

## PPS Keyword List: Keywords related to Physiology from PPS vol. 1 - 20

### PHYSIOLOGY (S)

Keyword		Article title (downloadable pdf link)	Author	Year	DOI	
Sap (4)	Bleeding sap (1)	Diurnal and Phenological Changes in the Rate of Nitrogen Transportation Monitored by Bleeding in Field-Grown Rice Plants ( <i>Oryza sativa</i> L.)	Sakaigaichi T, et al.	2007	10.1626/pps.10.270	
	Flow rate of stem sap (1)	Leaf Temperature and Transpiration of Field Grown Cotton and Soybean under Arid and Humid Conditions	Isoda A, et al.	2002	10.1626/pps.5.224	
	Sap flow (1)	Diurnal Change in Water Balance of Heat-Tolerant Snap Bean ( <i>Phaseolus vulgaris</i> ) Cultivar and Its Association with Growth under High Temperature	Tsukaguchi T, et al.	2005	10.1626/pps.8.375	
	Xylem sap (1)	A quick determination of root resistance to water transport in paddy rice	Adachi S, et al.	2017	10.1080/1343943X.2017.1313688	
Sclerenchyma (1)		Anatomy of Nodal Roots in Tropical Upland and Lowland Rice Varieties	Kondo M, et al.	2000	10.1626/pps.3.437	
Scutellum (1)		Changes in Surface Structure during Direct Somatic Embryogenesis in Rice Scutellum Observed by Scanning Electron Microscopy	Mariani TS, et al.	1998	10.1626/pps.1.223	
Seed (49)	Seed (1)	Nondestructive Near-Infrared Reflectance Spectroscopic Analyses of the Major Constituents of Sesame ( <i>Sesamum indicum</i> L.) Whole Seeds with Different Coat Color	Sato T, et al.	2004	10.1626/pps.7.363	
	Seed amylase activity (1)	Morphological and physiological traits of seeds and seedlings in two rice cultivars with contrasting early vigor	Huang M, et al.	2017	10.1080/1343943X.2016.1229571	
	Seed amylose content (1)	Morphological and physiological traits of seeds and seedlings in two rice cultivars with contrasting early vigor	Huang M, et al.	2017	10.1080/1343943X.2016.1229571	
	Seed cane (1)	Assessing Feasibility of Growing Sugarcane by a Polythene Bag Culture System for Rapid Multiplication of Seed Cane in Sub-Tropical Climatic Conditions of India	Singh SN, et al.	2011	10.1626/pps.14.229	
	Seed coat (3)		Water Uptake by Seeds in Yellow-seeded Soybean ( <i>Glycine max</i> (L.) Merrill) Cultivars with Contrasting Imbibition Behaviors	Nakayama N, et al.	2008	10.1626/pps.11.415
			Growth, Yield and Quality of Bird-Resistant Sunflower Cultivars Found in Genetic Resources	Yasumoto S, et al.	2012	10.1626/pps.15.23
			Does Pre-Germination Flooding-Tolerant Soybean Cultivar Germinate Better under Hypoxia Conditions?	Nakajima T, et al.	2015	10.1626/pps.18.146
	Seed component (1)	Growth and Yield Responses of Two Soybean Cultivars Grown under Controlled Groundwater Level in Southwestern Japan	Matsuo N, et al.	2013	10.1626/pps.16.84	
	Seed development (2)		Fatty Acid Content of Seed at Different Development Stages in Canola on Different Soil Types with Low Organic Matter	Onemli F.	2014	10.1626/pps.17.253
			Changes in seed growth, levels and distribution of flavonoids during tartary buckwheat seed development	Song C, et al.	2016	10.1080/1343943X.2016.1207485
	Seed dormancy (1)	Evaluation of Cultivar Differences in Preharvest Sprouting of Common Buckwheat ( <i>Fagopyrum esculentum</i> Moench)	Hara T, et al.	2008	10.1626/pps.11.82	
	Seed filling (1)	Response of Soybean Yield to Daytime Temperature Change during Seed Filling: A Long-Term Field Study in Northeast China	Zheng H, et al.	2009	10.1626/pps.12.526	
	Seed formation (1)	Cellularization of the Free Nuclear Endosperm in Rice Caryopsis Revealed by Light and Electron Microscopy	Suzuki K, et al.	2000	10.1626/pps.3.446	
	Seed germination (3)		Biochemical Analysis of Protein Kinase Activities in the Dry Seeds of Rice	Kanekatsu M, et al.	2005	10.1626/pps.8.65
			Variation of Germination Response to Temperature in Formosan Lily ( <i>Lilium formosanum</i> Wall.) Collected from Different Latitudes and Elevations in Taiwan	Weng JH, et al.	2006	10.1626/pps.9.281
			Varietal Differences of Flood Tolerance during Germination and Selection of the Tolerant Lines in Common Buckwheat	Sakata K, et al.	2006	10.1626/pps.9.395
	Seed hydration (1)	Water Uptake by Seeds in Yellow-seeded Soybean ( <i>Glycine max</i> (L.) Merrill) Cultivars with Contrasting Imbibition Behaviors	Nakayama N, et al.	2008	10.1626/pps.11.415	
Seed moisture content (1)	Water Uptake by Seeds in Yellow-seeded Soybean ( <i>Glycine max</i> (L.) Merrill) Cultivars with Contrasting Imbibition Behaviors	Nakayama N, et al.	2008	10.1626/pps.11.415		
Seed production (1)	Smooth bromegrass seed yield and yield component responses to seeding rates and row spacings in two climates	Han Y, et al.	2016	10.1080/1343943X.2016.1169152		

Seed (continued)	Seed protein content (1)	Somaclonal Variation in Regenerants Derived from Anther Culture of Rice ( <i>Oryza sativa</i> L.)	Sugimoto K, et al.	1999	10.1626/pps .2.71
	Seed protein quality (1)	Differential Accumulation of Soybean Seed Storage Protein Subunits in Response to Sulfur and Nitrogen Nutritional Sources	Paek NC, et al.	2000	10.1626/pps .3.268
	Seed quality (1)	Changes in Seed Quality during Maturation of Sunflower under High or Changeable Water Table Conditions	Yasumoto S, et al.	2013	10.1626/pps .16.226
	Seed shape (1)	Variation in Seed Shape and Husk Color in Japanese Native Cultivars of Common Buckwheat ( <i>Fagopyrum esculentum</i> Moench)	Tetsuka T, et al.	2005	10.1626/pps .8.60
	Seed size (1)	Factors Relating to Seedling Emergence in Spring Wheat	Ueno K, et al.	1999	10.1626/pps .2.235
	Seed storage protein (1)	Glutelin is partially degraded in globulin-less mutants of rice ( <i>Oryza sativa</i> L.)	Katsube-Tanaka T, et al.	2016	10.1080/13 43943X.20 16.1168705
	Seed structure (2)	The Role of Seed Structure and Oxygen Responsiveness in Pre-Germination Flooding Tolerance of Soybean Cultivars	Tian XH, et al.	2005	10.1626/pps .8.157
		Relation of Seed Structures to Soybean Cultivar Difference in Pre-germination Flooding Tolerance	Muramatsu N, et al.	2008	10.1626/pps .11.434
	Seed tuber (1)	Effect of Potato Microtuber Size on the Growth and Yield Performance of Field Grown Plants	Kawakami J, et al.	2012	10.1626/pps .15.144
	Seed vigor (1)	Calculation of Population Parameters using Richards Function and Application of Indices of Growth and Seed Vigor to Rice Plants	Hara Y.	1999	10.1626/pps .2.129
	Seed weight (2)	Seed Weight of Nodulating and Non-nodulating Soybeans at Different Nitrogen Levels and Years	Manalo DD, et al.	1998	10.1626/pps .1.264
		Effects of Day Length and Air and Soil Temperatures on Sesamin and Sesamolin Contents of Sesame Seed	Kumazaki T, et al.	2009	10.1626/pps .12.481
	Seed yield (9)	Effects of Low Temperature and Shading during Flowering on the Yield Components in Soybeans	Kurosaki H, et al.	2003	10.1626/pps .6.17
		Effects of Paclobutrazol on Dry Matter Distribution and Yield in Peanut	Senoo S, et al.	2003	10.1626/pps .6.90
		Drought Tolerance Characteristics of Brazilian Soybean Cultivars: Evaluation and characterization of drought tolerance of various Brazilian soybean cultivars in the field	Oya T, et al.	2004	10.1626/pps .7.129
		Nitrogen Fixation and Seed Yield in Soybean under Moderate High-Temperature Stress	Shiraiwa T, et al.	2006	10.1626/pps .9.165
		Agronomic and Tolerant Performance of Acid Soil-Tolerant Wild Soybean ( <i>Glycine soja</i> Sieb. and Zucc.) in Acid Sulfate Soil of Thailand	Kang DJ, et al.	2011	10.1626/pps .14.156
		Genotypic Adaptation of Soybean to Late Sowing in Southwestern Japan	Fatichin, et al.	2013	10.1626/pps .16.123
		Varietal Difference in Nitrogen Redistribution from Leaves and Its Contribution to Seed Yield in Soybean	Zhao X, et al.	2014	10.1626/pps .17.103
		Influence of Nitrogen Enrichment during Reproductive Growth Stage on Leaf Nitrogen Accumulation and Seed Yield in Soybean	Zhao X, et al.	2014	10.1626/pps .17.209
		Branch development responses to planting density and yield stability in soybean cultivars	Agudamu, et al.	2016	10.1080/13 43943X.20 16.1157443
		Seed-fill period (1)	Relation of Leaf Nitrogen Content and Other Traits with Seed Yield of Soybean	Shibles R, et al.	1998
	Seedfilling period (1)	Yield and dry matter productivity of Japanese and US soybean cultivars	Kawasaki Y, et al.	2016	10.1080/13 43943X.20 15.1133235
	Seed-set (1)	Influence of Day Length on Stem Growth, Flowering, Morphology of Flower Clusters, and Seed-Set in Buckwheat ( <i>Fagopyrum esculentum</i> Moench)	Michiyama H, et al.	2005	10.1626/pps .8.44
	Seed-setting (1)	Influence of Day Length before and after the Start of Anthesis on the Growth, Flowering and Seed-Setting in Common Buckwheat ( <i>Fagopyrum esculentum</i> Moench)	Michiyama H, et al.	2003	10.1626/pps .6.235
	Globular seed (1)	Growth, Yield and Quality of Bird-Resistant Sunflower Cultivars Found in Genetic Resources	Yasumoto S, et al.	2012	10.1626/pps .15.23
	Increase in the carbon of seed (1)	High Carbon Requirements for Seed Production in Soybeans [ <i>Glycine max</i> (L.) Merr.]	Kakiuchi J, et al.	2008	10.1626/pps .11.198
	Increase in the dry weight of seed (1)	High Carbon Requirements for Seed Production in Soybeans [ <i>Glycine max</i> (L.) Merr.]	Kakiuchi J, et al.	2008	10.1626/pps .11.198
	Initial seed filling (1)	Correlation between Yielding Ability and Dry Matter Productivity during Initial Seed Filling Stage in Various Soybean Genotypes	Shiraiwa T, et al.	2004	10.1626/pps .7.138

