Preservation of Agricultural Landscape under Urban Pressure
A case study in Tokyo Metropolitan Region

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Preface

The overall situation of Japanese agriculture has been very severe since the GATT Uruguay Round trade negotiation resulted in the opening of the Japanese food market to foreign agricultural industries. We can find many imported foods in any supermarket and department store, such as beef from Australia, chicken from Thailand, oranges from USA, matsutake mushroom from Korea and pumpkin from New Zealand. Although rice, which is the principal food and the main farm produce in Japan, has been superfluously produced, Japan was forced to import it since 1995. However, Japanese agricultural decline has been caused not only by the external pressure (gaïatsu) but also by many internal pressures such as shortage of agricultural labor, high prices to materials for farming, and urban pressures which will be the topics of this paper.  

Urban agriculture in Tokyo Metropolitan Region, in the Urbanization Promotion Areas (UPAs) of course and in the Urbanization Control Areas (UCAs) as well, have been under severe urbanising pressure and are on the way to being minor land use. However, it is very important, we believe, to preserve agriculture even in the metropolitan regions not only for food production but also as one of the important environmental resources.  

In this paper the authors intend to clarify, firstly, conventional planning measures to prevent urban sprawl and consequently to preserve urban agriculture, secondly, new measures to preserve urban agriculture regarding urban citizens not as an indication of urban pressure but as enormous supporters of urban agriculture.

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Planning Measures to Preserve Agriculture in Metropolitan Regions

Since the high economic growth period in the 1960s, suburban agricultural land has been attached less importance and regarded as merely reserved land for future urbanization. Until 1968 when the 'new' Town Planning Act was promulgated, Japanese urban planning had no measures to cope effectively with urban sprawl, except, although it is not a planning measure, the restriction of farmland transactions by the Agricultural Land Act (農地法:nichi hou) which also regulates the land use change of farmland into non farming use. As a result, wide sprawl areas have been formulated during the high economic growth period, causing many conflicts between urban and rural land uses.

After the enforcement of the Town Planning Act of 1968, some urban planning measures to control urban sprawl and consequently to preserve urban agriculture in the metropolitan regions such as 'Kuikagubun (区域区分)' or 'Sen-biki (線引き)' (Area Demarcation to UPA and UCA), 'Seisan-Ryokuchi Hou' (生産緑地法:Agricultural District Act) have been proposed and enforced but can not have significant results. Recently we outlined the Japanese planning system to control urban sprawl and to preserve urban agriculture in the metropolitan regions and pointed out the problems of the system and in its enforcement. Here we will evaluate these measures from the viewpoint of conflict, juxtaposition and cooperation between urban agriculture and other land uses.

Area Demarcation System:

The Area Demarcation System, which was introduced in 1968 by the 'new' Town Planning Act as a measure to cope with severe urban sprawl, is the system to divide the Town Planning Area into the Urbanization Promotion Area (UPA) where urbanization would be promoted under the appropriate planning control and the Urbanization Control Area (UCA) where urbanization should be restricted as a rule. The system intends to separate agricultural land use from already urbanized and now urbanizing areas and in a sense intends to lead conflicting agricultural and urban land uses to a state of macro juxtaposition.

Two problems rose in the system in the process of enforcement; one was that too much farmland and forests had been enclosed in UPAs and another was the many loopholes in the land use control of the UCA. The former was caused partly by the farmers' preference for designation of UPA to that of UCA for their farm land and mainly by so late enforcement of the Area Demarcation system that local planning officers regarded it as Atomo Matsuri (後の祭り:entertainment after the festival is over). In fact, the decade since the idea of the system was first proposed in 1960 was the peak period of urban sprawl in Japan. As for the latter, the boundary between the UPA and the UCA is not so firm and tight as expected that despite the boundary bank have not collapsed yet, many developments have been coozing out or spilling over from UPAs. There are so many loopholes in the regulations of UCA that we can not list them fully.

