DTXIV International Conference of Arid Land Studies

September 7th - 10th 2021

Tokyo

7th September

9:45-9:55 **Opening remarks** — **President of IDC, Prof. Takahiro Morio**

9:55-10:00 **Important points of presentation** — President of DT14ICAL, Prof. Yoshiko KAWABATA

Oral Presentation

7th Septembe Stress biology in arid land

	Chair: Prof. William PAYNE and Prof. Toshinori KOJIMA		Page
10:00-10:20	STATISTICAL ANALYSIS FOR ESTIMATING SURVIVAL OF LICORICE (*Glycyrrhiza uralensis* Fisch.) AND IMPROVEMENT EFFECTS OF SURFACE GROUND ENVIRONMENT	Zentaro FURUKAWA, Noriyuki YASUFUKU, Kiyoshi OMINE, Atsushi MARUI, Indree TUVSINTOGTOKH and Bayart MANDAKH	1
10:20-10:40	Development of CO_2 Fixation Technology by Afforestation of Fast-growing Paulownia Trees: An Example in Fukushima Prefecture,	Kazuki Sugawara, Kazuma Omiya, Hiroyuki Fujii, Shigeru Kato, Seiichi Suzuki	2
10:40-11:00	Electrochemical degradation mechanism of trichloroethylene in grass beads mock soil	Kazuki Ito, Kazuki Sugawara, Seiichi Suzuki, Takuya Ito, Shigeru Kato and	3
11:00-11:20	The tendency of plant species identified in the Djibouti Republic of East Africa registered in the global biodiversity database	TANAKA Satoru, TAKAHASHI Simpei, KIMURA Rikako, SHIMADA Sawahiko	4
11:20-11:40	Beyond Tsunami disaster: Ten years' Activities to use uncultured field for biomass production of willow after the Great East Japan Earthquake in Miyagi, Japan.	Yuichi Ishikawa, Hideo Sugimoto, Yasunobu Matoba, Toshio Oshida, Atsushi Fukuda, Hisao Ushiki, Tetsu Nishioka, Yuji Aoki, Takahiro Miyai, Shunsuke Kikuchi, Ryo Fujita, Satoshi Wakamiya, Shota Sasaki, Shota Nagasawa, Moe Satoh, Sachiko Yabuki, Hitoshi Kanno, Hidetsugu Morimoto, Shin Hidaka, Atsushi Hayakawa, and Tadashi Takahashi	5
11:40-12:00	Basic Study on the Mechanism of 1,4-Dioxane Phytoremediation by Willows. - Comparison of Three Willow Species.	Takahiro Miyai, Osamu Kiguchi, Tadashi Takahashi, Naoyuki Miyata, Atsushi Hayakawa, Yuichi Ishikawa	6

12:00-13:00 **Lunch**

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13:00-13:20	Solvent polarity control in direct liquefaction of eucalyptus wood	Miono ISHIZUKA, Takuya ITO, Toshinori KOJIMA	7
13:20-13:40	Utilization of hydrogel as an alternative water holding amendments on survival and growth of E.equisetina plant seedlings	Berdiyar JOLLIBEKOV, Jing-ai CHE, Tianfu HUANG, Shiho KAGAMI, Akihito TAKANO, Takahisa NAKANE, Masaaki YAMADA, Yoshiko KAWABATA, Isao OGIWARA	8
13:40-14:00	Profiling of the phenolic compounds from Aloe djiboutiensis in Djibouti	Ko Hinokidani, Ryuichi Tachibana	9
14:00-14:20	Preliminary study on improvement of soil water retention characteristics by Spirulina	Shinji SUZUKI , Satoru WATANABE , Fumio WATANABE , and Sawahiko	10

