

**Poster Session I****Wednesday, September 2, 2009****Time: 14:50 to 16:00****Symposium Topic****1: Root growth, anatomy and morphology**

	RAP No	Presenting Author		Title
1.	008 -1	Gebauer	Roman	Impact of soil compaction on the tracheid diameter and the theoretical hydraulic conductivity of Norway spruce seedlings
2.	013 -1	Ardakani	Mohammad	Effect of co-inoculation with rhizobia and mycorrhiza on root parameters of lucerne ( <i>Medicago sativa</i> L.) under dry organic farming conditions
3.	018 -1	Gavardashvili	Givi	Quantitative study of the root system and sprouts of the antierosional plant vetiver ( <i>Vetiveria zizanioides</i> , L. Nash)
4.	020 -1	Zanetti	Federica	Root morphology of two modern high-erucic acid oilseed rape varieties ( <i>Brassica napus</i> var. <i>oleifera</i> ) in response to reduced agricultural inputs
5.	035 -1	Herrmann	Antje	Temporal and spatial root growth dynamics of <i>Lolium Perenne</i> L. after defoliation
6.	037 -1	Barion	Giuseppe	Root and nodule efficiency in soybean ( <i>Glycine max</i> (L) Merr.) in differing conditions of water and nitrogen supply
7.	077 -1	Fujii	Saori	Fine root biomass and morphology of <i>Pinus densiflora</i> under different conditions of aboveground growth
8.	078 -1	Karahara	Ichirou	Effects of lateral mannitol treatment on the development of tissues in rice seminal roots
9.	079 -1	Kollarova	Karin	Influence of galactoglucomannan oligosaccharides on cell elongation in primary and lateral roots of intact mung bean plants
10.	080 -1	Lišková	Desana	Interaction of galactoglucomannan oligosaccharides with auxin and activity timing in seminal root growth
11.	085 -1	Bārdulis	Andis	Studies on the development of root systems in young forest stands of deciduous trees in naturally-afforested agricultural lands
12.	087 -1	Metselaar	Klaas	Fractal dimensions of rooting systems - the case of the Wurzelatlas mitteleuropäischer Ackerunkräuter und Kulturpflanzen
13.	088 -1	Metselaar	Klaas	Allometric relations between roots and shoots based on the root atlases
14.	093 -1	Salguero	Julio	Relationship between pericycle cell length and lateral root spacing in maize roots
15.	109 -1	Hund	Andreas	A meta-analysis of QTLs controlling root growth and the response to abiotic stresses in maize
16.	121 -1	Yahya	Asha	Root morphology and dynamics in yeheb ( <i>Cordeuxia edulis</i> Hemsley ) plants
17.	131 -1	Savé	Robert	Late season root profile development of three contrasting vine rootstocks
18.	132 -1	Tanimoto	Eiichi	Gibberellin regulation of root growth and flowering in tea plant ( <i>Camellia sinensis</i> )
19.	133 -1	Hayashi	Michi	Gibberellin-mediated regulation of major cell-wall proteins in pea roots
20.	138 -1	Yamashita	Masataka	Several factors relating on rooting of strawberry young plants
21.	150 -1	Zobel	Richard	Insights into fine root development patterns of perennial ryegrass ( <i>Lolium perenne</i> L.)
22.	156 -1	Martinka	Michal	The endodermal cell to cell contact is required for the spatial control of Casparian band development
23.	162 -1	Čiamporová	Milada	Root anatomy and growth of three Arabidopsis species differing in their heavy metal tolerance
24.	172 -1	Srba	Miroslav	The symplastic cell interconnection during the maize and reed root cortex differentiation
25.	173 -1	Husáková	Eva	Anatomical analysis of lrt1 maize mutant
26.	197 -1	Obroucheva	Natalie	Lignification commencement in roots is controlled by the time after elongation completion

