Education, Research, and Use of Human-Horticulture Relationships in Japan and Korea

Eisuke Matsuo

ADDITIONAL INDEX WORDS. **Human issues in horticulture, horticultural therapy, people-plant interactions, sociohorticulture, human well-being**

SUMMARY. Plants and horticulture play an integral role in the cultural heritage of eastern societies. Plants are deemed as important in many ways besides being a source of food and shelter. The present study summarizes information on research and trends in the value and application of horticulture collected from professionals in Asian countries, focusing on the work in human-horticulture relationships in Korea and Japan.

Plants and horticulture play an integral role in the cultural heritage of eastern societies. Plants are deemed as important in many ways besides being a source of food and shelter. Horticulture benefits us economically, psychologically, mentally, emotionally, environmentally, socially, and educationally (Matsuo, 1997b). Only recently has the importance of these less tangible relationships been recognized by many academic horticulturists worldwide. This paper documents some of the formal activities in human-horticulture relationships in Asian countries.

To gather information for this manuscript, the author began by reviewing the address list of the People-Plant Council (Blacksburg, Va.) for members in countries in Asia or Africa. The author then sent questionnaires to people who were members in countries other than Korea or Japan. The questionnaire included three questions: 1) What kind of studies do you think are included in the field of human-horticulture relationships? 2) Do you have any organization or society (local or nationwide) which concerns human-horticulture relationships? 3) Does any university or college have a course or curriculum that includes human-horticulture relationships? W.K. Sim (Department of Horticultural Science, Korea University, Seoul, Korea) provided the information on Korea. He has been active in this field for a number of years (Sim, 1997; Sim and Kwack, 1995). This author (Matsuo) provided the information covering events in Japan.

Bioresource and Bioenvironmental Sciences, Graduate School, Kyushu University, Japan 6-10-1, Hakozaki, Fukuoka-shi 812-8581, Japan.

The cost of publishing this paper was defrayed in part by the payment of page charges. Under postal regulations, this paper therefore must be hereby marked *advertisement* solely to indicate this fact.

Reviewing the membership list for the People-Plant Council showed that Asian and African members were located in the following 11 countries: Hong Kong, India, Indonesia, Iran, Israel, Japan, Korea, Pakistan, People's Republic of China, Saudi Arabia, and South Africa. This indicates that interest in human-horticulture relationships exists in many countries. In response to the questionnaire, the author only received three responses, one each from Hong Kong, India, and Pakistan. They mentioned a variety of topics that they believed to be included in studies on human-horticulture relationships (Table 1). This list shows that these respondents have similar ideas to others throughout the world about what is generally included under this terminology (Lewis, 1976; Matsuo, 1996; Matsuo and Relf, 1995). The response from Pakistan also noted that lectures on horticultural therapy are given there. The lack of more specific responses to this questionnaire could mean that the study of human-horticulture relationships is still in its infancy in many countries, as it was in the United States and in Japan in the 1970s. This idea is supported by the lack of published work from researchers in these countries. Charles Lewis recounts the early beginning of this field in the United States, stating that in 1972, "I had no idea how difficult it might be for academic professionals to accept a different way of seeing horticulture" (Lewis, 1994). He noted that it took two decades for the idea to be more widely accepted among horticulturists in the United States.

Korea

In Korea, horticultural therapy is becoming popular (Sim, 1997), and plant symbolism has been studied from the human-horticulture relationship point of view (Sim and Kwack, 1995). B.H. Kwack, Korea University, introduced horticultural therapy in South Korea at the beginning of the 1980s through lectures and publications. In 1991, Hyosung Women's University began offering the course Therapeutic Horticulture to undergraduate students in the Department of Floriculture. In 1993, Korea University offered the course Socio-horticultural Implementation to graduate students in the Department of Horticultural Science (Sim, 1997).

At present, Chonnam National University (for graduate students),

Konkuk University (for graduate students), and Ansung National Technical University (for undergraduate students) have courses related to horticultural therapy. Horticultural therapy has been implemented at hospitals, rehabilitation centers, and special education schools. In November 1997, a study group on horticultural therapy was organized. Other special activities related to human-horticulture relationships include special lectures on sociohorticulture sponsored by the Korean Society for Horticultural Science in October 1995. The Korean Institute of Plant, People and Environment was founded in February 1998 and held an international symposium "Plant and People Interactions in Human Health and the Quality of Life" in May 1998. Such activities show that human-horticulture relationships are gaining wide acceptance in Korea.

