

I. GENERAL

I-1. A Centennial Progress of the Japanese Society for Horticultural Science

The Japanese Society for Horticultural Science (JSHS) was founded almost 100 years ago on May 20, 1923. According to the records, a total of 75 volunteers participated in the inaugural meeting held at Fujimiken, Tokyo, and Dr. Tetsuya ONDA was elected as chairman. It is the fifth agricultural science society to be established in Japan. The purpose of the establishment of the JSHS was “to conduct academic and technical research on horticulture, including fruit trees, vegetables, ornamental plants, gardens, parks and landscaping and to promote their development”, which at the time included landscape gardening. Dr. Hiroshi HARA was appointed as the first president of the board, with four directors and 35 councilors. There were four types of members: regular members, associate members, supporting members and honorary members. Regular members were required to have academic background and experience, as well as a membership fee of JP¥ 12, which was considered expensive at the time, that is to say, it appears that not everyone was eligible for membership. The academic society office was in Tokyo Prefecture and played a role in publishing the journal and collecting membership fees. Dr. Hiroshi HARA, the first president of the board, took charge of the Laboratory of Horticultural Science, College of Agriculture, the Imperial University of Tokyo, while also serving as head of the practical science department (now the Faculty of Agriculture at Tokyo University of Agriculture and Technology) and as a lecturer at the Agricultural Teacher Training Institute (later Faculty of Agriculture at Tokyo University of Education, now Faculty of life and Environmental Sciences at University of Tsukuba). He emphasized practical education with the efforts to disseminate the research results to the agricultural field, such as naming the seedless persimmon ‘Hiratanenashi’. In addition, he made efforts in garden education along with the forestry expert Dr. Seiroku HONDA, known as the “Father of the Park”, and was also referred to as the “Restorer of Gardens”. Due to his role as the first director of the University Farm in the Imperial University of Tokyo, his statue is currently

placed at the South Campus of the Institute for Sustainable Agro-ecosystem Services (formerly Tanashi Farm), the University of Tokyo.

In the next and subsequent sections, the authors describe the 100-year history of the organization and management, holding of conferences, publishing of the journals in JSHS, and its relationship with the International Society for Horticultural Science (ISHS).

1) Organization and Management of the Society

There was no fixed term for the president at the time of the establishment of the JSHS. Following the first president, Dr. Yuzo HOSHINO (1934), Dr. Akio KIKUCHI (1938), Dr. Yoshichi ASAMI (1956) were appointed as the next presidents. After the World War II, the constitution of the society was revised at the annual meeting in 1957 during President ASAMI’s term, and the purpose of the society was changed to “research and technical advancement in the field of horticulture”. Incidentally, the Japanese Institute of Landscape Architecture was founded in 1925. The membership categories of JSHS were regular members, supporting members, subscribing members and honorary members, and management system consists of president, vice-president, secretaries (general affairs, accounting, meeting and editing) and 30 council members (elected by regular members, with a few appointed by the president). The organization, similar to that before it became a general incorporated association, was established during this period. The presidents after this term were Dr. Yoshichi ASAMI (1958), Dr. Minoru KAJIURA (1960), Dr. Akira KOBAYASHI (1966). During President A. KOBAYASHI’s term, the term of office for the president and vice-president was limited to one term of three years, and the selection of 30 council members was changed to mutual selection among regular members, with a term limit of not exceeding two consecutive terms. Furthermore, the terms of the president, vice-president and council members were shortened to two years in 2002. The successive presidents were Dr. Tadayoshi SUGIYAMA (1969), Dr. Katsuo NAGASAWA