Seed (continued)	Sprouting seed (1)	Varietal Differences in the Survival Rate of Sprouting Rice Seed ( <i>Oryza sativa</i> L.) under Highly Reduced Soil Conditions	Saka N, et al.	1999	10.1626/pps .2.136
Seedling (40)	Seedling (9)	Relationship between Endogenous Abscisic Acid Level and the Appearance of "Me type" Rice Seedlings	Watanabe H, et al.	1998	10.1626/pps .1.240
		Screening Cultivars at Low Dissolved Oxygen Level for Water-seeded Rice	Won JG, et al.	2000	10.1626/pps .3.112
		Varietal Differences in Seedling Traits under the Low Dissolved Oxygen Level in Water-Seeded Rice	Won JG, et al.	2000	10.1626/pps .3.375
		Patterns of Internode Elongation in Rice Seedlings	Hirao A, et al.	2001	10.1626/pps .4.88
		Identification of Casparian Bands in the Mesocotyl and Lower Internodes of Rice ( <i>Oryza sativa</i> L.) Seedlings Using Fluorescence Microscopy	Watanabe H, et al.	2006	10.1626/pps .9.390
		Effects of the Combined Application of Ethephon and Gibberellin on Growth of Rice ( <i>Oryza sativa</i> L.) seedlings	Watanabe H, et al.	2007	10.1626/pps .10.468
		Development of Rice "Seed-Mats" Consisting of Hardened Seeds with a Cover of Soil for the Rice Transplanter	Shiratsuchi H, et al.	2008	10.1626/pps .11.108
		Root Anatomical Responses to Waterlogging at Seedling Stage of Three Cordage Fiber Crops	Changdee T, et al.	2008	10.1626/pps .11.232
		Differences in Cadmium Accumulation and Root Morphology in Seedlings of Japanese Wheat Varieties with Distinctive Grain Cadmium Concentration	Kubo K, et al.	2011	10.1626/pps .14.148
	Seedling development (1)	Varietal Difference in Early Vegetative Growth during Seedling Stage in Soybean	Fatichin, et al.	2013	10.1626/pps .16.77
	Seedling emergence (5)	Differences in the Rate of Seedling Emergence among Rice Cultivars under Low Soil-Moisture Conditions	Shiratsuchi H, et al.	2001	10.1626/pps .4.94
		Seedling Emergence and Establishment-under Drained Conditions in Rice Direct-Sown into Puddled and Leveled Soil: Effect of calcium peroxide seed coating and sowing depth	Sato T, et al.	2002	10.1626/pps .5.71
		Growth Enhancement by Drainage during Seedling Establishment in Rice Direct-Sown into Puddled and Leveled Soil: Comparison with seed coating with calcium peroxide	Tsuchiya M, et al.	2004	10.1626/pps .7.324
		Improvement of Soybean Seedling Establishment under a Flooded Condition by Seed Coating with Molybdenum Compounds	Hara Y.	2015	10.1626/pps .18.161
		Improvement of seedling establishment under flood condition by seed coating with molybdenum compounds for wheat and barley	Hara Y.	2016	10.1080/13 43943X.20 15.1128110
	Seedling establishment (12)	Rice Direct Seeding Method with Recycled-paper Mulching	Ueno H, et al.	1999	10.1626/pps .2.53
		A Varietal Difference in Coleoptile Growth is Correlated with Seedling Establishment of Direct Seeded Rice in Submerged Field under Low-Temperature Conditions	Ogiwara H, et al.	2001	10.1626/pps .4.166
		Seedling Emergence and Establishment-under Drained Conditions in Rice Direct-Sown into Puddled and Leveled Soil: Effect of calcium peroxide seed coating and sowing depth	Sato T, et al.	2002	10.1626/pps .5.71
		Introduction of the Long-Coleoptile Trait to Improve the Establishment of Direct-Seeded Rice in Submerged Fields in Cool Climates	Miura K, et al.	2002	10.1626/pps .5.219
		Growth Enhancement by Drainage during Seedling Establishment in Rice Direct-Sown into Puddled and Leveled Soil: Comparison with seed coating with calcium peroxide	Tsuchiya M, et al.	2004	10.1626/pps .7.324
Effects of Temperature, Sowing Depth and Soil Hardness on Seedling Establishment and Yield of Cambodian Rice Direct-seeded in Flood Paddy Fields		Ly T, et al.	2007	10.1626/pps .10.129	
Establishment of Rice Seedlings by Direct Sowing of Multiple Seed Pellets on Paddy Soil Covered with Legume Living Mulch		Asagi N, et al.	2008	10.1626/pps .11.361	
$\alpha$ -Amylase Activity and Soluble Sugar Supply from Endosperm in Relation to Varietal Differences in Seedling Establishment under Low-Temperature Conditions in Rice ( <i>Oryza sativa</i> L.)		Ogiwara H, et al.	2010	10.1626/pps .13.321	
Improvement of Rice Seedling Establishment on Sulfate-Applied Submerged Soil by Seed Coating with Poorly Soluble Molybdenum Compounds		Hara Y.	2013	10.1626/pps .16.271	
Improvement of Soybean Seedling Establishment under a Flooded Condition by Seed Coating with Molybdenum Compounds		Hara Y.	2015	10.1626/pps .18.161	