Japan

ECONOMICAL PRODUCTION OF FOOD AND FLOWERS. After World War II, the Japanese people were eager to produce their own food. In horticulture, fruit and vegetable production was the main objective. Since the 1960s, flower production has been promoted, but only for economic gain. In other words, the human aspects of horticulture were, at best, ignored for a long time, and, at worst, rejected in favor of traditional academic topics related to horticultural plants, horticultural production, and postharvest storage of horticultural crops.

Japanese horticulturists typically had hesitated to respond to the needs of amateur horticulture or home horticulture, which concern the human aspects of horticulture, because it did not relate to commercial production. They held such opinions in spite of the fact that, for example, 900,000 copies of the TV text "Shumi-no-engei (Hobby gardening)" have been on monthly sale since 1984 (Matsuo, 1995a).

There have been very few presentations on amateur horticulture, home horticulture, or cultural aspects of horticulture at meetings of the Japanese Society for Horticultural Science (JSHS) (Matsuo, 1996). Such topics were inclined to be disregarded or criticized as "... not research projects in the field of horticulture." The author himself was criticized when he made presentations on regional appellations of the genus *Allium* L. plants (Matsuo, 1974, 1975),

home gardening and allotments (Matsuo, 1978a, 1978b), flower use at tombs (Matsuo, 1979), horticultural information on TV and radio (Matsuo, 1982a), and more. The manuscripts on these topics were routinely rejected by horticultural journals in Japan. Such attitudes of Japanese horticulturists came into the open during a presentation on the control of flower direction in *Narcissus* L. in 1982 (Hara, 1982, 1983; Kosugi, 1983). Hara was directly criticized, being told that his research project should not be done at a public research station. This situation may be the case now in most Asian and African countries.

Not surprisingly, topics related to human-horticulture relationships such as extension, environments, education, culture, etc., have been very few in JSHS meetings.

ATTENTION TO HUMAN ASPECTS OF HORTICULTURE. The status of agriculture in Japan changed at the end of 1980s. This resulted in agriculturists and horticulturists becoming interested in establishing allotments in populated areas (similar to community garden plots in the United States) and in beautifying rural areas for farmers to live and work in pleasurable surroundings. These changes suggest that people have begun to recognize the role of agriculture and horticulture in human well-being and social development.

One example of this striking change in the attitudes of horticulturists toward noncommercial horticulture was shown by the decision of JSHS in 1990 to use "The Beautification of Human Life and Its Environment through Horticultural Science" as the motto of the 24th International Horticultural Congress (IHC) of the International Society for Horticultural Science held in Kyoto, Japan. This decision led to the organization of a symposium on "Horticulture in Human Life, Culture, and Environment" (Matsuo and Relf, 1995). This was very successful and might be regarded as the first international symposium on human-horticulture relationships held outside of the United States.

The symposium on "Horticulture in Human Life, Culture, and Environment" at the 24th IHC resulted in increasing horticulturists' interests in human-horticulture relationships in Japan and worldwide. The number of topics related to human-horticulture relationships at the meetings of JSHS increased. The number of participants

Table 1. Topics mentioned by professionals in Hong Kong, India, and Pakistan as included in studies on human-horticulture relationships.

Topic
Aesthetic relationships
Benefits of community gardening
Diseases through plant reaction
Economic and income generation
Horticulture for disabled and mentally disturbed people
Horticulture for health—Exercises
Human behavior through reaction to plant species
Learning—Science/art
Nutritional as a protective food
Pollution control and ecological balance
Positive and negative effect of human beings on growth, yield and quality of horticultural crops
Possibility of the relationship for peaceful coexistence
Religious
Significance of horticulture-human interaction to the industry
Sociocultural relationships
Therapeutic benefits of horticulture
Therapeutic uses by establishing the Hortoriums

who attended the JSHS workshop, "Life and Horticulture," increased markedly over the previous workshop. People's interests in horticultural therapy increased greatly. In 1993, the University of Reading, U.K., began teaching a course in social horticulture for undergraduate students. A special lecture on the socio-horticultural matters was held at the fall meeting of the Korean Society for Horticultural Science in 1995. JSHS opened the first symposium on horticultural therapy in Fall 1997. Six Japanese horticulturists participated in the International Symposium People-Plant Council (Sydney) in July 1998.