(1972), Dr. Masatoshi IWATA (1975), Dr. Takashi TOMANA (1978), Dr. Tsutomu TAMURA (1981), Dr. Shinji HAYASHI (1984), Dr. Tadashi ASAHIRA (1987), Dr. Ryoza SAKIYAMA (1990), Dr. Akira SUGIURA (1993), Dr. Shuichi IWAHORI (1996), Dr. Hideo IMANISHI (1999), Dr. Ichiro KAJIURA (2002), Dr. Susumu YAZAWA (2004), Dr. Nobuo SUGIYAMA (2006), Dr. Keizo YONEMORI (2008), Dr. Koki KANAHAMA (2010), Dr. Ikuo KATAOKA (2012), Dr. Michio SHIBATA (2014), Dr. Motoaki DOI (2016), Dr. Saneyuki KAWABATA (2018), Dr. Yoshinori KANAYAMA (2020), Dr. Ryutaro TAO (2022) and Dr. Munetaka HOSOKAWA (2024). The current President Dr. Yukio OZAKI (2026) is the 30th president. The University of Tokyo had been in charge of the general secretary of the JSHS for 60 years after its establishment. Kyoto University, thereafter, took over the responsibility for 12 years from 1984, and it returned to the University of Tokyo with the establishment of Business Center for Academic Societies, Japan (BCASJ). However, due to the bankruptcy of the BCASJ in 2004, the administrative office was moved to Nakanishi Printing Co., Ltd. in Kyoto Prefecture, and general secretaries (currently directors in charge of general affairs) of various universities nationwide have been responsible for it. The printing and mailing of academic journals and the member management were handled by Yokendo Ltd. Publishers in Tokyo Prefecture/Metropolis from 1934 for about 60 years, and the abstracts of the annual meeting were handled by Shinsei Printing in Tokyo Prefecture/Metropolis (the starting year is unknown). Nakanishi Printing Co., Ltd. has been responsible for the printing and distribution of the journal and abstracts of the annual meeting, and member management of the society since 2005. The University of Tokyo was also in charge of the financial secretary in the past, but this responsibility has been rotated among universities in the Kanto and Kansai regions since 1963. The Horticultural Research Station of the Ministry of Agriculture and Forestry was in charge of the meeting secretary from 1958, which is currently divided among the fruit tree, vegetable and ornamental plant fields of the National Agriculture and Food Research Organization (NARO) on a rotation basis. The University of Tokyo was also initially in charge of the journal's editorial secretary. Dr. Tadayoshi SUGIYAMA and Dr. Yotaro TSUKAMOTO, thereafter, officially became editorial secretaries in 1958, and the journal's editorial board was established in 1963 and rotated among the universities for three years each. Currently, the

editorial board has been divided into two, one for English and the other for Japanese journals. A planning secretary was established in 1991 to take charge of symposium planning and related affairs, etc., and an IT secretary in 2014 to manage the website. Regarding regional branches, Tokai Branch was firstly established in 1956, and Kyushu (1958), Chugoku-Shikoku (1962), Tohoku (1977), Hokuriku (1978) and Kinki (1996) Branches followed. Research presentations and symposium arrangements are held in each branch. There is no branch system in Hokkaido region, but the Hokkaido Society for Horticultural Research (1967) was organized instead of a branch.

2) Holding of Conferences

The first conference was held as a subcommittee of the First Congress of the Association of Japanese Agricultural Scientific Societies in 1930, and it had been held mainly at the Imperial University of Tokyo every April. It was recorded that the number of research presentations was only 10 to 20, and that the conference was held in one day with one venue. Afterwards, the spring meeting expanded in scale to two venues for "fruit trees" and "vegetables/ornamentals" in 1949, and to three venues for "fruit trees", "vegetables" and "ornamentals" in 1952. In 1963, with the addition of "utilization", the number of venues increased to 4–5, making it difficult to hold the meeting at the Faculty of Agriculture, the University of Tokyo. As a result, it began to be held at universities in Tokyo area. The autumn meeting has been held in each region of Japan, such as Tohoku/Hokkaido, Tokai/Hokuriku, Chugoku/Shikoku and Kyushu regions, on a rotating basis since 1948. In recent years, the number of venues has expanded to 11–13, the number of research presentations in a year to 800–1,000, and the number of participants to 800–1,000. The autumn meeting in 2020, however, had to be cancelled, due to the sudden outbreak of a new corona infection (COVID-19) in 2020. The meeting was switched to online in 2021–2022, and the number of presentations and participants temporarily declined during this period. The hybrid face-to-face/online meeting with face-to-face oral and online poster presentations was revived in the autumn meeting in 2022, and the face-to-face meeting with the combination of face-to-face oral and online poster presentations was held in the spring meeting in 2023. Instead of the autumn meeting in 2023, a ceremony and commemorative lectures were held to mark the centenary of the founding of the JSHS, and the Asian Horticultural