The result of defects in the system and the enforcement was the state of patchwork of conflicting urban and rural land uses in both UPAs and UCAs which Dr. Hebbert called "desakota".

Agricultural District and District to Concentrate Agricultural Land Use:

The Agricultural District Act which enforced in 1974 to cope with the fact that large quantities of farmland remaining in UPAs in a state of land use patchwork, provided the 'Seisan-Ryokuchi Chiku' (生産緑地地区:Agricultural District) as one of Chiku Chiku (地域地区:Planning Zones and Districts). Nevertheless farmland in UPAs is in principle to be urbanized without delay and if that is not the case to be levied 'Takuchi-nami Kazei' (宅地並木税:land property taxes as high as for building lots), in the Agricultural Districts agricultural land use would be permitted for 10 or 5 years without being levied 'Takuchi-nami Kazei'. An object of the Agricultural District was to recognize a lot of farmland remaining in UPAs, to guide and authorize them in a state of planned micro juxtaposition for a while and to ease the conflict between agricultural and urban land uses. However the system could not gain popularity except in Tokyo, because 'Takuchi-nami Kazei' had been politically postponed several times and finally became practically ineffective by the revision of the Local Tax Act in 1980.

'Shugoun-Rou Chiku' (集合農地地区:District to Concentrate Agricultural Land
Use was provided in the Act to Promote Supply of Housing Estates of 1975 as a measure to cope with the micro juxtaposition of farmland and housing sites in the land readjustment areas and to make the juxtaposition somewhat planned and semi-macro ones. By means of the special replotting, land which owners would like to use for agriculture for some years can be concentrated in the District to Concentrate Agricultural Land Use.

The present Agricultural District Act, which was fully revised in 1991, requested farmland owners in UPAs in the metropolitan regions to state a free choice between two categories into which each lot of their farmland should be classified into the farmland in the new Agricultural District and to be used for farming for 30 years hence or into the farmland to be urbanized and to be levied high property taxes. To our surprise in almost all town planning areas the layers of farmers’ choices were decided as the statutory plans of Agricultural District. The result was a state of twofold micro juxtaposition or doubled conflict—the conflict between farmland and building sites and that between Agricultural Districts and farmland to be developed.

To our regret, we must conclude this section that even if the above mentioned urban planning measures are not regarded as totally fruitless, they could not preserve urban agriculture and agricultural land use nor make urban fringe areas of the metropolitan regions the planned and controlled ones.

New Measures to Preserve Urban Agricultural Land Use

Recently, citizen’s demands to experience or to participate themselves in farming or forestry have increased remarkably and movements to find or to make chances to do so become more and more popular. The importance of introducing new measures for the preservation of urban agriculture based on citizen’s concerns and citizen’s activities has been gradually recognized. We should have a new understanding of enormous population in the metropolitan regions, not as a sign of urban pressure but as an influential demand for urban agriculture, agricultural produces and agricultural land use.

There are many ideas and trials based on the new understanding. All of these measures are intending to establish the cooperative relationship between urban activities and agricultural land use. We categorize them into four; a) Allotment gardens which are long-established and rather common. b) Urban parks with agricultural functions. c) Leisure facilities combined with agriculture. d) Schemes to preserve good rural sceneries, settlements, farmland, woods and streams. We will outline them briefly.

Allotment gardens:

Many attempts have been made to provide citizens vegetable gardens or to provide citizens opportunities to grow vegetables and flowers, however the Agricultural Land Act, which had strictly prohibited non-farmers, both individuals and companies, from leasing farmland, prevented the allotment gardens to gain popularity. In 1989 ‘Tokutei Nouchi Kashituke Hou’ (特定農地貸付: Act for Exceptional Farmland Lease) which allows municipalities and agricultural cooperatives to buy or to lease farmland and to rent it to citizens for allotments without getting permission based on Article 3 of the Agricultural Land Act. Moreover ‘Shimin-Seibi Sokushin Hou’ (市民農園整備促進法: Allotment Garden Promotion Act), which was promulgated in 1990, provided more wide exception of the Agricultural Land Act for lease and diversion of farmland in designated ‘Shimin-Seibi Kuiki’ (市民農園区域: Allotment Garden Promotion Area). Thereafter, new examples of the allotment gardens managed by municipalities and agricultural cooperatives were realized in Tokyo Metropolitan Region.

