

2.3 Joint Research

(1) List of Joint Research

A-1) Studies on the Micrometeorological Improvement of Agricultural Fields in Arid Lands

Studies on Characteristics of Turbulence Transfer of Heat, Moisture, Momentum and Scalar Quantity in and above Canopy under Dry Condition

Seiji HAYAKAWA, Hiroshi TANI, Kenji SUZUKI, Makio KAMICHIKA, Kyoichi OTSUKI and Kyoko NAKAMOTO

Estimation of Soil Moisture in the Shallow Root Zone Using Simple Meteorological Observation

Nobuhiro MATSUOKA, Masahiro YOSHIHARA, Son GU, Kyoichi OTSUKI and Makio KAMICHIKA

Studies on the Micrometeorological Improvement of Agricultural Fields in Arid Lands

- Measurement of Evapotranspiration in Arid Fields by Micrometeorological Method -

Takeshi MIURA, Kyoichi OTSUKI and Makio KAMICHIKA

A-2) Hydraulic Design and Water Management of Microirrigation

Water Dynamics in Citrus Tree

Tetsuo SAKURATANI, Itaru TSUYUKI and Tomohisa YANO

Studies on Water Requirement of Several Fruit Trees

Kuniaki TAKAHASHI, Noboru NAKATA and Tomohisa YANO

Chemical Injection System in Microirrigation Using Bend Pipe

Soichi NISHIYAMA and Tomohisa YANO

A-3) Analysis of the Eco-physiological Characteristics of the Root System under Arid Land Condition

Analysis on Water Absorption by Root Systems of Cereal Crops with Reference to Their Morphology and Anatomy

Shigenori MORITA, Shinobu INANAGA and Yukihiro SUGIMOTO

Sudden Increase of Exudation Rate in Corn Plants Suffered Soil Desiccation by Irrigation

Tohru KOBATA, Fumihiko ADACHI, Jin KAKIUCHI and Shinobu INANAGA

Root Growth and Viscoelastic Properties of Cell Walls Mediated by the Water Environment

Eiichi TANIMOTO, Shinobu INANAGA, and Yukihiro SUGIMOTO

A-4) Studies on Water-Saving Cultivation of Crops in Arid Lands

Isolation of Frankia-like Actinomycetes from Nodule-lobes of Casuarina Roots in Ishigaki Island

Katsuki ADACHI and Kunio HAMAMURA

Effects of Salt Water Irrigation on Growth of Bulbous Plants

Hiroshi OKUBO, Megumi INOUE, Kuang Liang HUANG, Kaori II and Masao TOYAMA

A-5) Eco-physiological Studies on Tree Tolerance to Water Deficiency and Salinity

An Ecophysiological Study on the Mechanism of Drought Damage of Trees

Tatsuaki KOBAYASHI, Norikazu YAMANAKA and Shigenobu TAMAI

Studies on Salt Tolerance of Tree Species

Tsuneo NAKASUGA and Shigenobu TAMAI

Growth and Morphology of *Salix psammophila* Planted on Slopes of Sand Dunes in the Mu Us Desert, China

Fukuju YAMAMOTO, Akira YOSHIDA, Norikazu YAMANAKA and Shigenobu TAMAI

A-6) Studies on Farm Land Conservation in Arid Areas

Research on Measurement of Hydraulic Properties for Conservation of the Shallow Groundwater

Yuji TAKESHITA, Mitsuhiro INOUE and Tahei YAMAMOTO

On the Characteristics of Rill Patterns Generated on the Salinity Soil

-Time Variation of Plane and Sectional Patterns of Rills and Sediment Rate out of the Slope -

Mitsuo FUKADA, Tahei YAMAMOTO and Mitsuhiro INOUE

Preferential Flows and Solutes Transport in Sandy Soils

Hiroyuki CHO, Tahei YAMAMOTO and Mitsuhiro INOUE

Effects of Soil Stability and Water Quality on Erosion during a Rainfall

Taku NISHIMURA and Tahei YAMAMOTO

B-1) Studies on Water and Salt Management on Woody Plants in Arid Areas

Estimation Temperature and Water Status on Soil Surface Using Remote Sensing

Masateru SENGE, Kengo ITO, Makio KAMICHIKA and Kyoichi OTSUKI

Evaluation of Biomass on the Aboveground Using Satellite Data

Etuji ISHIGURO, Muneharu SATO, Koichi IWASAKI, Yukio TERAOKA, Sumitaka KASHIWAGI and Makio KAMICHIKA