Congress (AHC2023) was held at the University of Tokyo at the same time as the full face-to-face meeting. Since then, full face-to-face meetings have been restored in the spring and autumn meetings, and the number of presentations and participants is on a recovery trend. The semiannual meeting and the large number of presentations and participants are unique features of the JSHS, providing a valuable opportunity for the exchange of information and the construction of relationships between members. The number of poster presentations has increased from few dozen when they started in 1992 to more around 200 at present, but it has been difficult to secure a venue for the presentation. Recently, the number of open symposia has been increasing, and some venues are oversubscribed and cannot accommodate all the participants in some cases. The online format presentation developed under the corona disaster will eliminate the need for a venue and allow for more intensive question-and-answer session by providing the advance viewing of the presentations. When considering the future management of the meeting, there is also a room to exploit the advantages of the online method.

3) Publishing of the Journals

The first volume with two issues of *Engeigakkai Zasshi* (Journal of the Japanese Society for Horticultural Science; JJSHS) was published in 1925, followed by 2–3 issues per year until Vol. 9, and then increased to four issues per year from Vol. 10. The number of issues had to be suspended and reduced during and after the war and returning to four issues per year from Vol. 21 (1952). Six issues per year were published from Vol. 67 (1998), and four issues per year again from Vol. 76. *Engeigaku Kenkyu* (Horticultural Research (Japan)) was launched in 2002 as a new journal with four issues a year to which not only professional and/or academic researchers but also a wide range of horticultural professionals involved in production, extension, technology development, horticultural education, etc. can contribute and subscribe. The regulation of the contribution for *Engeigaku Kenkyu* (Horticultural Research (Japan)) was revised in 2004, and Journal of the Japanese Society for Horticultural Science (JJSHS) and *Engeigaku Kenkyu* (Horticultural Research (Japan)) became English- and Japanese-language journals, respectively. Furthermore, JJSHS was renamed as The Horticulture Journal (HJ) with the aim of increasing the presence of the English-language journal and making it a world-class leading journal. To date, 5,056 papers and review articles have been published in Volumes 1–83

(1925–2014) of JJSHS, 554 in Volumes 84–93 (2015–2024) of HJ, and 1,377 in Volumes 1–23 (2002–2024) of *Engeigaku Kenkyu* (Horticultural Research (Japan)). It should be added that the application for Grant-in-Aid for Scientific Research has been adopted since 2013, and various challenges have been achieved in strengthening the international information dissemination. Newly introduced services for members are full-text XML on J-STAGE, early publication, free color figures in the online edition, Open Access distribution on PubHort, special issues, and an increase in the number of overseas editorial board members. The impact factor of HJ reached a record high of 1.2 in 2022. Note that excessive strengthening of international information dissemination may lead to a decrease in the number of domestic society members, and we hope that this will be carried out with the understanding of society members.

4) Awards

The predecessor of the current Society Prize was the Horticultural Society Prize Kikuchi for Research, Outstanding Achievement, Promising Researcher, and Outstanding Contribution, which was first awarded to six persons in 1956. Selection has been made by the Prize Selection Committee of the JSHS from 1967, and to date, The JSHS Research Award (currently, The JSHS Outstanding Horticulturalist Award), The JSHS Outstanding Achievement Award, The JSHS Promising Researcher Award, and The JSHS Outstanding Contribution Award were given to 44, 71, 181 and 49 individuals or groups, respectively. The JSHS Outstanding Achievement Award was abolished in 2002, and The JSHS Publication Award (three in English and two in Japanese papers) and The JSHS Young Mind Presentation Award have been awarded since 2002 and 2021, respectively.