For example, Higashi-yamato Farmer’s Center in Higashi-yamato City has an area of about 1.84 hectares in total and is divided into three parts, namely (1) common facility areas which have a center house, a multipurpose ground and small open spaces, compost storage spaces and others, (2) allotment garden area which have 188 small allotment gardens of from 55m² to 500m², (3) a farm of 0.3 hectares area managed by a farmer and where citizens can participate and experience farming. Comparing with its German counterpart, Higashi-yamato Farmer’s Center is like nothing Kleingarten but rather Schrebergarten in style.

In spite of the enforcement of the Allotment Garden Promotion Act, there remains a serious obstacle to the popularity of allotment gardens, and that
is the high inheritance tax. As the provision to grant a postponement and finally to exempt from inheritance taxes on farmland is applicable to successors who will cultivate himself the inherited farmland for 20 years hence but not to successors who rent the inherited farmland for allotment gardens. In 1993, ‘Tokutei Shimin-Nouen Seido’ (特別市民農園制度: Special provision to reduce inheritance taxes for allotment gardens) was enforced and became applicable to the succeeded farmland which has been leased for allotment gardens under the conditions that it has been leased to and managed by municipalities on a long term contract’.

Urban parks with agricultural functions:

Recently urban parks which have agricultural functions such as an exhibition facility of agriculture, a farm to give citizens farming experiences, were strukcted by way of the town planning project. Jidayu-bori park (次大塚堤公園) in Setagaya Ward, Tokyo is one good example, which is 2.9 hectares of total area and has an outdoors exhibition of old farm house, a preserved old irrigation canal and paddy fields along it where citizens can have the chance to engage in planting and harvesting rice.

Leisure facilities combined with agriculture:

Open air leisure facilities which intend to combine agriculture in the area with citizen’s leisure activities are on increase. Kobe Wine and Agricultural Park (神戸ワイン・農業公園) which covers 32.0 hectares of total area and has a vineyard and other facilities for citizen’s recreational activities is the most typical example. The 160.8 hectares farms around the park, most of which are orchard growing grapevines and pear trees, are continuing the production of fruit on the contract with the park. Usunomiya Agricultural and Forestry Park (宇都宮農林公園) which is now under construction and will have 46 hectares in total area, is one example in Tokyo Metropolitan Region. The announced purposes of the park are that it will promote agriculture and forestry in the area by means of providing citizens chances to experience farming and forestry, to purchase local produce and to enjoy recreational activities in the open air.

Schemes to preserve good scenery of agricultural areas:

The preservation scheme of ‘Minuma-Tanbo’ (見沼田園: Minuma paddy field area) in Saitama prefecture and ‘Jike Furusato-mura’ (寺家ふるさと村: the good old village in Jike district) in Yokohama City are good examples of preservation schemes for agricultural landscape in relation with citizens’ recreational demands in Tokyo Metropolitan Region. ‘Jike Furusato-mura’ opened in November 1987 and the scheme covers 86.1 hectares of area in UCA, which situated in the most northern part of Aoba-ku, Yokohama City. Purposes of the scheme are to preserve the scenery in Jike, a good old farm village of 35 farm households with its surroundings consists of hilly deciduous woods and paddy fields in Yato (谷戸: small stream valleys), and to provide citizens chances to enjoy an outdoor life in the country side. Yokohama City designated the area as ‘Nogyou-senryo Chiiki’ (農業専用地域: exclusive agricultural area) and has been giving the financial support to maintain agriculture and agricultural landscape. Yokohama City constructed a facility which has a small exhibition hall to show the history and nature of Jike district and a restaurant to serve visitors which has been entrusted to a local committee to operate. Farmers of the area also constructed and have been managing facilities to attract citizens, such as allotment gardens, a fishing pond, farms for citizen’s participation, a tennis court and so on. Moreover, workshops of a ceramic artist, a ‘Togishi’ (研師: craftsman of sword sharpening), a maker of charcoal for tea ceremony etc were also invited to the area to increase the attractiveness of the area.