The increased activities in human-horticulture relationships in Japan were paralleled by the creation of courses on human-horticulture relationships at universities (Matsuo, 1996). For example, Horticulture in Life was first taught in 1988 and Horticulture and Culture in 1990 at Keisen Women's College. In 1991, National Kagoshima University began teaching Sociohorticulture. In 1992, Introductory Home Horticulture was introduced at Mukogawa Women's University. In 1995, Tokyo University of Agriculture created courses in Urban Horticulture and Horticulture in Life. The National Kyushu University offered Socio-horticulture in the same year. In the following year, Keisen Women's College began teaching Horticulture and Culture at Large.

These processes in Japan are very similar to the development of human horticulture relationships in the United

States. At the beginning of 1970s, the horticulturist, Charles Lewis, who recently published *Green Nature/Human Nature* (Lewis, 1996), noticed the significance of plants on human life, and appealed to horticulturists to examine the area (Lewis, 1976). He was completely neglected by academic horticulturists. Disappointed by this reaction from his colleagues, he began working actively with specialists in other fields such as psychology, landscaping, and community development. After the 1990 symposium "The Role of Horticulture in Human Well-Being and Social Development" was held, his thoughts and works, along with those of other early proponents of this field, began to receive increased recognition from horticulturists (Lewis, 1994). The author dares to feel that pioneers in any field are always solitary.

Sociohorticulture, or the study of human-horticulture relationships, encompasses a vast array of disciplines, extending from the natural sciences to the social sciences. This allows many approaches to be available for researchers. Research in Japan has resulted in publications by horticulturists on the appellation of *Allium* plants in different regions (Matsuo, 1982b), consumers' taste in flowers (Imanishi and Yonezawa, 1990), flower dedication at tombs (Matsuo, 1992), allotment gardens for children, elderly and impaired people (Konoshima, 1992; 1998), plant use on station platforms (Matsuo, 1995b), use of horticulture in welfare institutions and hospitals (Matsuo et al., 1997),

and people's physiological responses to flowers (Yamane et al., 1998), among others.

DEVELOPMENT OF HORTICULTURAL THERAPY IN JAPAN. Horticultural therapy is one example of an applied aspect from the benefits of human-horticultural relationships. Its objectives include helping people with any impairment, disability, or handicap. Horticultural therapy is in fashion now in Japan, not only among horticulturists, but among ordinary people as well.

Horticultural therapy was first introduced in Japan in a horticultural magazine in 1982 (Kyoto-daigaku, 1982). It was given little attention by either horticulturists or landscape architects. Horticultural therapy was reintroduced through publications after 1991 (Matsuo, 1991a, 1991b). In 1992, a Japanese student in horticultural therapy, M. Sawada, returned after 2 years' horticultural therapy training in the United States and began her horticultural therapy work at a welfare institution. In 1993, Diane Relf, Virginia Polytechnic Institute and State University, was invited to lecture at Kagoshima University, and she spoke in Tokyo on horticultural therapy. This was the first introduction of horticultural therapy into Japan by an international horticultural therapy specialist.

During 1993 and 1994, eight symposia, lectures or workshops by international horticultural therapy professionals were conducted (Matsuo and Fujiki, 1996). These events were followed by many lectures and workshops in horticultural therapy with Japanese participants in the following years (Matsuo and Miyajima, 1998). Study groups on horticultural therapy were organized to hold meetings, lectures, discussions, symposia, and workshops for their own enlightenment and to extend horticultural therapy. Such events increased explosively after 1995 (Matsuo and Miyajima, 1998). Hospitals and welfare institutions also began to try horticultural therapy.