Referring to the awards given by external organizations, Association of Japanese Agricultural Scientific Societies (AJASS) was established in 1929 and is an organization whose members are agricultural societies. JSHS has been a member since the establishment of AJASS. Currently, AJASS has 54 member societies, and JSHS is the 8th largest society in terms of membership. AJASS awards the Japan Prize of Agricultural Science (JPAS), the highest honor among Japanese agricultural scientists, every year. The past winners of the JPAS Prize, endorsed by the JSHS, include Dr. Chozaburo TANAKA (1934), Dr. Tuneo (Tsuneo) EGUCHI (1940), Mr. Zembei (Zenbei) KAWAKAMI (1941), Dr. Akio KIKUCHI

(1945), Dr. Jiro FUKUDA (1951), Dr. Hideo ITO and Dr. Takashi SAITO (1964), Dr. Akira KOBAYASHI (1973), Dr. Yotaro TSUKAMOTO (1974), Dr. Shinji HAYASHI (1984), Dr. Tadashi ASAHIRA (1992), Dr. Kuniyoshi KONISHI (1998), Dr. Akira SUGIURA (2003), Dr. Shohei YAMAKI (2007), Dr. Susumu YAZAWA (2009), Dr. Ryutaro TAO (2019), Dr. Masahiko YAMADA (2020) and Dr. Masayoshi SHIGYO (2025). On the other hand, the Foundation of Agricultural Sciences of Japan (FASJ) has awarded the Japan Prize in Agricultural Sciences, Achievement Award for Young Scientists to young researchers, under the age of 40, who have made outstanding contributions to the progress of agricultural science. The past winners of the FASJ Prize, endorsed by the JSHS, include Dr. Masayoshi SHIGYO (2003), Dr. Ryohei NAKANO (2003), Dr. Katsuhiro SHIRATAKE (2004), Dr. Akiko ITO (2005), Dr. Tamotsu HISAMATSU (2007), Dr. Sanae KISHIMOTO (2009), Dr. Hisayo YAMANE (2009), Dr. Kenichi SHIBUYA (2011), Dr. Hiroko YUMOTO (2013), Dr. Masafumi YAGI (2017) and Dr. Takashi AKAGI (2019), and it can be understood that many excellent research achievements have been issued by JSHS.

5) Involvement with the International Society for Horticultural Science (ISHS)

The first International Horticultural Congress (IHC) was held in Paris in 1889, but JSHS became involved after the International Society for Horticultural Science (ISHS) was established from its predecessor, the International Horticultural Congress Committee, in 1959. Since joining as Class II in 1960, the councils were attended by Dr. Minoru KAJIURA in Belgium (1962) and the United States (1966), Dr. Yotaro TSUKAMOTO in Israel (1970) and Poland (1974), and Dr. Masatoshi IWATA in Sydney (1978). After becoming Class I in 1979, three councilors attended in Hamburg (1982), Davis (1986) and Firenze (1990). The 24th IHC was held in Kyoto Prefecture (Aug. 21–27, 1994) for the first time in Asia, under the motto of “The beautification of life and it’s environment through horticultural science”, and the event was successfully concluded with 1,900 participants from 60 countries. Since then, the congress has been held in Brussels (1998), Toronto (2002), Seoul (2006), Lisbon (2010), Brisbane (2014), Istanbul (2018), Angers (2022) and the 32nd IHC will be held again in Kyoto in 2026. In recent years, numbers of international symposia have been organized in Japan. The ISHS was headed by Dr. Ryozo SAKIYAMA as President (1990–94) and Dr.

Ryutaro TAO as a director in charge of finance (2014–18). The ISHS councilors have been served by successive Presidents and Vice-Presidents of JSHS, and Dr. Shuichi IWAHORI, Dr. Ryutaro TAO and Dr. Hisayo YAMANE have continuously joined the ISHS as councilors, playing a role in strengthening the relationship with the ISHS. ISHS awards to date include the ISHS Honorary members to Dr. Masatoshi IWATA (1998) and Dr. Koki KANAHAMA (2016), ISHS Fellow members to Dr. Shuichi IWAHORI (2014) and Dr. Ryutaro TAO (2021), and the ISHS Horticulture Innovation Award to Suntory Flowers (2016). In 2024, there are 278 ISHS members in Japan. In addition, the Horticultural Society of Korea, China and Japan took the lead in organizing the Asian Horticultural Congress (AHC) in the middle year of the quadrennial IHC, and the first meeting was held in Jeju (Korea) in 2008. The second AHC was to be held in Tsukuba (Japan) in 2012, but was cancelled due to the 2011 Great East Japan Earthquake, and was held in Chengdu (China) in 2016 and the third in Bangkok (Thailand) in 2021. The fourth AHC was successfully held in Tokyo (Japan) in 2023 to coincide with the Centenary of the JSHS as mentioned before.