Generally speaking the scheme of ‘Jike Furusato-mura’ has proved successful. However, the success of the project has also caused problems. Attractiveness of Jike and scarcity of such good old agricultural landscape draw so many visitors to the area from very wide areas that numbers of visitors often exceeded the capacity of the area of only 86.1 hectares in total, and to make the matter worse, most of them come by cars. It is very worrisome that success of the scheme threaten Jike’s agriculture and landscape. For example, the undergrowth of deciduous woods in which many important wild grasses included are threatened with extinction because of so many citizens wandering from path into woods and the growing of ‘Renge’ (レンゲ草: Chinese milk vetch), which, in the early
spring, has adorned paddy fields in the area with carpets of pink flowers and was an important element of Jike’s landscape, are disappearing rapidly because farmers would like to avoid visitors stepping in the ‘Renge’ growing paddy fields to gather flowers and treading on the soil hard.

Preservation of Agricultural Landscape, A Case Study in Santome-Shinden Saitama prefecture

A case study to preserve the agricultural landscape:

In the second part of the presentation we would like to focus on a case in the Tokyo Metropolitan Region where urban pressure has been inexorable and of course very intense and consequently the preservation of urban agriculture is very difficult. In the Tokyo Metropolitan Region, in UPAs of course and in UCAs as well, long and keen conflicts between urban land use demand and agricultural land use have caused many land use and environmental problems.

We take up the case of Santome-shinden (三富新田), Saitama prefecture, where a group of architects and planners including one of the authors made intensive research on the preservation of agricultural landscape in the first half of the 1980s and published a report in 1986. In 1985 the research group held symposia on the landscape preservation in Santome-shinden, but this was not a matter of concern to farmers and local residents. However, recently the area of Santome-shinden has been recognized for its value in terms of a place of historical interest and a good old agricultural landscape with ecological farming. We ourselves are now participating in the ongoing scheme to preserve the historical and agricultural landscape in Santome-shinden. So, the following part of presentation is an outline of the report in 1986 and simultaneously a interim report on the preservation scheme now being elaborated and preservation activities of farmers, local residents, local officers and scholars taking part in it.

History of Santome-shinden

Santome-shinden, which is extended over the suburb of Tokorozawa City and Miyoshi Town, Saitama prefecture (Fig.2), is one of the best remaining examples of ‘Musashino Shinden Kaihatsu’ (文政野新田開拓: newly developed settlements in Musashino plain) developed during the 17th and 18th centuries (Fig-1). Musashino Shinden settlements, which are characterized by typical row settlements along straight roads and equally allotted strip form farms, covered Musashino plain widely from the western part of Tokyo’s wards area to the south western part of Saitama prefecture (Fig-3).

Santome-shinden developed in 1696 and celebrated its 300th anniversary of reclamation last year. In Santome-shinden each farm originally had a strip of nearly same size, about 5 hectares area, 40 ken (間) or 72 meters frontage and 376 ken or 675 meters depth. The strip were divided into three parts or three rows; the first row was used for a site of farm house with ‘Yashiki-rin’ （屋敷林: a forest in loo), the second row, about a half of the total area, for crop growing field and the third row for deciduous woods (Fig-4). It is noteworthy that ‘Musashino Shinden’ resemble very much German ‘Waldhufendorf’ in shape and in land use. ‘Yashiki-rin’ and tall ‘Keyaki’ （欅: Zelkova serrata) trees remaining in almost all lots makes the settlement like a green belt along the road and formulates a splendid road side landscape. The deciduous woods had been keeping the ecological and economical relation to farmer’s daily life and farming, providing firewood until so-called Energy Reform in the 1960s and a lot of fallen leaves for compost every year until now. It is said that in the Edo era farmers of Santome carried and sold lots of firewood and vegetables to Edo, located 30 km away from Santome, and often carried back Edo’s night soil for manure of their farmland.