Seedling (continued)	Seedling establishment (continued)	Improvement of seedling establishment under flood condition by seed coating with molybdenum compounds for wheat and barley	Hara Y.	2016	10.1080/1343943X.2015.1128110
		Comparison of the effects of seed coating with tungsten and molybdenum compounds on seedling establishment rates of rice, wheat, barley, and soybean under flooded conditions	Hara Y.	2017	10.1080/1343943X.2017.1360141
	Seedling establishment ratio (1)	Path Analysis of Tiller Density of Winter Wheat Demonstrates the Importance of Practices that Manipulate Clod Size Based on Soil Moisture at Seeding in the Rice-Wheat Cropping System	Inamura T, et al.	2010	10.1626/pps.13.85
	Seedling growth (5)	The Promotive Effect of Brassinolide on Lamina Joint-Cell Elongation, Germination and Seedling Growth under Low-Temperature Stress in Rice ( <i>Oryza sativa</i> L.)	Fujii S, et al.	2001	10.1626/pps.4.210
		NADPH Oxidases Act as Key Enzyme on Germination and Seedling Growth in Barley ( <i>Hordeum vulgare</i> L.)	Ishibashi Y, et al.	2010	10.1626/pps.13.45
		Seed Treatment with Uniconazole Powder Improves Soybean Seedling Growth under Shading by Corn in Relay Strip Intercropping System	Yan Y, et al.	2010	10.1626/pps.13.367
		Does Allelopathy Play a Role in Suppression of Mugwort ( <i>Artemisia vulgaris</i> ) by Alfalfa?	Onen H.	2013	10.1626/pps.16.255
		Effects of elevated CO <sub>2</sub> concentration on bulbil germination and early seedling growth in Chinese yam under different air temperatures	Thinh NC, et al.	2017	10.1080/1343943X.2017.1346477
	Seedling length (1)	Nursery Management for Improving Seedling Length and Early Growth after Transplanting in a Semi-Dwarf Rice Cultivar Hokuriku 193	Ohsumi A, et al.	2015	10.1626/pps.18.407
	Seedling period (1)	Stay-Green in Rice ( <i>Oryza sativa</i> L.) of Drought-Prone Areas in Desiccated Soils	Hoang TB, et al.	2009	10.1626/pps.12.397
	Seedling stage (1)	Screening, Inheritance and Linkage Marker Analyses of Salt Tolerance in Mutated Scented Japonica Rice ( <i>Oryza sativa</i> L.)	Yen CC, et al.	2011	10.1626/pps.14.260
	Seedling vigor (3)	The Development of Coleoptile Tillers in Relation to Seedling Vigor in Early-Maturing Varieties of Spring Type Wheat	Fujita R, et al.	2000	10.1626/pps.3.275
		Relative Contribution of Hetero- and Auto-trophic Growth to Genotypic Variation of Seedling Vigor in Rice ( <i>Oryza sativa</i> L.)	Shiraiwa T, et al.	2006	10.1626/pps.9.133
		QTLs for Seedling Growth of Direct Seeded Rice under Submerged and Low Temperature Conditions	Fukuda A, et al.	2014	10.1626/pps.17.41
	Growth of young seedling (1)	Promotion of Seedling Growth of Seeds of Rice ( <i>Oryza sativa</i> L. cv. Hitomebore) by Treatment with H <sub>2</sub> O <sub>2</sub> before Sowing	Sasaki K, et al.	2005	10.1626/pps.8.509
Seepage (1)		Effects of Soil Clay Content on Water Balance and Productivity in Rainfed Lowland Rice Ecosystem in Northeast Thailand	Tsubo M, et al.	2007	10.1626/pps.10.232
Senescence (15)	Senescence (8)	Involvement of Silicon in the Senescence of Rice Leaves	Agarie S, et al.	1998	10.1626/pps.1.104
		Differences in Leaf Senescence among Reciprocally Grafted Plants of Two Soybean Cultivars, Enrei and Tachinagaha	Ookawa T, et al.	1999	10.1626/pps.2.51
		Analysis of the Factors Causing Differences in the Leaf-Senescence Pattern between Two Soybean Cultivars, Enrei and Tachinagaha: Comparison of root length and exudation rate among grafted plants	Ookawa T, et al.	2001	10.1626/pps.4.3
		A Comparison of the Accumulation and Partitioning of Nitrogen in Plants between Two Rice Cultivars, Akenohoshi and Nipponbare, at the Ripening Stage	Ookawa T, et al.	2003	10.1626/pps.6.172
		Effects of Soil Moisture Depletion for One Month before Flowering on Dry Matter Production and Ecophysiological Characteristics of Wheat Plants in Wet Soil during Grain Filling	Nakamura E, et al.	2003	10.1626/pps.6.195
		Effects of a Reduction in Soil Moisture from One Month before Flowering through Ripening on Dry Matter Production and Ecophysiological Characteristics of Wheat Plants	Nakagami K, et al.	2004	10.1626/pps.7.143
		Interaction of Scion and Stock on Leaf Senescence of Soybean Plants Grafted at Mid-Stem during Ripening	Ookawa T, et al.	2005	10.1626/pps.8.32
		Stability Verification of the Effects of Stem Determination and Earliness of Flowering on Green Stem Disorder of Soybean against Genetic Background and Environment	Fujii K, et al.	2015	10.1626/pps.18.166

Senescence (continued)	Delayed stem senescence (2)	The Occurrence of Delayed Stem Senescence in Relation to <i>trans</i> -Zeatin Riboside Level in the Xylem Exudate in Soybeans Grown under Excess-Wet and Drought Soil Conditions	Sato J, et al.	2007	10.1626/pps .10.460
		Varietal Difference in the Occurrence of Delayed Stem Senescence and Cytokinin Level in the Xylem Exudate in Soybeans	Isobe K, et al.	2015	10.1626/pps .18.356
	Leaf senescence (4)	Effects of Pre-Flowering Soil Moisture Deficits on Dry Matter Production and Ecophysiological Characteristics in Soybean Plants under Well Irrigated Conditions during Grain Filling	Hirasawa T, et al.	1998	10.1626/pps .1.8
		Gene Expression and Accumulation of Rubisco in Bundle Sheath and Mesophyll Cells during Leaf Development and Senescence in Rice, a C <sub>3</sub> Plant	Tsutsumi K, et al.	2008	10.1626/pps .11.336
		Characteristics of Gas Exchange and Chlorophyll Fluorescence during Senescence of Flag Leaf in Different Rice ( <i>Oryza sativa</i> L.) Cultivars Grown under Nitrogen-Deficient Condition	Kumagai E, et al.	2009	10.1626/pps .12.285
		Effects of Excessive Ear Removal on Senescence Order of Wheat Functional Leaves	Miao F, et al.	2009	10.1626/pps .12.428
	Root senescence (1)	Root growth, soil water variation, and grain yield response of winter wheat to supplemental irrigation	Man J, et al.	2016	10.1080/13 43943X.20 15.1128097
Sensitivity (7)	Malate sensitivity (1)	Regulatory Properties of Phosphoenolpyruvate Carboxylase in Crassulacean Acid Metabolism Plants: Diurnal Changes in Phosphorylation State and Regulation of Gene Expression	Theng V, et al.	2007	10.1626/pps .10.171
	Photoperiod sensitivity (1)	Field Technique and Traits to Assess Reproductive Stage Cold Tolerance in Sorghum ( <i>Sorghum bicolor</i> (L.) Moench)	Krishnamurthy L, et al.	2014	10.1626/pps .17.218
	Photoperiodic sensitivity (1)	Accurate Evaluation of Photoperiodic Sensitivity and Genetic Diversity in Common Buckwheat under a Controlled Environment	Hara T, et al.	2013	10.1626/pps .16.247
	Photosensitivity (1)	Changes in developmental duration of direct-seeded rice in a well-drained paddy field in response to late planting	Yasumoto S, et al.	2017	10.1080/13 43943X.20 17.1340801
	Sensitive growth stage (1)	Cooperative effects of sand application and flushing during the sensitive stages of rice on its yield in a hard saline-sodic soil	Wang MM, et al.	2016	10.1080/13 43943X.20 16.1195695
	Spectral sensitivity (1)	Response Spectrum for Green Light-Induced Acceleration of Heading in Wheat cv. Norin 61	Kasajima S, et al.	2009	10.1626/pps .12.54
	Thermosensitivity (1)	Changes in developmental duration of direct-seeded rice in a well-drained paddy field in response to late planting	Yasumoto S, et al.	2017	10.1080/13 43943X.20 17.1340801
Separation zone (1)		Morphological Evaluation of the Trace of Grain Detachment in <i>Japonica</i> Rice Cultivars with Different Shattering Habits	Okubo K.	2014	10.1626/pps .17.291
Shattering / Shedding (5)	Shattering habit (1)	Morphological Evaluation of the Trace of Grain Detachment in <i>Japonica</i> Rice Cultivars with Different Shattering Habits	Okubo K.	2014	10.1626/pps .17.291
	Grain shattering (3)	Breaking Strength of Pedicel and Grain Shattering Habit in Two Species of Buckwheat ( <i>Fagopyrum</i> spp.)	Oba S, et al.	1998	10.1626/pps .1.62
		Breaking Strength of Pedicel as an Index of Grain-Shattering Habit in Autotetraploid and Diploid Buckwheat ( <i>Fagopyrum esculentum</i> Moench.) Cultivars	Oba S, et al.	1999	10.1626/pps .2.190
		Yield Potential and Physiological and Morphological Characteristics Related to Yield Performance in <i>Oryza glaberrima</i> Steud.	Futakuchi K, et al.	2012	10.1626/pps .15.151
	Grain shedding habit (1)	Association of Grain Shedding Habit with Polyploidy in Tartary Buckwheat ( <i>Fagopyrum tataricum</i> ) Strains	Oba S, et al.	2004	10.1626/pps .7.212
Shoot (21)	Shoot (1)	Potato Stolon and Tuber Growth Influenced by Nitrogen Form	Gao Y, et al.	2014	10.1626/pps .17.138
	Shoot apex (2)	Analysis of Spike Development of Three Spring Wheat Genotypes under Various Cultural Conditions	Itoh H, et al.	1998	10.1626/pps .1.258
		A Histological Evaluation of Adventitious Bud Formation in Cotyledons in <i>Crotalaria juncea</i> L.	Daimon H, et al.	2002	10.1626/pps .5.301
	Shoot apical meristem (2)	Effects of Gibberellic Acid Application on Panicle Characteristics and Size of Shoot Apex in the First Bract Differentiation Stage in Rice	Mu C, et al.	2001	10.1626/pps .4.227
		Size and Activity of Shoot Apical Meristems as Determinants of Floret Number in Rice Panicles	Mu C, et al.	2005	10.1626/pps .8.51
Shoot bud formation (1)	Anatomical Changes during in Vitro Direct Formation of Shoot Bud from Root Tips in Garlic ( <i>Allium sativum</i> L.)	Haque MS, et al.	1999	10.1626/pps .2.146	