6) Other Events/Publications

The Commemorative events for the founding of the JSHS have been held every quarter of a century so far. Although the 25th anniversary was in 1948, Dr. Masatoshi IWATA recalls that it was just after the defeat in the war and no one seems to have noticed. The 50th anniversary was celebrated on April 9, 1973 at the Nokyo-Kaikan Hall (hall of Agricultural Cooperative), Otemachi, Tokyo Metropolis and the 75th anniversary of April 2, 1998 at the Keio Plaza Hotel, Tokyo Metropolis, where the *Engeigaku Zenpen* (Complete Horticulture) and *Shin-Engeigaku Zenpen* (New edition of Complete Horticulture), were edited and published, respectively. The centenary celebrations were held on August 28, 2023 at the Ito International Hall, Tokyo Metropolis. Other publications include a Glossary of Horticultural Terms and a Glossary of Horticultural Terms and Crop Names, published in 1972, 1979, 1987 and 2005. Horticulture in Japan was published in both English and Japanese to commemorate the IHC held in Kyoto Prefecture in 1994, and the English edition was revised and published in 2006. The newly revised Horticulture in Japan 2026 will be published as part of the centenary celebrations.

7) Establishment of the JSHS as General

Incorporated Association

The JSHS had been the largest voluntary organization in the AJASS in terms of membership. Voluntary organizations were officially regarded as a group of individuals and no social personality, and social contracts such as bank accounts had to be made in the personal name of the president. With the revision of the Corporation Law in 2008 in Japan, general corporations can be established only by registration, and the incorporation of the JSHS was discussed in the special committee of JSHS established in 2010. A report was issued in March 2012, recommending that the society should be converted to a non-profit general incorporated association as soon as possible. Specific action began to be taken regarding the transition to a non-profit general incorporated association were initiated, including the integration of convention accounting and general accounting through the introduction of a convention registration system in 2012, and the system for incorporation, including the introduction of corporate accounting was established through the submission of a notification of commencement of profit-making business and salary paying business office notification to the Kamigyō Tax Office in 2013, to comply with corporate tax, consumption tax, and withholding income tax. The transition to incorporation was reported at the general meeting of the spring meeting in March 2014, and coordination with the judicial scrivener regarding the preparation of articles of incorporation began in April. Supportive funding was introduced to improve the relationship with the branches in June, and an extraordinary general meeting was held in the autumn meeting in September, where a resolution was passed to revise the constitution regarding the dissolution of the JSHS, and finally the new corporation was established in January 2015. Incidentally, Article 3 of the Articles of Incorporation of the JSHS stipulates that “The purpose of the Society is to advance the science and technology of horticulture and to contribute to the development of the horticultural industry and a sustainable society”.

It was decided to engage in a frank discussion of incorporating the association with a judicial scrivener based on compliance with the Corporation Law. For ensuring a smooth transition from the former voluntary association and continuity of business, it was decided to maintain the executive committee structure, election of candidates for the board of directors by both nomination of the president and election of councilors, and continue the practice of allowing the vice-president to be nominated as the next

president. The Articles of Incorporation were kept to the minimum necessary, details were stipulated in the Bylaws and Rules, and the Bylaws and Rules could be amended or abolished by the board of directors for agile organization and management. In addition, a system was established to implement web-based delegate elections, the election of candidates for director and auditor by delegate, and the election of the president and vice-president by the board members for the purpose of promoting the participation of members in the management of the organization and a democratic election system. From the constitution of former JSHS as a voluntary organization, the following main changes were made: membership classification rights were changed so that member of one journal could also be given the right to be elected; a General Meeting of members was established with delegates having voting rights on the Constitution, officer, and financial statements; the Board of Directors was established with directors elected by the delegates and directors appointed by the president as the decision-making body for management and administration; and the Executive Committee was established under a Board of Directors, which was based on the previous Executive Committee. In addition, the Management Committee, which follows the existing Executive Committee, has been established under the Board of the Directors. It was decided that the business and fiscal years are set from January to December, and that the General Meeting of Members will be held at the Spring Meeting as in the past. In addition, only Article 2, “Branches can be established” was included in the Articles of incorporation for the continuation of branch activities. The incorporated association JSHS was established as of January 5, 2015, with three members (Dr. Michio SHIBATA, Dr. Motoaki DOI and Dr. Munetaka HOSOKAWA). Until the election of delegates and candidates for officers, the secretary and financial auditor served as founding directors and auditors. Web-based delegate and officer candidate elections were held, and a new officer structure was put in place under the leadership of President Motoaki DOI.