‘Santome-shinden’ consists of three settlements, namely, Kamitome (上富) in Miyoshi Town and Nakatomi (中富) and Shimotomi (下富) in Tokorozawa City (Fig-3). Kamitome had and still has the most typical landscape features of ‘Musashinoshinden’ settlements; long, straight and rather wide road of 6 ken or 10.8 meters width, strips of allocated land and their uses, road side landscape of tall ‘Keyaki’ trees and ‘Yashiki-rin’ forests (Fig-4).

Urban Pressures in Santome-shinden:

Santome-shinden’s strips of farm, which were 180 in total; Kamitome
Village Nakatome village and Shimotome village at the end of the 17th century have been gradually divided. In 1898, only 21 of 91 Kamitome's strips remained in the original form and the remainder were divided lengthwise into two to four narrower strips resulting in 237 strips in total (Fig.6). The main reason of strip dividing was to set up branch families. Until around 1960, nevertheless, landownership had subdivided and strips had become narrower, Santome's landscape had not changed substantially. However, in the high economic growth period, because of severe urban pressure, Santome's landscape started to change. Factories, sport ground and housing for commuters were constructed developing deciduous woods and farmland.

In 1970, all areas of Santome-shinden were designated as the Urbanisation Control Area. Hence, Santome-shinden narrowly escaped the intense urban pressure, however, urban pressure was not stopped completely. The opening of Kan-Etsu express way in 1971 which passes through the east side of Kamitome settlement crossing strips and separating deciduous woods from farmland and the settlement, strengthened the urban pressure to Santome-shinden very much. Tokorozawa interchange located very close to Santome-shinden which is only 30km away from Tokyo's central area and has wide roads of 6 ken or 10.8m run through the settlements since Edo period turned the area into very good location for the distribution industry. Moreover, the recent deregulation of planning control in the UCAs made the land development to construct warehouses of the distribution industry on the site along the road of more than 10 meters width permissible.

Santome's landowners sold their land not by their preference but they were forced to sell the ancestral land to get money to appropriate for the inheritance tax. Until few years ago, farmer successors had to sell much more land than equal value land to the amount of the inheritance tax to get a sum of money for the inheritance tax he must pay, because he must pay a capital gain tax when he sell his inherited land to get money. This irrational double taxation was improved recently. However, many irrationalities remain in Japanese inheritance taxation system imposed on agriculture land. The postponement system of inheritance taxes on farmland, which postpones the payment of taxes imposed on farmer successor who will farm it at least 20 years hence, can not be applied to forest land and a housing lot. As mentioned above, in Santome-shinden deciduous woods which have close relation with farming supplying fallen leaves for material of compost and nursery bed of sweet potato. Farmers in Santome have requested that the inheritance tax postponement system should be widely applied to their deciduous woods because in Santome 'Yama' are indispensable to farming.

Recently, very serious problems occurred in Santome. Disposal industries bought deciduous woods and constructed many small plants to dispose industrial wastes. Defective small incinerators have caused the pollution of air and soil by the dioxin, the most serious carcinogen. It is no exaggeration to say that the existence of Santome's farming and citizens' life is threatened to menace to the existence.

Preservation of agricultural landscape of Santome-shinden:

Designated as the Urbanisation Control Area, Santome's landscape has been fairly well preserved even under severe urban pressure. In 1985, a research group headed by Dr. Ryoichi Ura the then professor of rural planning at Meiji University made a research on Musashino-shinden. The group made the intensive field surveys on land ownership, land use and landscape in Santome-shinden, made a proposal on preservation of agricultural landscape, held symposia on Santome's preservation in Tokorozawa City and Miyoshi Town in 1985 and published a report in 1986 which pointed out many levels of landscape factors and compositions of these factors from old farm houses of thatched roof, rows of 'Yashiki' along roads, the allotting pattern and land use and the total landscape of Santome. We proposed some measures to preserve the agriculture landscape of Santome including to restore and preserve several farm units with these old land use as a museum on the point (Fig.6).