Break

Agriculture in arid land

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15:40-16:00	Farmers' preferences of the agricultural inputs for rice farming in Senegal River Basin, Mauritania: A best-worst scaling approach	Yuki Maruyama, Kiyokazu Ujiie, Cherif Ahmed, Mandiaye Diagne and Mitsuteru Irie	11
16:00-16:20	Effects of plastic mulching on productivity and profitability of cotton (Gossypium hirsutum) in Uzbekistan	Sirojiddin NIZAMOV, German BEZBORODOV, Musulmon ZIYATOV,	12
16:20-16:40	Circular Halophytes Mixed Farming (CHMF) to Improve Food Security in Salt-Affected Irrigated Arid and Semi-arid Ecosystems	Kristina Toderich, Hidenari Yasui, Nataliya Akinshina, Matsuo Naoko, Ryosuke Endo, Timur Khujanazarov, Ana Shkineva, Zulfiya Sultanova, Alisher Qurbanov, Norikazu Yamanaka and Elena Shuyskaya	13
16:40-17:00	Cultivation of quinoa to improve food security in arid climate and salinization of the Southern Aral Sea region	Zulfiya Sultanova, Kristina Toderich, Xudaybergenov Baxtiyar, Utewliev Janibek	14
17:00-17:20	Seasonal variations and obstacles of cocoon production in Tashkent region, Uzbekistan	Khaytbay Artikov, Shavkat Achilov, Motoi Kusatodokoro, Makoto Iikubo, Yunus Kenjayev, Yoshiko Kawabata	15

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17:40-18:00	Development of technology for the evaluation and cultivation of medicinal plant Ravoch (Rheum L) growing in Karakalpakstan	Janbolat AKSEITOV, Zamira PAZILBEKOVA, Yoshiko KAWABATA,	16

Seasonal variations and obstacles of cocoon production in Tashkent region, Uzbekistan

Khaytbay ARTIKOV[1,2], Shavkat ACHILOV[3], Motoi KUSATODOKORO[1], Makoto IIKUBO[1], Yunus KENJAYEV[2], Yoshiko KAWABATA[1]

Uzbekistan's sericulture tradition dates back to ancient times and is of national proud. Despite considerable production of fresh cocoons at 25,000 t/year or sharing 80% in Central Asia until 2012, the sector is now struggling to reach its previous volumes. Being one of the main income sources in rural areas, family sericulture program has not yet contributed to poverty reduction due to outdated technique of cocoon rearing. Considering those statements, we conducted a study based on a questionnaire survey to identify the obstructing factors of cocoon production in Tashkent region. Major sericulture activities are practiced in spring; however, the autumn sericulture has also recently been launched on a regular basis. Therefore, we compared both sericulture seasons with a focus on sericulture farmers whose livelihoods largely depend on sericulture. We surveyed 107 sericulture farmers in total, practiced with 70% sericulture alone followed by 14% horticulture. They were presumably selected based on rearing seasons and taking care practice of mulberry plantations.

Surveyed farmers had 29 % agriculture background while 59% being temporary workers engaged in seasonal sericulture, having 51 % income from sericulture followed by horticulture (27%) and subsidies (22%). Mulberry land areas of 1, 2, 3 ha and other (<1 ha) used by spring and spring+autumn farmers were 44%, 32%, 4%, and 19%, respectively. 86% of land occupied by mulberry, while 25% intended to cropping purposes, of them 77% rented from government for mulberry. Interesting case was seen at sericulture experiences where spring farmers were greater in number (28%) of 1-3 years of experience while spring+autumn group with 39% over 10 years of experience. Therefore, number of silkworms raised by spring farmers at 65% case consisted of 1 box followed by 35% of 2 boxes, where spring+autumn farmers instead of one, grown two and three boxes at 71% and 29%, respectively (p = <0.01). Similarly, both sericulture farmers found main obstacles as climate related at 60-62% case, followed by diseases at 20-24%, relatively (p = <0.01). These struggling factors could not be prevented due to traditionally home-based sericulture (p = >0.05), occupying both living rooms (43-44%) and cow sheds (30-38%). Therefore, particular efforts are required to maintain the day/night temperature, and humidity in cowshed or living rooms used as rearing places; keeping the mulberry leaves freshness in autumn while washing out the dirty leaves in autumn before feeding the silkworms which were even more effortful and time-consuming.

Keywords:

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