Shoot (continued)	Shoot elongation (1)	Relationship between Shoot Elongation and Dry Matter Weight During Submergence in <i>Oryza sativa</i> L. and <i>O. glaberrima</i> Steud. Rice Cultivars	Kawano N, et al.	2008	10.1626/pps .11.316
	Shoot elongation pattern (1)	Effects of Seed Rhizome Size on Growth and Yield of Turmeric ( <i>Curcuma longa</i> L.)	Hossain A, et al.	2005	10.1626/pps .8.86
	Shoot growth (4)	Effects of Benzylaminopurine on Shoot and Root Development and Growth of Rice (cv. North Rose) Grown Hydroponically with Different Nitrogen Forms	Liu Z, et al.	2000	10.1626/pps .3.349
		Effects of Temperature on Growth and Dry Matter Accumulation in Mulberry Saplings	Fukui K.	2000	10.1626/pps .3.404
		Assessing Drought Tolerance of Snap Bean ( <i>Phaseolus vulgaris</i> ) from Genotypic Differences in Leaf Water Relations, Shoot Growth and Photosynthetic Parameters	Omae H, et al.	2007	10.1626/pps .10.28
		Responses of Root Growth to Moderate Soil Water Deficit in Wheat Seedlings	Saidi A, et al.	2010	10.1626/pps .13.261
	Shoot length (4)	Modeling of Shoot Elongation and Leaf Appearance in Potted Mulberry	Fukui K.	2000	10.1626/pps .3.410
		Modeling the Interactive Effect of the Photoperiod and Temperature on Shoot Elongation of Mulberry	Fukui K.	2004	10.1626/pps .7.224
		Modeling of Mulberry Shoot Elongation and Leaf Appearance in Field Conditions	Fukui K.	2005	10.1626/pps .8.115
		QTLs for Shoot Length and Chlorophyll Content of Rice Seedlings Grown under Low-Temperature Conditions, using a Cross between <i>Indica</i> and <i>Japonica</i> Cultivars	Fukuda A, et al.	2015	10.1626/pps .18.128
	Adventitious shoot (2)	Nurturing of Plantlets Using Cut Pieces from the Storage Roots of Sweet Potatoes ( <i>Ipomoea batatas</i> (L.) Lam.) and their Productivity in the Field	Yamashita M.	2000	10.1626/pps .3.259
		Callus Induction and Adventitious Shoot Regeneration from Petiole of <i>Erigeron breviscapus</i>	Zhang L, et al.	2007	10.1626/pps .10.343
	High shoot and root temperature (1)	Physiological Response of Three Wheat Cultivars to High Shoot and Root Temperatures during Early Growth Stages	Tahir ISA, et al.	2009	10.1626/pps .12.409
Total shoot biomass (1)	Responses of Eighteen Rice ( <i>Oryza sativa</i> L.) Cultivars to Temperature Tested Using Two Types of Growth Chambers	Pasuquin EM, et al.	2013	10.1626/pps .16.217	
Yield-shoot ratio (1)	Effects of Harvest Time on Shoot Biomass and Yield of Turmeric ( <i>Curcuma longa</i> L.) in Okinawa, Japan	Hossain MA.	2010	10.1626/pps .13.97	
Silicified cell (1)	Agricultural Use of Porous Hydrated Calcium Silicate: Effect of porous hydrated calcium silicate on resistance of rice plant ( <i>Oryza sativa</i> L.) to rice blast ( <i>Pyricularia oryzae</i> )	Saigusa M, et al.	2000	10.1626/pps .3.51	
Silking (1)	Post-silking dry matter accumulation (1)	Maintenance of Crop Growth through 30 Days after Silking Contributes to Achieving Super-High Yield of Spring Maize	Tao H, et al.	2014	10.1626/pps .17.268
Sink (14)	Sink (4)	Gene Expression of Enzymes for Starch and Sucrose Metabolism and Transport in Leaf Sheaths of Rice ( <i>Oryza sativa</i> L.) during the Heading Period in Relation to the Sink to Source Transition	Hirose T, et al.	1999	10.1626/pps .2.178
		Contribution of Sink and Source Sizes to Yield Variation among Rice Cultivars	Lubis I, et al.	2003	10.1626/pps .6.119
		Photosynthesis and Dry-Matter Production during Ripening Stage in a Female-Sterile Line of Rice	Kato M, et al.	2004	10.1626/pps .7.184
		Effect of CO <sub>2</sub> Enrichment on the Translocation and Partitioning of Carbon at the Early Grain-filling Stage in Rice ( <i>Oryza sativa</i> L.)	Sasaki H, et al.	2005	10.1626/pps .8.8
	Sink activity (1)	Activities of Enzymes for Sucrose-Starch Conversion in Developing Endosperm of Rice and Their Association with Grain Filling in Extra-Heavy Panicle Types	Kato T, et al.	2007	10.1626/pps .10.442
	Sink and source (1)	The Occurrence of Delayed Stem Senescence in Relation to <i>trans</i> -Zeatin Riboside Level in the Xylem Exudate in Soybeans Grown under Excess-Wet and Drought Soil Conditions	Sato J, et al.	2007	10.1626/pps .10.460
	Sink capacity (1)	Yielding Performance of "Kita-aoba", High-yielding Rice Variety for Hokkaido Region, Northern Japan	Hayashi S, et al.	2012	10.1626/pps .15.209
	Sink formation (1)	Roles of Auxin and Cytokinin in Soybean Pod Setting	Nonokawa K, et al.	2007	10.1626/pps .10.199
	Sink size (1)	Responses of Yielding Ability, Sink Size and Percentage of Filled Grains to the Cultivation Practices in a Chinese Large-Panicle-Type Rice Cultivar, Yangdao 4	Gendua PA, et al.	2009	10.1626/pps .12.243
	Source-sink (2)	Effects of Growth under Elevated CO <sub>2</sub> on the Capacity of Photosynthesis in Two Radish Cultivars Differing in Capacity of Storage Root	Usuda H.	2004	10.1626/pps .7.377
Effects of Excessive Ear Removal on Senescence Order of Wheat Functional Leaves		Miao F, et al.	2009	10.1626/pps .12.428	

Sink (continued)	Source-sink balance (1)	Effect of Sugar Solution Infused into Mungbean ( <i>Vigna radiata</i> (L.) Wilczek) Plant on Seed Yield and Dry Matter Production	Khaliq QA, et al.	2002	10.1626/pps .5.31
	Source-sink ratio (1)	Effects of Source/Sink Ratio and Cytokinin Application on Pod Set in Soybean	Yashima Y, et al.	2005	10.1626/pps .8.139
	Source-sink relationships (1)	Phenotypic Plasticity of Rice Seedlings: Case of Phosphorus Deficiency	Luquet D, et al.	2005	10.1626/pps .8.145
Somatic (6)	Somatic embryo (2)	Changes in Surface Structure during Direct Somatic Embryogenesis in Rice Scutellum Observed by Scanning Electron Microscopy	Mariani TS, et al.	1998	10.1626/pps .1.223
		Improvement of Direct Somatic Embryogenesis in Rice by Selecting the Optimal Developmental Stage of Explant and Applying Desiccation Treatment	Mariani TS, et al.	2000	10.1626/pps .3.114
	Somatic embryogenesis (2)	Efficient Plant Regeneration in Garlic through Somatic Embryogenesis from Root Tip Explants	Haque MS, et al.	1998	10.1626/pps .1.216
		Haploid Plantlet Production through Somatic Embryogenesis in Anther-Derived Callus of <i>Bupleurum falcatum</i>	Shon TK, et al.	2004	10.1626/pps .7.204
	Somatic incompatibility (2)	Ultrastructure of Fusion Product between Protoplasts from C <sub>3</sub> and C <sub>4</sub> Species of Amaranthaceae	Mastuti R, et al.	1998	10.1626/pps .1.67
		Ultrastructure of Hybrid Callus between C <sub>3</sub> and C <sub>4</sub> Species of Amaranthaceae	Mastuti R, et al.	1998	10.1626/pps .1.136
Source (13)	Source (2)	Gene Expression of Enzymes for Starch and Sucrose Metabolism and Transport in Leaf Sheaths of Rice ( <i>Oryza sativa</i> L.) during the Heading Period in Relation to the Sink to Source Transition	Hirose T, et al.	1999	10.1626/pps .2.178
		Photosynthesis and Dry-Matter Production during Ripening Stage in a Female-Sterile Line of Rice	Kato M, et al.	2004	10.1626/pps .7.184
	Source ability (1)	Identification of Chromosome Regions Affecting Leaf Area with Rice Chromosome Segment Substitution Lines	Ujiiie K, et al.	2013	10.1626/pps .16.31
	Source and yield (1)	Contribution of Sink and Source Sizes to Yield Variation among Rice Cultivars	Lubis I, et al.	2003	10.1626/pps .6.119
	Source capacity (1)	Suppression of starch accumulation in 'sugar leaves' of rice affects plant productivity under field conditions	Okamura M, et al.	2017	10.1080/1343943X.2016.1259958
	Source leaf (1)	Elevated Sucrose-phosphate Synthase Activity in Source Leaves of Potato Plants Transformed with the Maize SPS Gene	Tobias DJ, et al.	1999	10.1626/pps .2.92
	Source-sink (2)	Effects of Growth under Elevated CO <sub>2</sub> on the Capacity of Photosynthesis in Two Radish Cultivars Differing in Capacity of Storage Root	Usuda H.	2004	10.1626/pps .7.377
		Effects of Excessive Ear Removal on Senescence Order of Wheat Functional Leaves	Miao F, et al.	2009	10.1626/pps .12.428
	Source-sink balance (1)	Effect of Sugar Solution Infused into Mungbean ( <i>Vigna radiata</i> (L.) Wilczek) Plant on Seed Yield and Dry Matter Production	Khaliq QA, et al.	2002	10.1626/pps .5.31
	Source-sink ratio (1)	Effects of Source/Sink Ratio and Cytokinin Application on Pod Set in Soybean	Yashima Y, et al.	2005	10.1626/pps .8.139
	Source-sink relationships (1)	Phenotypic Plasticity of Rice Seedlings: Case of Phosphorus Deficiency	Luquet D, et al.	2005	10.1626/pps .8.145
	Carbon source (1)	Effects of Various Carbon Sources and Their Combinations on <i>in vitro</i> Growth and Photosynthesis of Banana Plantlets	Buah JN, et al.	2000	10.1626/pps .3.392
	Sink and source (1)	The Occurrence of Delayed Stem Senescence in Relation to trans-Zeatin Riboside Level in the Xylem Exudate in Soybeans Grown under Excess-Wet and Drought Soil Conditions	Sato J, et al.	2007	10.1626/pps .10.460
Spike (9)	Spike development period (1)	Factors in the Reduction in Grain Number in Winter Wheat by Early-Sowing in Yamaguchi	Zhang L, et al.	2007	10.1626/pps .10.189
	Spike elongation (1)	Analysis of Spike Development of Three Spring Wheat Genotypes under Various Cultural Conditions	Itoh H, et al.	1998	10.1626/pps .1.258
	Spike length (2)	Effect of the Interaction between Cultural Condition and Genotype on Spike Morphogenesis in Spring Wheat	Itoh H, et al.	1998	10.1626/pps .1.56
		Analysis of Spike Development of Three Spring Wheat Genotypes under Various Cultural Conditions	Itoh H, et al.	1998	10.1626/pps .1.258
	Spike number (2)	Investigation of Yielding Ability of Wheat Cultivars for Early-Sowing Cultivation in Yamaguchi	Zhang L, et al.	2006	10.1626/pps .9.83
		The Effect of Different Nitrogen Sources from Urea and Ammonium Sulfate on the Spikelet Number in Egyptian Spring Wheat Cultivars on Well Watered Pot Soils	Hafez EEDMM, et al.	2012	10.1626/pps .15.332