One of the authors has joined a voluntary group, which consists of researchers, municipal officers, citizens, workers of 'Nokyo' (農協: agricultural cooperative) and farmers in Santome and is working for the campaigns to promote an ecological recycle system of 'Ochiba' (落ち葉: fallen leaves) and to preserve Santome's landscape with the traditional agricultural system itself. The campaigns have been establishing a basis of
Santome’s new preservation scheme on the new understanding of enormous population in Tokyo Metropolitan region.

Preservation of Urban Agriculture as a Heritage

Recently it has become popular understanding that the good traditional rural landscapes of Japan have been created through the long cooperation between human activities and nature itself. An extra issue of ‘Gendai Nogyou’ (現代農業: contemporary agriculture) entitled ‘human life have created landscapes’ collected many examples through out Japan. We should regard these landscapes, which have been created by long human activities in cooperation with or, in a vague word, in symbiotic relation (環境共生: ‘Kankyou kyousei’) to the natural environment, as one of the cultural heritages.

‘Tana-da’ as a cultural heritage:

For example, ‘Tana-da’ (棚田: terraced paddy fields) or ‘Senmai-da’ (千枚田: thousands of terraced paddy fields) is one of typical sceneries of mountainous Japan and diligent Japanese farming. Typical examples of ‘Tana-da’ such as ‘Tagoto-no-Tsuki’ (田種の月: moon reflected in every paddy field) in Nagano prefecture and ‘Shira-yone Senmai-da’ (白来千枚田) in Wajima, Noto peninsula have become tourist attractions. However it becomes very difficult to maintain rice farming at ‘Tana-da’ because despite low productivity it needs very much hard work. If rice farming stops the beautiful scenery of ‘Tana-da’ would be soon devastated and moreover the devastated ‘Tana-da’ often becomes cause of disasters such as landslide and flood. Recently, municipalities which have ‘Tana-da’ area within the administrative boundary have organized a conference to discuss measures to maintain ‘Tana-da’ as a valuable scenery and heritage.

Yuzuhara Town, Kochi prefecture, one of those municipalities, where there were 700 ma (枚: pieces or lots) of terraced paddy fields in 1966, now reduced to only 228 ma, invited urban owners of terraced paddy fields who would contribute about 40 thousand yen or 345 US$ for 100 m2 of rice field and participate in rice farming. The mayor of Yuzuhara Town said ‘Tana-da’ is one of the national cultural heritages to be preserved with cooperative efforts of farmers and citizen.

Havrå—The steep landscape of the fjords:

In September of 1995, one of the authors visited a small and beautiful village called Havrå located in the steep hillside of Sørfjord on the southern side of Osterøy island near Bergen, Norway, where efforts to preserve the agricultural landscape consisted of traditional buildings of village and surrounded farm are put forth by scholars and local volunteer farmers. Only in Havrå the traditional farming system of strip-farming (teig-blending), which was common all over western Norway until the end of the last century in which every farmer is allowed a fare share of the good soil, continues today. Farming in the steep hillside and not using any machine is very hard, but have been and is essential to form and maintain the traditional and beautiful agricultural landscape, because if farming stops, farms around village would turn back to forest soon. In the 1950s about 30 people of eight households lived at Havrå however, at present only 4 aged people of three households are remaining and they have not taken charge of hard farming any more. Since 1988 farming has been charged by local volunteer farmers and Havrå and surrounding farm and forest which ranked high on the cultural heritage list have been maintained. In 1973 a private trust to preserve Havrå and the landscape was granted the status of museum on the spot and is protected by a private agreement between the owners and the trust. The goal of Havrå is to be listed as an historical monument under the Cultural Heritage Act and to be protected by the Nature Conservation Act. When one of the authors visited Havrå while the conservation plans for the strip farming landscape and the farm buildings have not yet finally been agreed upon, a highway bridge closing Sørfjord and connecting Osterøy island with the mainland is going to be completed and the increasing urban pressure gives cause for anxiety.