8) For the Future Development of the JSHS

Prior to the incorporation, the Executive Committee, Board of Councilors, JSHS Award Selection Committee, International Exchange Committee, Journal Editorial Committee, Symposium Committee and Branch Chairperson’s Roundtable Meetings were always held at the time of the biannual meeting. At the same time, special committees were established under the leadership of

the President as the occasion arises to revitalize the activities of the society, to respond to internationalization, and to consider the future of horticulture and the society, with the councilors playing the main roles. There was not enough time to consider the transition to the new organization led by the directors and secretaries after the incorporation of the society; besides, the expansion of the new coronavirus infection required the directors and secretaries to establish an unprecedented management of the society. Despite these situations, AHC2023 and the centennial commemorative project of the JSHS were successfully finished, and IHC2026 will come without any

time to wait. Looking back on the 100-year history of the JSHS, the authors would like to thank our senior members once again for their dedicated contributions to the society and look forward to the future activities and development of the current officers and secretaries. In our opinion, our mission is to promote further development of horticultural science in the future, to utilize the accumulation of “knowledge” for the benefit of the society and to pass it on to future generations to generate new knowledge. We look forward to the next 100 years with renewed determination.

(Yukio Ozaki, Michio Shibata)

I-2. The Japanese Personality and Horticultural Products

THE JAPANESE PERSONALITY

1) Overview of the Japanese Temperament

This chapter delves into the unique mindset that fosters horticultural traditions in Japan. As an island nation, Japan has historically had limited international interactions, resulting in narrow variations in values, lifestyles, and languages. Hence, compared to other nations, it is easier to identify a cohesive “Japanese disposition” as approaches and attitudes tend to be similar within industries throughout Japan (horticulture, education, etc.). This interpretation is subjective, but is supported by the following preferred traits and tendencies of the Japanese people:

- Prioritizing their community or group
- Favoring peaceful conflict resolution
- Embracing humility and fortitude
- Diligence
- Kindness, mutual aid, and hospitality
- Brimming with intellectual curiosity
- Adherence to societal ethics (leading to a robust public order)
- Sensitivity to trends (easily bored, embracing subcultures)
- Cherishing the four seasons, nature, and natural beauty

Of these traits, the fundamental Japanese disposition resides in community prioritization. Despite its abundant natural landscapes, such as mountains, water bodies, forests, flora, and fauna, Japan grapples with recurrent natural disasters. Throughout their extensive agrarian history, the Japanese people have feared, respected, and coexisted

with nature. Furthermore, the cooperation and dedication of locals are essential to sustaining agriculture, even in the face of constant natural disasters. This might contribute to the robust sense of camaraderie among the Japanese people and their inclination towards modesty in cooperative endeavors.

Foreigners often perceive Japanese individuals as reserved and taciturn. This perception could stem from their anxiety about speaking English (although the Japanese tend to have strong reading and writing English skills) and their inexperience with foreigners. They tend to overly consider others’ feelings, even those of fellow Japanese people, and cautiously maintain interpersonal boundaries. Additionally, Japanese society prioritizes group stability, avoids abrupt changes or transformations, endures discontent with the status quo, and leans towards adaptation. Thus, the Japanese people have cultivated a culture that esteems humility and tactful expressions to avoid aversion and considers endurance and emotional restraint as virtues.

2) Japanese Decision Criteria and Work Approaches

Japanese individuals tend to assess their personalities and values through comparisons within a group, making “how one is perceived by others”, a crucial criterion in all aspects of life. With the belief that group uniformity is essential for collective stability, Japanese people tend to fear deviating from the norm or causing inconvenience to others. This disposition often acts as external pressure, leading to a tendency to prioritize “work first” over personal desires or private time. In contrast, cooperation