**Symposium Topic****5: Climate change and environmental stresses**

	RAP No	Presenting Author		Title
1.	009 -5	Ehara	Hiroshi	Role of root to avoid salt stress in Sago palm ( <i>Metroxylon sagu</i> Rottb.)
2.	014 -5	Moghaddam	Ali	Root biomass of eighteen alfalfa ( <i>Medicago sativa</i> L.) cultivars in two different environments under organic management
3.	022 -5	Shimamura	Satoshi	Oxygen transport to flooded roots for respiration via aerenchyma in soybean ( <i>Glycine max</i> )
4.	024 -5	Ehara	Hiroshi	Seedling growth and aluminum distribution in root of sago palm under low pH condition
5.	029 -5	Vamerali	Teofilo	Shoot and root phytotoxicity by EDDS in relation to dose and application time in <i>Brassica carinata</i> L. and <i>Raphanus sativus</i> L. var. <i>Oleiformis</i>
6.	039 -5	Shimono	Hiroyuki	Factors responsible for diurnal and seasonal changes in the reduction of stomatal conductance in paddy rice caused by elevated CO <sub>2</sub>
7.	046 -5	Ohashi	Mizue	Contribution of root systems on soil CO <sub>2</sub> efflux in a tropical rainforest in Borneo, Malaysia
8.	059 -5	Korhonen	Anna	Frost hardiness of mycorrhizal and non-mycorrhizal Scots pine ( <i>Pinus sylvestris</i> L.) roots
9.	062 -5	Bohner	Andreas	Effects of sewage sludge application on the arbuscular mycorrhizal colonization of selected grassland species in Austria
10.	107 -5	Reimer	Regina	Association mapping for root traits of maize ( <i>Zea Mays</i> L.) grown at three temperature regimes
11.	122 -5	Arndal	Marie	Root dynamics and nitrogen uptake in a future climate
12.	145 -5	Oyanagi	Atsushi	Wet injury in drained paddy fields and root aerenchyma formation of wheat
13.	149 -5	Kawaguchi	Kentaro	Formation of aerenchyma in seminal root of wheat under nutrient starvation and transcriptome analysis
14.	160 -5	Gurínová	Erika	Ameliorating effects of aluminium on low pH-induced structure damage to <i>Lotus corniculatus</i> root cells
15.	161 -5	Miguel	Carolina	Carbon accumulation in fine roots of soils of a Mediterranean oak forest growing under different levels of thinning and drought conditions after fire disturbance
16.	167 -5	Luxova	Miroslava	The effect of different Si concentrations on antioxidative response in young maize and oilseed roots
17.	178 -5	Chiba	Masahiro	Effect of deep-flood irrigation on grain quality, yield and root activity in rice
18.	184 -5	Krisinger	Gabriele	Growth and vitality of fine roots of Norway spruce as influenced by experimental and natural drought
19.	185 -5	Himmelbauer	Margarita	Soil compaction and root growth controlling factors in cropland, semi-arid of South Bulgaria
20.	186 -5	Himmelbauer	Margarita	Root characteristics of <i>Lotus corniculatus</i> L. and <i>Bromus inermis</i> L. grown on eroded rangeland in a semi-arid area of South Bulgaria
21.	193 -5	Vaculik	Marek	Root anatomical responses of two <i>Salix caprea</i> isolates growing in different environmental conditions

**Poster Session II****Thursday, September 3, 2009****Time: 15:00 to 16:10****Symposium Topic****3: Rhizosphere and soil organisms**