Spike (continued)	Spikelet number per spike (1)	Factors in the Reduction in Grain Number in Winter Wheat by Early-Sowing in Yamaguchi	Zhang L, et al.	2007	10.1626/pps .10.189
	Grain number per spike (2)	Investigation of Yielding Ability of Wheat Cultivars for Early-Sowing Cultivation in Yamaguchi	Zhang L, et al.	2006	10.1626/pps .9.83
		Factors in the Reduction in Grain Number in Winter Wheat by Early-Sowing in Yamaguchi	Zhang L, et al.	2007	10.1626/pps .10.189
Spikelet (36)	Spikelet (4)	Effects of Gibberellic Acid Application on Panicle Characteristics and Size of Shoot Apex in the First Bract Differentiation Stage in Rice	Mu C, et al.	2001	10.1626/pps .4.227
		Initiation and Development of Spikelets and Florets in Wheat as Influenced by Shading and Nitrogen Supply at the Spikelet Phase	Toyota M, et al.	2001	10.1626/pps .4.283
		Diversity of the Rachis-Branching System in a Panicle in Japonica Rice	Yamagishi J, et al.	2003	10.1626/pps .6.59
		Effects of genes increasing the number of spikelets per panicle, <i>TAW1</i> and <i>APO1</i> , on yield and yield-related traits in rice	Fukushima A, et al.	2017	10.1080/13 43943X.20 17.1365614
	Spikelet degeneration (1)	Relationship between Dry Weight at Heading and the Number of Spikelets on Individual Rice Tillers	Shiratsuchi H, et al.	2007	10.1626/pps .10.430
	Spikelet differentiation (2)	Effects of Non-Structural Carbohydrates on Spikelet Differentiation in Rice	Kobayasi K, et al.	2001	10.1626/pps .4.9
		Relationship between Dry Weight at Heading and the Number of Spikelets on Individual Rice Tillers	Shiratsuchi H, et al.	2007	10.1626/pps .10.430
	Spikelet fertility (3)	Agronomic Performance of F <sub>1</sub> Hybrids of Rice ( <i>Oryza sativa</i> L.) in Japonica-Indica Crosses: Heterosis for and relationship between grain yield and related characters	Murayama S, et al.	2002	10.1626/pps .5.203
		Variation in Spikelet-Related Traits of Rice Plants Regenerated from Mature Seed-Derived Callus Culture	Carsono N, et al.	2007	10.1626/pps .10.86
		Effects of the number of pollen grains on cold tolerance at the booting stage in rice lines with QTLs for cold tolerance	Fukushima A, et al.	2017	10.1080/13 43943X.20 16.1245103
	Spikelet formation (1)	Analysis of Spike Development of Three Spring Wheat Genotypes under Various Cultural Conditions	Itoh H, et al.	1998	10.1626/pps .1.258
	Spikelet number (7)	Effect of the Interaction between Cultural Condition and Genotype on Spike Morphogenesis in Spring Wheat	Itoh H, et al.	1998	10.1626/pps .1.56
		Analysis of Spike Development of Three Spring Wheat Genotypes under Various Cultural Conditions	Itoh H, et al.	1998	10.1626/pps .1.258
		Effects of Non-Structural Carbohydrates on Spikelet Differentiation in Rice	Kobayasi K, et al.	2001	10.1626/pps .4.9
		Relationship between the Size of the Apical Dome at the Panicle Initiation and the Panicle Components in Rice	Kobayasi K, et al.	2001	10.1626/pps .4.81
		Relationship between Apical Dome Diameter at Panicle Initiation and the Size of Panicle Components in Rice Grown under Different Nitrogen Conditions during the Vegetative Stage	Kobayasi K, et al.	2002	10.1626/pps .5.3
		Proteins and Carbohydrates in Developing Rice Panicles with Different Numbers of Spikelets: Cultivar difference and the effect of nitrogen topdressing	Ding Y, et al.	2004	10.1626/pps .7.16
		The Effect of Different Nitrogen Sources from Urea and Ammonium Sulfate on the Spikelet Number in Egyptian Spring Wheat Cultivars on Well Watered Pot Soils	Hafez EEDMM, et al.	2012	10.1626/pps .15.332
	Spikelet number per panicle (1)	Response of Spikelet Number per Panicle in Rice Cultivars to Three Transplanting Densities	Zhang B, et al.	2010	10.1626/pps .13.279
	Spikelet number per spike (1)	Factors in the Reduction in Grain Number in Winter Wheat by Early-Sowing in Yamaguchi	Zhang L, et al.	2007	10.1626/pps .10.189
	Spikelet sterility (5)	Effects of High Temperature on Growth, Yield and Dry-Matter Production of Rice Grown in the Paddy Field	Oh-e I, et al.	2007	10.1626/pps .10.412
		Does Regional Temperature Difference before the Panicle Initiation Affect the Tolerance for Low Temperature-Induced Sterility in Rice?	Shimono H, et al.	2008	10.1626/pps .11.430
		The Early-Morning Flowering Trait of Rice Reduces Spikelet Sterility under Windy and Elevated Temperature Conditions at Anthesis	Ishimaru T, et al.	2012	10.1626/pps .15.19
		Breeding efforts to mitigate damage by heat stress to spikelet sterility and grain quality	Ishimaru T, et al.	2016	10.1080/13 43943X.20 15.1128113
		Effects of salt and low light intensity during the vegetative stage on susceptibility of rice to male sterility induced by chilling stress during the reproductive stage	Koumoto T, et al.	2016	10.1080/13 43943X.20 16.1190283



