we are living primarily by agriculture, it is out of question if we cannot earn. The reason why we could overcome the various difficulties as well as we could increase fellows is because we could increase the profit by *sanchoku* with the consumers' cooperative society after all. We cannot live on only a noble idea. It is also no good if we meet unilateral demands of consumers. If we do so, we would only drift into declining.

At the beginning, we have tried to increase profit by using different sorting standard from that of the market circulation, our own pricing method, reusing of boxes for transportation, and so on. As the sorting method of tomatoes was simple, since 1984 we employed members of the consumers' cooperative society as part-time employees for sorting and packing. Through this, the reliance of consumers' cooperative society on us increased and we appreciated as our family labor was reduced.

With this, we tried to accept more orders by increasing the cultivation area and prolonging the shipping period through increased frequency of planting. In addition, we have reviewed the relationship between planting frequency and planting date as well as between temperature and date of ripening of tomatoes in order to get rid of a shipment peak. One fellow has been joined in 1986, five fellows in 1988 and one in 1996. Now the total number of cultivators is 8 as there were persons who retired, and the total cultivation area is 300a. The planed yield is 244 tons per annum.

Since 1990, we have started supplying garland chrysanthemum, bokchoy and mini-tomato other than the ordinary tomato. We would like to develop more and more since now on and then provide vegetables of the "local" and the "season" to the local people.

5) Toward the local *sanchoku* that can exchange hearts

I have laid special emphasis on cross-fertilizing exchanges with members of the consumers' cooperative society. I have visited group leaders' meetings, bringing sample tomatoes with me, and also participated in storefront sale of cooperative's shops. In particular, I have laid emphasis on members' excursions of the society visiting and seeing actual farm. In the early days, we had arranged excursions associated with strawberry hunting. Recently, the number of visitors becomes several hundred annually. I am not only explaining about tomatoes to the visitors but also raising issues concerning the situation surrounding agriculture, methods for developing the *sanchoku* more and so on. We would like consumers to know about the real intention of farmers. Several thousand producers' cards, which are sent with tomatoes to consumers, return back to us annually and become precious information to us when we are going to know demands of members of the cooperative society and examine a course of improvement. We are very much encouraged when we read messages written on the cards such as "I am liking the tomatoes you have produced because there is moderate hardness and they are long-life, though they have ripened in red. Taste of the tomato itself is also so delicious that we don't need to put any dressing." "I was anxiously waiting for the season of the Harumichi tomato. It was very tasty. Since I am going to place orders

every week in this season again, I request you to send me."

It was very terrible for us when green houses collapsed by typhoon 17 of 1998. At that time, a lot of members and staffs of the consumers' cooperative society rushed for restoration. I have really appreciated that we could have continued the relationship with the consumers' cooperative society through *sanchoku* for almost 20 years. We have made up our mind to produce safer and tastier tomatoes from now on.

I think that we were able to walk in these 20 years by a courageous decision of Managing Director of the cooperative society, enthusiasm and efforts of staffs and members in charge of *sanchoku*, which is "*sanchoku* must be successful by any means", and supportive cooperation of members of the society. From now onward, we would like to develop the *sanchoku* from one that faces can be seen each other to one that "can exchange hearts".

At the end, Mr. Kaneyoshi Horiuchi and his wife Keiko talked "we, myself and my wife, become aged that it can be said we are continuing agriculture for our health and for preventing from getting senile. However, the situation surrounding agriculture does not allow us to enjoy the rest of life without any worry. As we are going to make our best efforts to develop local *sanchoku* and protect dietary culture of Nara during the rest of the period with help of members of the Nara consumers' cooperative society who helped us in case of tomato cultivation, please help/support us more."

6) Yamato agrarian system for the 21st century

While reading a book titled "The Day When Agriculture Disappeared from Tokyo" ("Tokyo Kara Nōgyō Ga Kieta Hi", Soshisha, 2000. 『東京から農業が消えた日』, 草思社, 2000) written by Kiyoshi Usui, I wonder if a book titled "The Day when Agriculture Disappeared from Japan" would be published within few years.