	RAP No	Presenting Author		Title
1.	006 -3	Babay-Ahari	Assadollah	Identification and pathogenicity of the fungi species causing root rot on pepper in West Azerbaijan province of Iran
2.	010 -3	Rezvani	Mohammad	Interaction between alfalfa ( <i>Medicago sativa</i> L.) mycorrhizal roots traits and heavy metals (Cd, Co and Pb)
3.	011 -3	Nandi	Rajasree	Biodiversity of arbuscular mycorrhizal fungi in some forest tree species in Bangladesh
4.	012 -3	Ardakani	Mohammad Reza	Root area index of lucerne affected by rhizobia and mycorrhiza under dry organic farming conditions
5.	016 -3	Noormohammadi	Ghorban	Evaluation mycorrhizal symbiosis and root traits of barely ( <i>Hordeum vulgare</i> L.) under heavy metals stress
6.	041 -3	Levai	Laszlo	Some effects of soil born bacteria in plant nutrition
7.	042 -3	Merbach	Wolfgang	Influence of rhizosphere bacteria of African oil palm ( <i>Elaeis guineensis</i> ) on calcium, iron, and aluminum phosphate in vitro mobilization
8.	070 -3	Nell	Monika	Arbuscular mycorrhizal fungi increase pharmaceutical active compounds in Valerian roots
9.	071 -3	Vierheilig	Horst	Bioprotection against the root parasite <i>Orobancha crenata</i> is induced in pea roots inoculated with <i>Rhizobium leguminosarum</i> bv viceae defective in Nod factor production
10.	114 -3	Wechselberger	Katharina	Do earthworms affect the utilization of nutrients and the mycorrhizal colonization of grassland plants
11.	129 -3	Balloe	Farnia	Effect of thiobacillus and mycorrhiza fungi under different levels of sulfur on yield and yield components of soybean
12.	140 -3	Oburger	Eva	Field versus laboratory studies - comparing turnover rates of <sup>14</sup> C-labelled citrate in soil
13.	146 -3	Kaneko	Michiyo	Auxin-regulation of hyphal elongation and spore germination in arbuscular mycorrhizal fungus, <i>Gigaspora margarita</i>
14.	158 -3	Montero Calasanz	Maria del Carmen	Use of model plans for monitoring colonization of several PGPR isolated from an organic olive grove
15.	168 -3	Zeleznik	Peter	Alteration of root growth caused by heavy forest machinery on Osankarica
16.	169 -3	Hrenko	Melita	Mycobioindication method simplified: Sclerotia of <i>Cenococcum geophilum</i> Fr. as indicators of stress in forest soils
17.	177 -3	Albareda Contreras	Marta	Differences in common bean root colonization by distinct PGPRs and their fluorescent marked derivatives
18.	189 -3	Fender	Ann-Catrin	Effects of biota on biochemistry of the rhizosphere of deciduous tree species and its impact on carbon flow to the soil
19.	204 -3	Moreta	Danilo	Biological nitrification inhibition as a novel approach for enhancing Nitrogen use efficiency in crops

**Symposium Topic****4: Allocation and partitioning in roots, contributions to soil C sequestration**

	RAP No	Presenting Author		Title
1.	056 -4	Hirano	Yasuhiro	Pattern of aluminium-induced efflux of organic acid anions in root tips differs between <i>Cryptomeria japonica</i> and <i>Pinus thumbergii</i> seedlings
2.	076 -4	Dannoura	Masako	Belowground carbon allocation: recovery of <sup>13</sup> C in root growth and respiration after in situ <sup>13</sup> CO <sub>2</sub> pulse labeling
3.	095 -4	Budkevich	Tamara	Evolution of biologically active organic exometabolite content in rhizosphere of agroecosystems of different species composition
4.	101 -4	Makita	Naoki	Seasonal change in fine root respiration and morphological characteristics in a broad-leaved forest in Japan
5.	102 -4	Matsumoto	Akira	Direct measurement of heterotrophic decomposition respiration from root litter in warm-temperate secondary deciduous forest in Japan
6.	118 -4	Schwarz	Dietmar	Assimilate partitioning towards the roots at increased nutrient solution concentration affected by tomato fruit size and origin
7.	136 -4	Gonzalez	Maya	Roots of understory species in maritime pine forests
8.	147 -4	Bingham	Ian	Factors influencing the rate of senescence of clover roots following permanent excision of the shoot
9.	148 -4	Bingham	Ian	Influence of soil compaction on the dynamics of root growth and mortality in spring barley
10.	152 -4	Teliševa	Gajina	Siliceous lignin as promoter for root system development of coniferous trees seedlings
11.	153 -4	Yamashita	Tamon	Spatial variation of fine root biomass in a lowland dipterocarp forest, Peninsular Malaysia
12.	155 -4	Børja	Isabella	Stem girdling effect on soil respiration in 35 and 65 years old Norway spruce ( <i>Picea abies</i> ) stands
13.	165 -4	Püttsepp	Ülle	Fine-root biodegradation measurements in controlled OxiTop system
14.	181 -4	Braun	Michaela	Root and shoot growth and yield of different grass-clover mixtures
<b>4.1 COST Action: Belowground carbon turnover in European forests</b>				
15.	017 -4.1	Ephrath	Jhonathan	Influence of high salinity on root biomass and sap flow of adult olive trees
16.	053 -4.1	Lukac	Martin	Belowground allometric relations in Norway spruce growing in soils with contrasting boulder and water content
17.	098 -4.1	Ostonen	Ivika	Long-root growth dynamics, bio- and necromass, turnover rate, NPP and its proportion of fine root production in a fertile Norway spruce forest
18.	106 -4.1	Rosenvald	Karin	Dynamics of fine-root, rhizosphere and soil parameters in a silver birch stand chronosequence on reclaimed oil shale mining area
19.	135 -4.1	Bakker	Mark R.	Seasonality in growth of ectomycorrhizal hyphae in <i>Fagus</i> , <i>Quercus</i> and <i>Pinus</i> in France
20.	192 -4.1	Zakharova	Anna	Root decomposition and soil carbon pools in a laboratory experiment