Basic Study for Extracting Physical Properties of Plant by Remote Sensing

Yoshiaki HONDA, Koji KAJIWARA, S. B. HUANG, Chiaki OKANO and Kyoichi OTSUKI

Environmental Assessment of Sakyu and Forest

Hisashi FUJIMURA and Kyoichi OTSUKI

Application of Remote Sensing and GIS Technology for Water Management/Land Use Change in Large Scale Irrigation Project in Arid Land

Kiyoshi TORII and Tahei YAMAMOTO

B-2) Integrated Researches on Soil-Water-Plant Monitoring by Remote Sensing

Numerical Study on Water and Salt Transport

Kazuro MOMII, Tomohisa YANO and Yoshinobu KITAMURA

Undisturbed Measurement of Water and Salt Movement in the Large-Scale Soil Columns

*Toshimasa HONNA, Sadahiro YAMAMOTO, Atsuo INOUE, Tahei YAMAMOTO
and Mitsuhiro INOUE*

Effect of Zeolite Amendment on Water and Salt Control in Soil

*Hiroshi YASUDA, Junichi SUZUKA, Hisashi NAKAHARA, Tahei YAMAMOTO
and Mitsuhiro INOUE*

Mechanism of Simultaneous Transfer of Water, Solute and Heat

Yasutaka KIHARA, Yasushi MORI, Mitsuhiro INOUE and Kyoichi OTSUKI

Salt Movement in Soil with Salt Affected Ground Water

Takeo AKAE and Mitsuhiro INOUE

C) Free Subject on Arid Land Studies

Studies on Circulation of Groundwater in Sand Dunes

Shizuo SHINDO, J. G. TOU, Makio KAMICHIKA and Kyoichi OTSUKI

Spectral Analyze of Arid Land Soil by Visible and Near IR Range

Haruhiko YAMAMOTO, Kiyoshi IWAYA, Makio KAMICHIKA, Kyoichi OTSUKI and Syuhei OKADA

Numerical Simulation of the Flow Field over the Tottori Sand Dune and the Estimation of the Effect of the Vegetation on the Flow Field

Tetuya KAWAMURA and Makio KAMICHIKA

Study on the Simulation of Sand Dunes Variation

Hiroshi YAJIMA, Makio KAMICHIKA and Syuhei OKADA

Fundamental Studies on the Relationship between Salinization and Evapotranspiration of Agricultural Lands in Arid Area

Tadao AODA and Tomohisa YANO

Micrometeorological Measurement of Methane Flux over a Rice Paddy Field

Hikomichi ODANI and Tomohisa YANO

Synthesis of Novel Abscisic Acid Analogues and Their Effect on Plant Growth

Jun-ichi TAMURA, Junko TANAKA, Shinobu INANAGA and Yukihiro SUGIMOTO

Study on Root Characteristics Relating to Stress Tolerance of Cereal Crops grown in Problem Soils with Aspects of Functional Morphology

Jun ABE, Junko YAMAGISHI, Shinobu INANAGA and Yukihiro SUGIMOTO

Analysis of Physiological Characteristics of Crops in Dry Land, China

Hajime TAKAHASHI, Akihiro ISODA and Shinobu INANAGA

Investigation of Gene in Relation to Root Development under Soil Drying

Asana MATSUURA, Yukihiro SUGIMOTO, Ken-ichi MUROTA and Shinobu INANAGA

Screening Germination Stimulants for Parasitic Weeds

Koichi YONEYAMA, Yasutomo TAKEUCHI and Yukihiro SUGIMOTO

Fundamental Study on Natural Plant Growth Regulators for Enhancement of Crop Productivity in the Arid Land

Hikomitsu NAKAJIMA, Yukihiro SUGIMOTO and Shinobu INANAGA

Comparative Study on Factor of Soil Concerning Biological Products on Desert

Kazuhisa HASEGAWA and Masao TOYAMA

Ecophysiological Studies on the Pine Wilt Disease Occurring in Coastal Dune

Kazuyoshi FUTAI, Norikazu YAMANAKA, Shigenobu TAMAI and Fukuju YAMAMOTO

Ecophysiological Study on Drought Resistance of Tree Species in China

Ken YOSHIKAWA, Takashi KUWADA, Ayako SEO and Shigenobu TAMAI

Characteristics of Natural Development and Rural Development of Arid Land Agriculture in West Asia

Ryuichi HARA and Tahei YAMAMOTO

In-situ Measurement of Soil Permeability

Toshihiro MORII and Mitsuhiro INOUE

Analysis of Soil Water Movement by using the Generalized Model for Unsaturated Hydraulic Conductivity

Ken'ichirou KOSUGI and Mitsuhiro INOUE

Study of Water Management on 2 Varieties of Baker's Garlic Grown on Sand Dune Field

Satoshi YAMADA and Mitsuhiro INOUE

Salts Behavior in Soil

Kosuke NOBORIO and Tomohisa YANO