Spikelet (continued)	Spikelet weight (1)	Correlation of Nitrogen Concentration with Dry-Matter Partitioning to Spikelets and Total Husk Volume on the Panicle in Japonica Rice	Matsui T, et al.	2002	10.1626/pps .5.198
	Differentiated spikelet (1)	Response of Spikelet Number per Panicle in Rice Cultivars to Three Transplanting Densities	Zhang B, et al.	2010	10.1626/pps .13.279
	Grain number per spikelet (1)	Factors in the Reduction in Grain Number in Winter Wheat by Early-Sowing in Yamaguchi	Zhang L, et al.	2007	10.1626/pps .10.189
	Inferior spikelet (2)	Dynamics of Abscisic Acid Levels during Grain-Filling in Rice: Comparisons between Superior and Inferior Spikelets	Tsukaguchi T, et al.	1999	10.1626/pps .2.223
		Activities of Enzymes for Sucrose-Starch Conversion in Developing Endosperm of Rice and Their Association with Grain Filling in Extra-Heavy Panicle Types	Kato T, et al.	2007	10.1626/pps .10.442
	Number of spikelets (5)	Effect of Top-dressing and Planting Density on the Number of Spikelets and Yield of Rice Cultivated with Nitrogen-free Basal Dressing	Truong TH, et al.	1998	10.1626/pps .1.191
		Effects of Dry Matter Production, Translocation of Nonstructural Carbohydrates and Nitrogen Application on Grain Filling in Rice Cultivar Takanari, a Cultivar Bearing a Large Number of Spikelets	Nagata K, et al.	2001	10.1626/pps .4.173
		Correlation of Nitrogen Concentration with Dry-Matter Partitioning to Spikelets and Total Husk Volume on the Panicle in Japonica Rice	Matsui T, et al.	2002	10.1626/pps .5.198
Analysis of the Number of Spikelets per Panicle on the Main Stems, Primary and Secondary Tillers of Different Rice Genotypes Grown under the Conventional and Nitrogen-Free Basal Dressing Accompanied with Sparse Planting Density Practices		Pham QD, et al.	2004	10.1626/pps .7.456	
Relationship between Dry Weight at Heading and the Number of Spikelets on Individual Rice Tillers		Shiratsuchi H, et al.	2007	10.1626/pps .10.430	
Superior spikelet (1)	Dynamics of Abscisic Acid Levels during Grain-Filling in Rice: Comparisons between Superior and Inferior Spikelets	Tsukaguchi T, et al.	1999	10.1626/pps .2.223	
Unfertilized spikelet (1)	Convenient Estimation of Unfertilized Grains in Rice	Kobata T, et al.	2010	10.1626/pps .13.289	
Spore density (2)		Distribution of Arbuscular Mycorrhizal Fungi in Upland Field Soil of Japan. 1. Relationship between Spore Density and the Soil Environmental Factor	Isobe K, et al.	2007	10.1626/pps .10.122
		Distribution of Arbuscular Mycorrhizal Fungi in Upland Field Soil of Japan. 2. Spore Density of Arbuscular Mycorrhizal Fungi and Infection Ratio in Soybean and Maize Fields	Isobe K, et al.	2008	10.1626/pps .11.171
Sprout (1)		Morphological Studies on the Mobilization of Reserves in Japanese Yam ( <i>Dioscorea japonica</i> Thunb.) Seed Tuber and Eddo ( <i>Colocasia esculenta</i> Schott var. <i>antiquorum</i> Hubbard & Rehder) Seed Corm on and after Sprouting	Kawasaki M, et al.	2001	10.1626/pps .4.304
Sprouting (6)	Preharvest sprouting (3)	Germination of Wheat Grains at Various Temperatures in Relation to the Activities of $\alpha$ -Amylase and Endoprotease	Ichinose Y, et al.	2002	10.1626/pps .5.110
		Ascorbic Acid Suppresses Germination and Dynamic States of Water in Wheat Seeds	Ishibashi Y, et al.	2006	10.1626/pps .9.172
		Effects of Sprouting on Texture of Cooked Buckwheat ( <i>Fagopyrum esculentum</i> Moench) Noodles	Hara T, et al.	2009	10.1626/pps .12.492
	Preharvest sprouting resistance (1)	Effects of Preharvest Sprouting on Flour Pasting Viscosity in Common Buckwheat ( <i>Fagopyrum esculentum</i> Moench)	Hara T, et al.	2007	10.1626/pps .10.361
	Rhizome sprouting (1)	Does Allelopathy Play a Role in Suppression of Mugwort ( <i>Artemisia vulgaris</i> ) by Alfalfa?	Onen H.	2013	10.1626/pps .16.255
Sprouting seed (1)		Varietal Differences in the Survival Rate of Sprouting Rice Seed ( <i>Oryza sativa</i> L.) under Highly Reduced Soil Conditions	Saka N, et al.	1999	10.1626/pps .2.136
Stage (23)	Stages of growth (1)	Effects of Waterlogging at Vegetative and Reproductive Growth Stages on Photosynthesis, Leaf Water Potential and Yield in Mungbean	Ahmed S, et al.	2002	10.1626/pps .5.117
	Early growth stage (3)	Nonstructural Carbohydrate Reserves in Roots and the Ability of Temperate Perennial Grasses to Overwinter in Early Growth Stages	Tamura Y, et al.	2001	10.1626/pps .4.56
		Effects of Seed Rhizome Size on Growth and Yield of Turmeric ( <i>Curcuma longa</i> L.)	Hossain A, et al.	2005	10.1626/pps .8.86
		Variation in Root Development Response to Flooding among 92 Soybean Lines during Early Growth Stages	Sakazono S, et al.	2014	10.1626/pps .17.228
Early stage growth (1)	Temporal Growth Inhibition of Rice Plant and Growth Recovery Observed under Application of Anaerobically-Digested Cattle Manure	Nishikawa T, et al.	2013	10.1626/pps .16.154	

Stage (continued)	Flowering stage (2)	Effects of Low Temperature and Shading during Flowering on the Yield Components in Soybeans	Kurosaki H, et al.	2003	10.1626/pps .6.17
		Pod Setting Pattern during and after Low Temperature and the Mechanism of Cold-Weather Tolerance at the Flowering Stage in Soybeans	Kurosaki H, et al.	2003	10.1626/pps .6.247
	Growth stage (2)	Effects of Carbon Dioxide Enrichment during Different Growth Periods on Flowering, Pod Set and Seed Yield in Soybean	Nakamoto H, et al.	2004	10.1626/pps .7.11
		Growth Behavior of Sago Palm ( <i>Metroxylon sagu</i> Rottb.) from Transplantation to Trunk Formation	Nabeya K, et al.	2015	10.1626/pps .18.209
	Jointing stage (1)	Remote Assessment of Wheat Canopies under Various Cultivation Conditions Using Polarized Reflectance	Shibayama M, et al.	2006	10.1626/pps .9.312
	Milk-ripe stage (1)	Effect of Brassinolide Applied at the Meiosis and Flowering Stages on the Levels of Endogenous Plant Hormones during Grain-Filling in Rice Plant ( <i>Oryza sativa</i> L.)	Saka H, et al.	2003	10.1626/pps .6.36
	Reproductive stage (5)	Effect of Soil Compaction on Dry Matter Production and Water Use of Rice ( <i>Oryza sativa</i> L.) under Water Deficit Stress during the Reproductive Stage	Kobata T, et al.	2000	10.1626/pps .3.306
		Effect of Soil Compaction on the Grain Yield of Rice ( <i>Oryza sativa</i> L.) under Water-Deficit Stress during the Reproductive Stage	Hoque M, et al.	2000	10.1626/pps .3.316
		Relationship between the Size of the Apical Dome at the Panicle Initiation and the Panicle Components in Rice	Kobayasi K, et al.	2001	10.1626/pps .4.81
		Relationship between Apical Dome Diameter at Panicle Initiation and the Size of Panicle Components in Rice Grown under Different Nitrogen Conditions during the Vegetative Stage	Kobayasi K, et al.	2002	10.1626/pps .5.3
		High-yielding Crop Management by Enhancing Growth in Reproductive Stage of Direct-Seeded Rainfed Lowland Rice ( <i>Oryza sativa</i> L.) in Northeast Thailand	Hayashi S, et al.	2010	10.1626/pps .13.104
	Ripening stage (1)	Distribution of Assimilates to Each Organ in Rice Plants Exposed to a Low Temperature at the Ripening Stage, and the Effect of Brassinolide on the Distribution	Fujii S, et al.	2001	10.1626/pps .4.136
	Sensitive growth stage (1)	Cooperative effects of sand application and flushing during the sensitive stages of rice on its yield in a hard saline-sodic soil	Wang MM, et al.	2016	10.1080/13 43943X.20 16.1195695
	Vegetative stage (3)	Relationship between the Size of the Apical Dome at the Panicle Initiation and the Panicle Components in Rice	Kobayasi K, et al.	2001	10.1626/pps .4.81
		Relationship between Apical Dome Diameter at Panicle Initiation and the Size of Panicle Components in Rice Grown under Different Nitrogen Conditions during the Vegetative Stage	Kobayasi K, et al.	2002	10.1626/pps .5.3
		Effects of salt and low light intensity during the vegetative stage on susceptibility of rice to male sterility induced by chilling stress during the reproductive stage	Koumoto T, et al.	2016	10.1080/13 43943X.20 16.1190283
Young microspore stage (2)	Number of Pollen Grains in Rice Cultivars with Different Cool-Weather Resistance at the Young Microspore Stage	Nakamura T, et al.	2000	10.1626/pps .3.299	
	Cool Tolerance of Barley ( <i>Hordeum vulgare</i> L.) at the Young Microspore Stage	Koike S, et al.	2003	10.1626/pps .6.132	
Starch (16)	Starch accumulation (1)	Structural and Functional Differentiation of Bundle Sheath and Mesophyll Cells in the Lamina Joint of Rice Compared with that in the Corresponding Region of the Liguleless Genotype	Tsutsumi K, et al.	2007	10.1626/pps .10.346
	Starch content (1)	Effect of Genotype, Environment and Their Interaction on Quality Parameters of Wheat Breeding Lines of Diverse Grain Hardness	Surma M, et al.	2012	10.1626/pps .15.192
	Starch decomposition (1)	Gas Exchange through the Slit between the Lemma and the Palea in the Rice ( <i>Oryza sativa</i> L.) Floret before Anthesis	Matsui T, et al.	2003	10.1626/pps .6.262
	Starch degradation (2)	Involvement of $\alpha$ -Amylase Genes in Starch Degradation in Rice Leaf Sheaths at the Post-Heading Stage	Sugimura Y, et al.	2015	10.1626/pps .18.277
		Two $\beta$ -amylase genes, <i>OsBAM2</i> and <i>OsBAM3</i> , are involved in starch remobilization in rice leaf sheaths	Hirano T, et al.	2016	10.1080/13 43943X.20 16.1140008
	Starch granule (4)	Morphological Studies on the Mobilization of Reserves in Germinating Rice Seed: Decomposition process of starch granules	Zakaria S, et al.	2000	10.1626/pps .3.152
		Effect of Temperature on the Decomposition of Reserves during Germination and Early Growth of Rice Plants: An electron microscopic study	Zakaria S, et al.	2001	10.1626/pps .4.20
		Effect of High Temperature at Ripening Stage on the Reserve Accumulation in Seed in Some Rice Cultivars	Zakaria S, et al.	2002	10.1626/pps .5.160
		Physiological Mechanisms of Poor Grain Growth in Abnormally Early Ripening Wheat Grown in West Japan	Hossain MA, et al.	2009	10.1626/pps .12.278