**Symposium Topic****6: Root - Soil Interactions: modelling concepts**

	RAP No	Presenting Author		Title
1.	081 -6	Herrera	Juan	Root growth and leaching of nitrogen of catch crops - results from a lysimeter project
2.	108 -6	Hund	Andreas	Depth and vertical distribution of roots in tropical maize inbred lines
3.	117 -6	Zubkova	Tatiana	Influence of salts on soils and plant in city
4.	125 -6	Bodner	Gernot	Model based assessment of barley root ideotypes for breeding strategies in water limited environments
5.	130 -6	Starr	Mike	Modelling depth distribution of tree roots in boreal forests
6.	139 -6	Shelef	Oren	Root halotropism? Salinity effects on Kochia ( <i>Basia indica</i> ) roots

**Poster Session III****Friday, September 4, 2009****Time: 10:00 to 11:00****Symposium Topic****2: Root uptake, use efficiency and competition**

	<b>RAP No</b>	<b>Presenting Author</b>		<b>Title</b>
1.	<b>002 -2</b>	<b>Egodawatta</b>	Chaminda	Application of green manures affect root development and nitrogen uptake of field grown maize and mungbean in tropical minor seasons
2.	<b>003 -2</b>	<b>Egodawatta</b>	Chaminda	Root development of maize as affected by weeds in tropical major and minor seasons
3.	<b>048 -2</b>	<b>Brown</b>	Lawrie	Genotypic variation in root traits involved in phosphorus utilization by barley
4.	<b>050 -2</b>	<b>Båth</b>	Birgitta	Root pruning reduces root competition and increases crop growth in a living mulch cropping system
5.	<b>054 -2</b>	<b>Kikuchi</b>	Sunao	Study of root zone restriction by transplanting cultivation for suppression of cadmium content in Spinach
6.	<b>065 -2</b>	<b>Kudrjashov</b>	Anatolij	Modification of NH <sup>+</sup> ions transport into <i>Zea mays</i> germ roots by means of exogenous aminoacids
7.	<b>075 -2</b>	<b>Moreno-Jiménez</b>	Eduardo	Mercury uptake kinetics by white lupin roots
8.	<b>082 -2</b>	<b>Zelko</b>	Ivan	Effect of root structure on root cadmium uptake in maize
9.	<b>090 -2</b>	<b>Abe</b>	Jun	Silicion deposition in roots of forage grasses
10.	<b>094 -2</b>	<b>Zabolotny</b>	Alexander	Cd accumulation in roots and nitrogen - fixing activity of root nodules in leguminous plants
11.	<b>096 -2</b>	<b>Gaudin</b>	Amelie	Maize ( <i>Zea mays</i> L.) root architectural plasticity in response to critical Nitrogen stress using an aeroponics system
12.	<b>097 -2</b>	<b>Petrítan</b>	Ion Catalin	Effects of root trenching of overstorey Norway-spruce ( <i>Picea abies</i> ) on root growth of underplanted beech ( <i>Fagus sylvatica</i> ) and Gouglas fir ( <i>Pseudotsuga menziesii</i> ) seedings
13.	<b>099 -2</b>	<b>Nihei</b>	Naoto	A study of glutamine uptake by rice roots
14.	<b>103 -2</b>	<b>Homma</b>	Tomoo	Effects of Cd treatment on root activity in tea plants
15.	<b>116 -2</b>	<b>Čermák</b>	Jan	Absorbing roots and leaves distribution in studies based on the whole tree approach in large pines and oaks
16.	<b>175 -2</b>	<b>Schweiger</b>	Peter	Root distribution of winter wheat cultivars as affected by drought
17.	<b>194 -2</b>	<b>Kristensen</b>	Hanne L.	Root growth and N uptake to 1.6 m soil depth by babyleaf rucola on sandy soil
18.	<b>199 -2</b>	<b>Crush</b>	Jim	Breeding for root system shape in perennial ryegrass ( <i>Lolium perenne</i> L.)
19.	<b>201 -2</b>	<b>Samardakiewicz</b>	Slawomir	Is callose a barrier that does not enable penetration of the root cell protoplast in <i>Lemna minor</i> L. by lesd ions?