Future of Santome-shiden as a cultural heritage:

The cases of Japanese ‘Tana-da’ and Norwegian Havrå provide us an idea for the preservation scheme of Santome-shiden. The research group already proposed in 1986 a preservation of several typical strip farms as a
cultural heritage. Recently we attached much importance to maintain the farming system in Santome-shinden which recycling fallen leaves to compost and material for nursery beds of potato is a very ecological and traditional system to be evaluated as one of intangible cultural assets. One of our goals in Santome-shinden, which is to preserve typical strips of farm and traditional farming system upon ‘Ochiba’ recycle, may be nearly same as Havr’s museum on the spot. However, it would be not so easy because urban pressure in Santome-shinden is severer than in Havr.

A museum to exhibit the historical materials on the reclamation of Santome in Edo period named ‘Santome Kinsei Shiden’ (三富近世歴史資料館) is planned to be established in the near future by Saitama prefecture. A tentative concept and plan of museum already prepared by a consultant on the request of the Department of Cultural Heritage, Saitama prefectural office, to my surprise a proposed building design of the museum has a tall glass observation tower of 50m height which is totally inharmonious or even harmful to the landscape of Santome-shiden. A committee to finalize the plan of the museum was chaired by one of the authors, the committee tends to disapprove of the high observation tower which certainly fools young farmers in Santome and citizens and aggressive officers of local heritage and we can start a long procedure to recover or restore the good old landscape of Santome and its ecological and economical agricultural system.

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The Exclusive Agricultural Area of Yokohama City differs from its foreign counterparts such as Washington State, U.S.A., in that a statutory system supported by any act or bylaw but a sort of plan based on the agreement between Yokohama City and local farmers as that in Washington State. It is not a statutory system supported by any act or bylaw but a sort of plan based on the agreement between Yokohama City and local farmers as that in Washington State.

In May of 1997, Yokohama City opened the second Furusato-mura called Maioka Furusato-mura (狭山ふるさと村) in Totsuka Ward.

The Excluive Agricultural Area of Yokohama City, differing from its foreign counterparts such as that in Washington State, U.S.A., is not a statutory system supported by any act or bylaw but a sort of plan based on the agreement between Yokohama City and local farmers.

The head of research group was Professor Ryuichi URA and the report titled 'A Study of the Formation of Special Order for Environmental Preservation of Special Farming Communities, with Special Emphasis on the Musashino Shinden Region' was published in 1986. In the report we discussed the problems from following view points: a)evaluate Santome's agriculture and landscape from historical and ecological viewpoints, b) categorising the landscape of Santome-shinden into some levels of value and area, discuss the preservation measures for each levels of landscape, c) report and analyse citizen's activities in preservation of agricultural landscape and ecological farming, d)suggest proposals for preserving Santome's agricultural landscape with ecological farming as a cultural heritage or a museum on the spot.

One of the authors was brought up in Kichijouji, Musashino City, which was located in the eastern part of 'Musashinoshinden'. Kichijouji, which is a fully built-up good residential area in the present, was, as present Santomeshinden, one of the suburban agricultural areas under severe urban pressure when he lived there in the 1980s.