Starch (continued)	Starch metabolism (2)	Diurnal Changes in Photosynthesis in Sugarcane Leaves. II. Enzyme activities and metabolite levels relating to sucrose and starch metabolism	Du Y-C, et al.	2000	10.1626/pps.3.9
		Identification of Two Plastid-Targeted $\beta$ -Amylases in Rice	Hirano T, et al.	2011	10.1626/pps.14.318
	Starch property (2)	Effects of Variations in Starch Synthase on Starch Properties and Eating Quality of Rice	Umemoto T, et al.	2008	10.1626/pps.11.472
		Relationship between the Starch Properties of White-Core Tissue and Polishing Characteristics in Brewers' Rice Kernels	Tamaki M, et al.	2009	10.1626/pps.12.233
	Starch synthesis (1)	Structural and Immunocytochemical Characterization of the Synthesis and Accumulation of Starch in Sweet Potato ( <i>Ipomoea batatas</i> Lam.) Tuberous Root	Kawasaki M, et al.	2002	10.1626/pps.5.152
	Starch synthesis and degradation (1)	Molecular physiological aspects of chalking mechanism in rice grains under high-temperature stress	Mitsui T, et al.	2016	10.1080/1343943X.2015.1128112
	Sucrose and starch partitioning (1)	Elevated Sucrose-phosphate Synthase Activity in Source Leaves of Potato Plants Transformed with the Maize SPS Gene	Tobias DJ, et al.	1999	10.1626/pps.2.92
Status (5)	Leaf water status (1)	Assessing Drought Tolerance of Snap Bean ( <i>Phaseolus vulgaris</i> ) from Genotypic Differences in Leaf Water Relations, Shoot Growth and Photosynthetic Parameters	Omae H, et al.	2007	10.1626/pps.10.28
	Nitrogen status (1)	Leaf Positions of Potato Suitable for Determination of Nitrogen Content with a SPAD Meter	Li L, et al.	2012	10.1626/pps.15.317
	Plant nitrogen status (1)	The effects of nitrogen uptake before and after heading on grain protein content and the occurrence of basal- and back-white grains in rice ( <i>Oryza sativa</i> L.)	Tsukaguchi T, et al.	2016	10.1080/1343943X.2016.1223527
	Water status (2)	Influence of Low/High Temperature on Water Status in Developing and Maturing Rice Grains	Funaba M, et al.	2006	10.1626/pps.9.347
Changes in NMR Relaxation of Rice Grains, Kernel Quality and Physicochemical Properties in Response to a High Temperature after Flowering in Heat-Tolerant and Heat-Sensitive Rice Cultivars		Tanaka K, et al.	2009	10.1626/pps.12.185	
Stay-green (2)		Stay-Green in Rice ( <i>Oryza sativa</i> L.) of Drought-Prone Areas in Desiccated Soils	Hoang TB, et al.	2009	10.1626/pps.12.397
		Stay-Green Trait Assessment using the Leaf Incubation Method to Examine the Maintenance of Assimilation Rates under High Temperature Conditions during the Grain-Filling Period in Rice	Kobata T, et al.	2015	10.1626/pps.18.254
	Stele transversal area (1)	Near-isogenic lines of IR64 ( <i>Oryza sativa</i> subsp. <i>indica</i> cv.) introgressed with <i>DEEPER ROOTING 1</i> and <i>STELE TRANSVERSAL AREA 1</i> improve rice yield formation over the background parent across three water management regimes	Deshmukh V, et al.	2017	10.1080/1343943X.2017.1305868
Stem (20)	Stem (3)	Effects of Nitrogen Application on Dark-Respiration in Different Parts of Rice Seedlings	Saitoh K, et al.	2000	10.1626/pps.3.243
		Evaluation of Soybean ( <i>Glycine max</i> ) Stem Vining in Maize-Soybean Relay Strip Intercropping System	Liu WG, et al.	2015	10.1626/pps.18.69
		Mutation of the <i>SPI</i> gene is responsible for the small-panicle trait in the rice cultivar Tachisuzuka, but not necessarily for high sugar content in the stem	Hirose T, et al.	2017	10.1080/1343943X.2016.1260484
	Stem base (1)	Effects of Drought and Shading on Non-structural Carbohydrate Stored in the Stem of Potato ( <i>Solanum tuberosum</i> L.)	Zheng X, et al.	2009	10.1626/pps.12.449
	Stem carbohydrates (1)	Storage and Remobilization of Soluble Carbohydrates after Heading in Different Plant Parts of a Winter Wheat Cultivar	Takahashi T, et al.	2001	10.1626/pps.4.160
	Stem cross-sectional area (1)	Change in Hydraulic Resistance and Shoot Morphology of Napiergrass ( <i>Pennisetum purpureum</i> Schumach.) under Shaded Condition	Nagasuga K, et al.	2006	10.1626/pps.9.364
	Stem desiccation (1)	Dry Matter Partitioning to Stem at Full Maturity Affects Stem Desiccation and Combine Harvest Maturity in Soybeans	Tanaka Y, et al.	2010	10.1626/pps.13.331
	Stem growth (2)	Analysis of Successive Internode Growth in Sweet Sorghum Using Leaf Number as a Plant Age Indicator	Nakamura S, et al.	2011	10.1626/pps.14.299
		Relation between Stem Growth Processes and Internode Length Patterns in Sorghum Cultivar 'Kazetachi'	Fujii A, et al.	2014	10.1626/pps.17.185
	Stem growth habit (1)	Stability Verification of the Effects of Stem Determination and Earliness of Flowering on Green Stem Disorder of Soybean against Genetic Background and Environment	Fujii K, et al.	2015	10.1626/pps.18.166
	Stem length (1)	Change in Hydraulic Resistance and Shoot Morphology of Napiergrass ( <i>Pennisetum purpureum</i> Schumach.) under Shaded Condition	Nagasuga K, et al.	2006	10.1626/pps.9.364
Stem number (1)	A Quantitative Knowledge-based Model for Designing Suitable Growth Dynamics in Rice	Yan D, et al.	2006	10.1626/pps.9.93	