Landscape architects comprised many of the people with interests in horticultural therapy when it was first becoming known in Japan (Matsuo and Fujiki, 1996), but recently, interest among horticulturists and people in hospitals and welfare institutions is increasing. Two colleges began offering horticultural therapy courses for students in 1996 and one college in 1998, and after 1996, some study groups opened short-

term training courses for horticultural therapists.

This explosive expansion of interest in horticultural therapy has revealed some problems to be solved. For example, 1) there are different understandings of the concepts of horticultural therapy, 2) many horticultural therapy study groups have been organized, and 3) these groups are teaching and developing horticultural therapy and conducting their works by themselves. This situation has led to confusion, for example, regarding what horticultural therapy actually is. In response to this situation, the author proposed the following definition of horticultural therapy (Matsuo, 1997a, 1998b); horticultural therapy is a procedure whereby a horticultural therapist, with professional skills, understands the nature and condition or symptoms of clients, who need any medical or welfare involvement, and uses horticulture to improve their mental or physical conditions or symptoms, recording the procedure and evaluating the results, followed by choosing the next procedure.

The basic idea of horticultural therapy is to utilize the benefits of horticulture for people with any impairment, disability, or handicap to improve their physical or mental condition. It includes cure, care, rehabilitation, promoting physical or mental growth, and enhancing quality of life. That is, horticultural therapy refers to horticultural activities that are done by people who cannot enjoy them or participate in them by themselves without the help or support of professionals. These benefits from horticulture are used not only for these people, but also for ordinary people. In other words, all human beings can benefit through horticulture, and this benefit can be referred to as horticultural well-being (Matsuo, 1998a).

Conclusion

People's interests in human-horticulture relationships appear to be expanding in various countries in Asia. The research and interests are quite strong in Korea and Japan. Among the many directions of human-horticulture relationships, horticultural therapy, a practical application of the field, receives the most attention. Considering horticulture's involvement in our daily lives, we should pay much more attention to the total role of horticulture in life. Horticulture helps us to live as human beings, to inherit our culture,

and to study how to manage the green on this small planet called earth.

