

Recent research results in the news:

Engineering

Urban Green Space Projects Incorporating the Therapeutic Effects of Plants

Associate Professor, Graduate School of Horticulture

Yutaka Iwasaki



Background of Research

The functions required of urban green spaces have diversified, and in addition to the function of improving the environment through the creation of green roofs and walls, expectations have recently begun growing for greenery to provide stress relief, that is for what has been described as its “healing effects.”

“Forest therapy,” where people recharge themselves by taking walks through forests, have long been known, and many people have probably experienced this phenomenon for themselves. For people who spend most of their lives in the city, however, the reality is that it is too difficult to just take oneself off to a forest and relax. It’s possible that if the same sort of effects could be had from green spaces nearer to home, then we could relieve our stress more easily in the course of our daily lives. To that end, as well as test for the remedial effects that urban green spaces possess, I have been designing proposals for facilities and uses for these spaces to aid the health of the people who use them.

Results from this research

Based on the results of my experiments in a variety of urban green spaces around Tokyo, such as Think Park in Osaki, Tokyo Midtown in Roppongi, and rooftop gardens on commercial buildings in Shinjuku, it was evident that when people relaxed in a green space, their levels of salivary cortisol (the physiological “stress hormone”) has decreased, their blood pressure was brought closer to normal levels, and in terms of their state of mind, their tension and unease were reduced while their spirits were lifted. Judging from these results, even urban green spaces closer to home can be said to adequately recharge people.

Other areas of my research include a series of practical research projects on “Plants and People’s Health,” which include the promotion of “garden hospitals” where the therapeutic effects of plants are incorporated into hospital landscaping; an examination of the effects of horticultural therapy in cancer palliative care units; and designing and testing therapy programs in suburban woods.

Prospective developments

Although urban green spaces proved to be effective places for relieving stress, several issues are raised if we turn our attention to how they are used in practice. One such issue is that since people have to attend work or school during the day, for most people even if a park is close at hand it will be difficult to take advantage of it with any frequency. I am presently studying the stress easing effects to be had by such city dwellers by making use of green spaces later in the evening. Many people enjoy viewing cherry blossoms and autumn leaves in the evenings when the trees are specially lit up. I would like to propose more such green spaces where people can experience this sort of enjoyment in the evening on their way home from work.



Experiments on the effects of stress easing in urban green spaces