The gene-modified (GM) crops become topics of conversation. In case of tomato, 2 companies were carrying out research and development in Japan. However, considering anxiety of consumers, they have shelved commercialization as food for the time being.

20 years have passed since tomato producers of Harumichi, Yamato-kōriyama city, Nara prefecture, started *sanchoku* [産直: a system under which agricultural products are directly sent to consumers from the production area/farmers] of "Harumichi brand tomatoes" in 1981, cooperating with local "Nara co-op". Harumichi brand tomatoes became a noted summer product of the co-op now. In May, 1999, there was a memory ceremony to celebrate the 20th anniversary, and a symposium to think about "*sanchoku* in future" was held.

The reason why Harumichi brand tomatoes continued being eaten for 20 years is because it is delicious without any need for convincing. Why is it delicious? Any of the

following matters such as *Sanchoku* with the co-op, less frequency of application of agricultural chemicals, use of organic manure, containing high nutrient and a wave of magic wand (?) might be related factors, but the most probable secret of deliciousness is because it is full-ripened tomato whatever it may say.

Tomatoes are being harvested after ripened fully on plants, which is original form of plants, rather than fruits are picked while they are still green in order to meet the demands of shipping, transportation and sales, which is egoism of human beings. As tomatoes store "life" of nature abundantly, we, who take the tomatoes, feel it tasty and a feeling of "*arigataya* [ありがたや: grateful; thankful; welcome; appreciated; evoking gratitude; rare; infrequent: exceptional]" would rise in our mind spontaneously. More than anything else, "*magokoro* [まごころ: sincerity; devotion; cordiality; the naked heart]" of farmers, who produce the tomato, is in it. Both of producers and consumers have an emotional rapport.

The producers' group, which is started from 3 farmers, is now comprised of 8 farmers. The planted area becomes 300 ares from 35 ares. The volume of shipment increased by almost 10 times. It is long since an agricultural crisis is exclaimed, but Harumichi brand tomatoes have survived for 20 years with competing in the natural taste. By virtue of 20 years' effort of many people, Harumichi brand tomatoes become new "traditional vegetable" of the Nara basin. Only longstanding vegetables are not "traditional vegetables". Even Yamato-mana (Yamato cress) and Yamato-imo (Yamato yam) become traditional vegetables by keeping on cultivating.

In addition to "local and season", Harumichi brand tomatoes store "life" of nature, and "*magokoro*" of farmers, who produce the tomatoes, is in it. Learning from the 20 years' experience of Harumichi brand tomatoes, I suggest that a new "yamato agrarian system" toward 21st century be established. With a united effort, let us establish a paddy-dry field crop rotation, which is comprised of leaf vegetables, fruit vegetables and rice, a rotation system of Nara, which combines cultivation at open field and in green house, and a *sanchoku* system, which is pivoting on the consumers' cooperative society standing on farmers' viewpoint.

When we deal with "tradition", we often incline to imagine agriculture which is conventional and manual. What is important is spirit of producers and relationship with nature. GM crops are on artificial lines which is persisting in modifying nature with conventionally relying on human power and/or scientific technology. Meanwhile, opposing to artificial, there is an idea on natural lines which let nature take its course and be untended, not tinkering with the nature. I think both are one-dimensional. I think only "*ten'nen* [天然: heavenly nature; cosmos]" lines would be for an agrarian

system of the next generation.

Let us see the views on agriculture in farming textbooks of Edo period when the cultivation of traditional vegetables started. It says in a farming textbook of Yamato province "*Yamamoto-ke Hyakushō Issai Chikamichi Ari* (There is a shortcut for all farming activities in Yamamoto family)" that "Don't neglect farming. Farmers ought to follow the farming intently. Follow the farming even when the price is very low" and "No doubt, farming is very hard, but any other job is the same". The spirit as a farmer and pride can be seen here, can't it?