Literature cited

- Hara, S. 1982. Kappu-zaki suisen no hanamuki wo seigyo suru kenkyu. 1982 Fall Abstr. Meet. Jpn. Soc. Hort. Sci. p. 336-337.
- Hara, S. 1983. Fummuko—Shuki engei gakkai kaki-bukai de okotta hatsugen. Agr. Hort. 58(1):36.
- Kosugi, K. 1983. Fummuko—Harashi no goiken ni taisuru watakushi no iken. Agr. Hort. 58(2):296.
- Imanishi, H. and F. Yonezawa. 1990. Hana to hito to no kakawari. Shin-kaki 146:66-71.
- Konoshima, H. 1992. Horticulture in education (2) (in Japanese). Jpn. J. Agr. Educ. 23(1):1-8.
- Konoshima, H. 1998. Cosmos garden project of horticultural activities at 'Gull' (Japan). Abstr. Intl. People-Plant Symp. (Sydney). p. 20.
- Kyoto-daigaku Sosai-kaki Kenkyushitsu. 1982. Engei wo tooshiteno chiryo to rihabilitation. Shin-kaki 113:28-29.
- Lewis, C.A. 1976. People/plant interaction: Human perspectives in horticulture. HortScience 11:4-5.
- Lewis, C.A. 1994. People-plant relationships—Past and future, p. 13-25. In: M. Francis, P. Lindsey, and J.S. Rice (eds.). The healing dimension of people-plant relations: Proc. Res. Symp., Univ. Calif., Davis.
- Lewis, C.A. 1996. Green nature/human nature: The meaning of plants in our lives. Univ. Ill. Press, Urbana.
- Matsuo, E. 1974. Wakegi oyobi sono kin-en negirui ni kansuru kenkyu—Kyushu chiho ni okeru negirui no shikibetsu to kosho. Proc. Autumn Meet. J. Soc. Hort. Sci. p. 190-191.
- Matsuo, E. 1975. Wakegi oyobi sono kin-en negirui bi kansuru kenkyu—Nainsei shoto ni okeru negirui sakumotsu no kosho. Proc. Spring Meet. JSHS, p. 126-127.
- Matsuo, E. 1978a. Katei engei ni kansuru kenkyu—Idea hachi ni tuite. Proc. Spring Meet. J. Soc. Hort. Sci. p. 422-423.
- Matsuo, E. 1978b. Katei engei no kansuru kenkyu—Shimin noen ni tuite. Proc. Autumn Meet. J. Soc. Hort. Sci. p. 184-185.
- Matsuo, E. 1979. Amami-oshima ni okeru hakabana ni tuite. Proc. Spring Meet. J. Soc. Hort. Sci. p. 248-249.
- Matsuo, E. 1982a. Katei engei no kansuru kenkyu (3). TV, radio ni yoru engei joho. Proc. Autumn Meet. J. Soc. Hort. Sci. p. 334-335.
- Matsuo, E. 1982b. Traditional differentiation and appellation of the native *Allium* vegetables in Amami-oshima Island, Kagoshima Prefecture (in Japanese). Geograph. Rev. Japan 55(3):151-164.
- Matsuo, E. 1991a. Hort-therapy 1 (in Japanese). Green joho 12(5):50-51.
- Matsuo, E. 1991b. Hort-therapy 2 (in Japanese). Green joho 12(6):42-43.
- Matsuo, E. 1992. Cut flower usage for ancestral tombs in Kagoshima, Japan. HortTechnology 2(2):236-238.
- Matsuo, E. 1995a. Amateur engei no sengo 50nen wo miru, p. 289-296, 333-335. In: Y. Tsukamoto (ed.). Engei no seiiki 1. Hana wo tsukuru. Yasaka-shobo, Tokyo.
- Matsuo, E. 1995b. What does the plant use on the station platform give an account of? Acta Hort. 391:311-318.
- Matsuo, E. 1996. Sociohorticulture : A new field of horticulture and its present status in Europe, the U.S.A. and Japan. J. Korea Soc. Hort. Sci. 37(1):171-185.
- Matsuo, E. 1997a. Engei-ryoho ni kakawaru samazamana kotoba 5. Green joho 18(1):71.
- Matsuo, E. 1997b. Kurashi to noko—shimin no engei wo kangaeu (1). Agr. Hort. 72(1):9-14.
- Matsuo, E. 1998a. What is horticultural well-being? Abstr. Intl. People-Plant Sym. (Sydney), p. 21.
- Matsuo, E. 1998b. Exploring horticultural therapy—Looking for healing and humanity (in Japanese). Green Joho, Nagoya . p. 257.
- Matsuo, E. and Y. Fujiki. 1996. Therapeutic use of horticulture in Japan, p. 118-122. In: P. Williams and J. M. Zajicek (eds.). People-plant interactions in urban areas: Proc. Res. Educ. Symp., Texas A&M Univ., College Station.
- Matsuo, E., Y. Fujiki, and K. Fujiwara. 1997. Research survey on the therapeutic use of horticulture in welfare institutions and psychiatric hospitals in Fukuoka Prefecture, Japan (in Japanese). Sci. Bul. Fac. Agr. Kyushu Univ. 52(1/2):11-20.
- Matsuo, E. and I. Miyajima. 1998. Up-to-date trend of horticultural therapy in Japan—An attempt to redefine horticulture in horticultural therapy and place horticultural therapy in relation to other therapies. J. Korean Inst. Plant, People and Environ. 1(1):22-33.
- Matsuo, E. and P.D. Relf (eds.). 1995. Horticulture in human life, culture, and environment. Acta Hort. 391:1-334.
- Sim, W.K. 1997. Human in horticulture/People-plant interaction in South Korea. p. 6. Doc. Meet. Intl. Res. Human Issues in Horticulture, October 1997, Va. Polytech. Inst. State Univ., Blacksburg.
- Sim, W.K. and B.H. Kwack. 1995. Psychological effects of ornamental plants on mental health in Korea. Acta Hort. 391:261-264.
- Yamane, K., S. Fukaya, N. Fujishige, K. Yoshino, and M. Katagiri. 1998. Effects of cut flowers on physiological and psychological parameters of human being under stress. Abstr. Intl. People-Plant Symp. (Sydney). p. 45.