A few leading farmers such as Nanashi (長村, the headman of village) were allotted two strips. Deciduous woods in Musashino plain, which are usually called 'Zoeki-bayashi' (森林林, literally means woods of miscellaneous trees), are not a kind of thicket or copse but well cared woods consist of a spice of deciduous trees, mainly 'Konara' (コナラ, Quercus serrata) and 'Kumugi' (きむぎ, Q. acutissima). Farmers in Santome call the deciduous woods 'Yama' (山 or literally means a mountain) and also a forest on a mountain. On the contrary, in the northern part of Honshu, a word 'Morii' (森) which literally means a forest also means a mountain. The farmers collect fallen leaves of deciduous trees every winter or spring and use them as material of compost and a nursery bed of sweet potato. It is said that in Santome traditional and ecological farming needs same area of deciduous woods as farmland. Before the 1960s deciduous trees cut down every twenty years or so to use for firewood. However, deciduous tree sprouts up from its stump soon and woods regenerate as before. We call this process 'Houga-koushin' (培養更新, sprout renewal). Recently, there is no demand for firewood and farmers do not 'Houga-koushin' of their deciduous woods, consequently trees are overgrown and landscape of Zoeki-bayashi in Musashino plain including Santome are no longer what it is in Kunikida's essay. To maintain Santome's historical landscape of deciduous woods, good care by 'Houga-koushin' is indispensable.

Tokorozawa City changed the reading of 'Cen' from historical 'tome' which is rather particular one to common 'tomi', however Miyoshi Town have persistence in the historical reading.


The group was financially supported by Toyota Foundation's research grant of the 1983 fiscal year.

The special Act concerning the Promotion of Housing and Land Supply in the Metropolitan Regions was established in the zone of deciduous woods changing areas and use however after the deregulation warehouses of distribution industries have been invading into roadside of the main road of Santome destroying its splendid roadside landscape.

According to the recent interpretation in the Lower House concerning the high Inheritance tax and the preservation of natural resources, the Inheritance tax levied to a Santome's farmer who succeed 1 hectare farmland, 3 hectares deciduous woods and a housing site was more than 3 hundred million Yen or 1 million US dollars.

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Fig-1: Distribution of Musashino-shinden Settlements (SUGIMOTO, 1960)

Fig-2: Location of Santome-shinden (URA et al. 1980)

Fig-3: Santome-shinden before Urban Pressure (URA et al. 1986)

Fig-4: From and Land Use of Farm Strips
A: Restored Historical Strip
At least one farm strip should be purchased and restored to its original state.

B: Group of Preserved Historical Strips
A few farm strips should be restored to the state being worth of a historical place or to that before the 1960s and should be preserved.

C: Typical Landscape of Street Settlement
At least several lots on both sides of the road. After the improvement of harmful land use changes, the area would be worth a tourist attraction.

D: Roadside Landscape
Roadside landscape of a considerable length with hedge and ‘keyaki’ trees in almost all lots. The tall ‘keyaki’ trees, which are the most important element of the roadside landscape, should be preserved as many as possible and land use changes should be restricted to setback from boundary line of the road. The recent widening of Kamitomoe’s main road have been done without cutting down the ‘keyaki’ trees and preserving them as roadside shade trees.

E: Deciduous Woods
The most important element of Santome’s agricultural landscape and providing fallen leaves and open spaces. The deciduous woods should be preserved as the indispensable land use for the ecological farming and citizen’s recreational activities in Santome.

F: Farmland
The largest and the most important agricultural area within the 30 kilometer range of Tokyo and the important element of Santome’s agricultural landscape. Preservation of Santome’s agriculture is very difficult but not impossible.

G: Total Landscape of Santome
A valuable remaining landscape of Musashino plain. Leading inevitable land use changes to planned urban land use areas, the total landscape of Santome would be hardly preserved.
Land Use in 1984

- housing
- commercial
- public
- park & sport

Land Use Changes 1984-1997

Other uses

urban use (factory or warehouse)

Fig-7: Land Use in 1984 and Land Use changes 1984-1997 in Kamitome (Base map by URA et al, 1986, land use change data by Miyoshimachi)

Fig-8a: Landscape of Terraced Paddy Fields in Shirayone-Sennai, Noto, Japan (JICHIDAYORI, 1997)

Fig-8b: Landscape of Cluster Community in Hjära, Österøy, Norway (BREKKE et al, 1990)

Fig-8c: Landscape of Linear Settlement and Strip Farms in Santome-ohyori, Saitama, Japan (URA et al, 1986)

Fig-8: Agricultural Landscape as a Cultural Heritage