Furthermore, we can see the wordings that are *ta-mawari wata-mawari* [田廻り綿廻り: paddy rotation and cotton rotation literally; matters related to paddy as well as cotton cultivation] and *te-mawashi* [手まわし: hand rotation literally; labor arrangement]. There was the world of "*mawashi* [まわし: rotation; circulation]" that is for preventing replant failure due to crop rotation and for the appropriate arrangement of labor of family and menials. There is an adage that "*kane wa tenkano mawari-mono* [金は天下の回りもの: Money comes and goes; Money circulates among people]" in Japan. Keyword in farming textbooks of Edo period is *mawashi*.

Mawashi extends even into the world of human heart that is invisible. A farming textbook in Chikuzen province says "*kokoro-wo-mawashi* [心を廻し: rotating heart literally; taking care from the heart; bending your mind]" and "*shian-no-mawashi* [しあんの廻し: thinkingly; with deliberation]" are important. Farming textbook in Ecchū province says, for those who is keeping in mind all the daylong that rice seedling should grow well, plant will feel it and grow well and it is the certain principal. Plants also have *kokoro* [心: heart; spirit; mind] to feel.

According to a study by some researcher, "*kokoro*" can be found about 350 times out of 4500 poems in *Manyōshū* of Nara period. Among those 350 *kokoro*, "心" is used about 130 times and "情" is used about 120 times, the remaining is written in *Manyō-gana* [early Japanese syllabary composed of Chinese characters used phonetically]. Differentiation in using "心" and "情" continued up to the Edo period. "心" is a closed heart which is toward inside of oneself and can be expressed as "self heart". "情" is an open heart which is toward outside and can be expressed as "heart for two".

People in the Japanese archipelago had been recognizing that *kokoro* is comprised of small and unobservable balls that are circulating with rolling between human beings as well as between the living things, though it is invisible. "*kokoro-wo-mawashi*" which I mention above is the typical example of this circulation.

"Going with ambition or going with innocent desire!" The Contemporary watermelon master says outspokenly. "It will be perceived by the watermelon shortly if there is

distortion in the heart." "If it is the thing which is made by exerting the best, the price follows it later." "When there are limpness and deceptiveness, it begins and ends in haggling." The unfeigned "farmer's way" is still inherited.

Primary meaning of a Chinese character "芸 (Gei)" is that a man plant a plant in the ground by his hand. And then it becomes 'skill of man' and further 'art' afterward. In other words, fields and crops that are generated through the agricultural activities mixed in the nature can be regarded as traditional works of "agricultural art [農藝=農芸: nōgei]" which are inherited for hundred and thousand years. The root of the culture is "農藝 [agricultural art]" which is now going to be disappeared from the Japanese archipelago.

It is said that *sanchoku* movement [see 2. 2) of this chapter about *sanchoku*] is on the turn. Being fascinated only with quantitative aspect such as reduced usage of agricultural chemicals or cultivation using organic matter, people might be forgetting "*kokoro-wo-mawashi*" which is the most important.

Asking "Is there light in the future of agriculture?", Mr. Kiyoshi Usui expects consumers [to change the situation]. Post-war Japanese consumers eat firstly by "belly", and subsequently came to eat with "mouth", "eye" and then "head." He says that next is with "*kokoro* [heart]". I completely agree.

What is *kokoro* in this case? It is the "*kokoro* of agricultural art". *Kokoro* circulate between living things which can be expressed as cultivator, crop = food, consumer. "The next *sanchoku*" must be a system which can circulate "*kokoro* of agricultural art" through *Ten'nen Nōhō* [天然農法: Cosmic Agrarian System]. If such system is available, "The Day When Agriculture Disappeared from Japan" will never come.

The tomatoes, which are ripened in red, are smiling.