**Symposium Topic****7: Methods for root observation and measurement**

	<b>RAP No</b>	<b>Presenting Author</b>		<b>Title</b>
1.	<b>023 -7</b>	<b>Raza</b>	Amir	Root sampling and analysis in lucerne ( <i>Medicago sativa</i> L.) field trial
2.	<b>030 -7</b>	<b>Vamerali</b>	Teofilo	Methods for thresholding minirhizotron root images
3.	<b>032 -7</b>	<b>Faget</b>	Marc	Green fluorescent protein (GFP) - a tool to identify roots in mixed plant stands
4.	<b>052 -7</b>	<b>Picon-Cochard</b>	Catherine	Use of near-infrared reflectance spectroscopy to predict the percentage of dead versus living grass roots
5.	<b>100 -7</b>	<b>Yamamoto</b>	Rika	Ground penetrating radar can detect roots of <i>Pinus thunbergii</i> in a coastal forest
6.	<b>105 -7</b>	<b>Britschgi</b>	Deborah	Distinguishing roots of maize and weeds in plant mixtures
7.	<b>113 -7</b>	<b>Karpachevskiy</b>	Lev	The role of roots in the humus formation in soil
8.	<b>119 -7</b>	<b>Sah</b>	Shambhu Prasad	Tree and understorey fine root growth and longevity in a Norway spruce stand in northern Finland
9.	<b>128 -7</b>	<b>Ghedira</b>	Seif	Methods for root observation and measurement
10.	<b>159 -7</b>	<b>Nakano</b>	Aiko	Analysing of fine root growth from digital images
11.	<b>171 -7</b>	<b>Watanabe</b>	Hajime	No-tillage direct seeding cultivation in rice with single basal application of controlled availability fertilizer in poorly drained paddy soil
12.	<b>174 -7</b>	<b>Chloupek</b>	Oldrich	Electric capacity as a measure of the intact root system size in the soil
13.	<b>183 -7</b>	<b>Beyer</b>	Friderike	Vitality and turnover rates of tree fine roots affected by competition and drought
14.	<b>188 -7</b>	<b>Andreas</b>	Jacob	Fine root biomass and dynamics in a mature broad-leaved deciduous forest differing in tree species composition
15.	<b>190 -7</b>	<b>Rose</b>	Laura	Livestock identity effects on belowground biomass, fine root morphology, and nitrogen allocation in pastures differing in species diversity
16.	<b>195 -7</b>	<b>Petrarulo</b>	Marica	Mapping QTLs for root morphological traits in durum wheat