Stem (continued)	Stem traits (1)	Evaluation of the juice brix of wild sugarcanes ( <i>Saccharum spontaneum</i> ) indigenous to Japan	Sakaigaichi T, et al.	2016	10.1080/1343943X.2016.1140009
	Stem yield (1)	Relation between seeding times and stem yield of sorghum in cold region in Japan	Fujii A, et al.	2016	10.1080/1343943X.2015.1128102
	Delayed stem senescence (2)	The Occurrence of Delayed Stem Senescence in Relation to <i>trans</i> -Zeatin Riboside Level in the Xylem Exudate in Soybeans Grown under Excess-Wet and Drought Soil Conditions	Sato J, et al.	2007	10.1626/pps.10.460
		Varietal Difference in the Occurrence of Delayed Stem Senescence and Cytokinin Level in the Xylem Exudate in Soybeans	Isobe K, et al.	2015	10.1626/pps.18.356
	Flow rate of stem sap (1)	Leaf Temperature and Transpiration of Field Grown Cotton and Soybean under Arid and Humid Conditions	Isoda A, et al.	2002	10.1626/pps.5.224
	Main stems (1)	Analysis of the Number of Spikelets per Panicle on the Main Stems, Primary and Secondary Tillers of Different Rice Genotypes Grown under the Conventional and Nitrogen-Free Basal Dressing Accompanied with Sparse Planting Density Practices	Pham QD, et al.	2004	10.1626/pps.7.456
	Unelongated stem (2)	Anatomical Characteristics of the Formation of Crown Root Primordia in Unelongated Stems of Wheat	Nitta Y, et al.	2005	10.1626/pps.8.186
Relation between Crown Root Primordia Formation and Stem Size in Unelongated Stems of Wheat ( <i>Triticum aestivum</i> L.)		Nitta Y, et al.	2006	10.1626/pps.9.266	
Stolon (2)	Potato Stolon and Tuber Growth Influenced by Nitrogen Form	Gao Y, et al.	2014	10.1626/pps.17.138	
	Changes in Freezing Tolerance and its Relationship with the Contents of Carbohydrates and Proline in Overwintering Centipedegrass ( <i>Eremochloa ophiuroides</i> (Munro) Hack.)	Cai Q, et al.	2004	10.1626/pps.7.421	
Stomata (22)	Stomata (3)	Effects of Silicon on Transpiration and Leaf Conductance in Rice Plants ( <i>Oryza sativa</i> L.)	Agarie S, et al.	1998	10.1626/pps.1.89
		Effects of Silicon on Stomatal Blue-Light Response in Rice ( <i>Oryza sativa</i> L.)	Agarie S, et al.	1999	10.1626/pps.2.232
		Silica Deposition in Cell Walls of the Stomatal Apparatus of Rice Leaves	Ueno O, et al.	2005	10.1626/pps.8.71
	Stomatal aperture (1)	Varietal Differences in the Morphophysiological Response to Atmospheric Humidity in Rice	Hirai G, et al.	2002	10.1626/pps.5.101
	Stomatal area (1)	Adaptive Responses of Soybean and Cotton to Water Stress. I. Transpiration Changes in Relation to Stomatal Area and Stomatal Conductance	Inamullah, et al.	2005	10.1626/pps.8.16
	Stomatal behaviour (1)	Water-Extraction by Split-Roots of Sesbania and Pigeon Pea Exposed to Spatially Heterogeneous Distribution of Soil Water	Sekiya N, et al.	2006	10.1626/pps.9.191
	Stomatal conductance (10)	Growth Responses of Drought Resistant Rice Cultivars to Soil Compaction under Irrigated and Succeeding Nonirrigated Conditions during the Vegetative Stage	Hoque M, et al.	1998	10.1626/pps.1.183
		Interactive Effects of Sodium and Potassium on the Growth and Photosynthesis of Spinach and Konnatsuna	Tomemori H, et al.	2002	10.1626/pps.5.281
		Genotypic Variation of Stomatal Conductance in Relation to Stomatal Density and Length in Rice ( <i>Oryza sativa</i> L.)	Ohsumi A, et al.	2007	10.1626/pps.10.322
		Stomatal Responses in Rainfed Lowland Rice to Partial Soil Drying; Evidence for Root Signals	Siopongco JDLC, et al.	2008	10.1626/pps.11.28
		Response of Leaf Photosynthesis to Vapor Pressure Difference in Rice ( <i>Oryza sativa</i> L) Varieties in Relation to Stomatal and Leaf Internal Conductance	Ohsumi A, et al.	2008	10.1626/pps.11.184
		Stomatal Responses in Rainfed Lowland Rice to Partial Soil Drying; Comparison of Two Lines	Siopongco JDLC, et al.	2009	10.1626/pps.12.17
		Varietal Differences in Photosynthetic Rates in Rice Plants, with Special Reference to the Nitrogen Content of Leaves	Hirasawa T, et al.	2010	10.1626/pps.13.53
		Identification of Chromosomal Regions Controlling the Leaf Photosynthetic Rate in Rice by Using a Progeny from <i>Japonica</i> and High-yielding <i>Indica</i> Varieties	Adachi S, et al.	2011	10.1626/pps.14.118
		Interactive Effects of Elevated Atmospheric CO <sub>2</sub> and Waterlogging on Vegetative Growth of Soybean ( <i>Glycine max</i> (L.) Merr.)	Shimono H, et al.	2012	10.1626/pps.15.238
Leaf Photosynthesis and Its Genetic Improvement from the Perspective of Energy Flow and CO <sub>2</sub> Diffusion		Tanaka Y, et al.	2014	10.1626/pps.17.111	
Stomatal density (3)	Varietal Differences in the Morphophysiological Response to Atmospheric Humidity in Rice	Hirai G, et al.	2002	10.1626/pps.5.101	
	Genotypic Variation of Stomatal Conductance in Relation to Stomatal Density and Length in Rice ( <i>Oryza sativa</i> L.)	Ohsumi A, et al.	2007	10.1626/pps.10.322	

Stomata (continued)	Stomatal density (continued)	Leaf Photosynthesis and Its Genetic Improvement from the Perspective of Energy Flow and CO <sub>2</sub> Diffusion	Tanaka Y, et al.	2014	10.1626/pps.17.111
	Stomatal length (1)	Genotypic Variation of Stomatal Conductance in Relation to Stomatal Density and Length in Rice ( <i>Oryza sativa</i> L.)	Ohsumi A, et al.	2007	10.1626/pps.10.322
	Stomatal movement (1)	Silica Deposition in Cell Walls of the Stomatal Apparatus of Rice Leaves	Ueno O, et al.	2005	10.1626/pps.8.71
	Specific stomatal conductance (1)	Genotypic Variation of Stomatal Conductance in Relation to Stomatal Density and Length in Rice ( <i>Oryza sativa</i> L.)	Ohsumi A, et al.	2007	10.1626/pps.10.322
Storage (3)	Storage (1)	Endogenous Gibberellins in Bulbils of Chinese Yam during Growth and Storage	Kim SK, et al.	2005	10.1626/pps.8.181
	Storage life (1)	Development of Rice "Seed-Mats" Consisting of Hardened Seeds with a Cover of Soil for the Rice Transplanter	Shiratsuchi H, et al.	2008	10.1626/pps.11.108
	Storage root formation (1)	Stimulation of Root Thickening and Inhibition of Bolting by Jasmonic Acid in Beet Plants	Koda Y, et al.	2001	10.1626/pps.4.131
Straw weight (1)		Effects of the Tillering Nodes on the Main Stem of a Chinese Large-Panicle-Type Rice Cultivar, Yangdao 4, on the Growth and Yield-Related Characteristics in Relation to Cropping Season	Gendua PA, et al.	2009	10.1626/pps.12.257
Structure (25)	Canopy structure (4)	Comparison of Assimilation Rates in Leaves at Various Nodes in Canopies of Three Spring Wheat Cultivars with Different Plant Forms	Takahashi T.	1998	10.1626/pps.1.174
		Modeling of a Soybean Canopy Structure by the Approximation of a Leaflet into an Ellipsoid for Estimating Direct Solar Radiation Environment	Hirota O, et al.	2000	10.1626/pps.3.67
		Interseeding a Cover Crop as a Weed Management Tool is More Compatible with Soybean than with Maize in Organic Farming Systems	Uchino H, et al.	2015	10.1626/pps.18.187
		Effects of Vertical Gradient of Leaf Nitrogen Content on Canopy Photosynthesis in Tall and Dwarf Cultivars of Sorghum	Tominaga J, et al.	2015	10.1626/pps.18.336
	Endosperm structure (2)	Hardness Distribution and Endosperm Structure on Polishing Characteristics of Brewer's Rice Kernels	Tamaki M, et al.	2007	10.1626/pps.10.481
		Varietal Differences in Endosperm Structure Related to High-degree Polishing Properties of "Hattan Varieties" of Rice Suitable for Brewing Original Hiroshima Sake	Tamaki M, et al.	2008	10.1626/pps.11.466
	Light receiving structure (1)	Effects of Inabenfide [4'-chloro-2'-( $\alpha$ -hydroxybenzyl)-isonicotinamide] on Growth, Lodging, and Yield Components of Rice	Fukazawa M, et al.	2001	10.1626/pps.4.118
	Non-structural carbohydrates (NSC) content (1)	Differential responses to high temperature during maturation in heat-stresstolerant cultivars of Japonica rice	Tanamachi K, et al.	2016	10.1080/1343943X.2016.1140007
	Plastid structure (1)	Structural and Functional Differentiation of Bundle Sheath and Mesophyll Cells in the Lamina Joint of Rice Compared with that in the Corresponding Region of the Liguleless Genotype	Tsutsumi K, et al.	2007	10.1626/pps.10.346
	Seed structure (2)	The Role of Seed Structure and Oxygen Responsiveness in Pre-Germination Flooding Tolerance of Soybean Cultivars	Tian XH, et al.	2005	10.1626/pps.8.157
		Relation of Seed Structures to Soybean Cultivar Difference in Pre-germination Flooding Tolerance	Muramatsu N, et al.	2008	10.1626/pps.11.434
	Surface structure (1)	Changes in Surface Structure during Direct Somatic Embryogenesis in Rice Scutellum Observed by Scanning Electron Microscopy	Mariani TS, et al.	1998	10.1626/pps.1.223
	Ultrastructure (13)	Ultrastructure of Fusion Product between Protoplasts from C <sub>3</sub> and C <sub>4</sub> Species of Amaranthaceae	Mastuti R, et al.	1998	10.1626/pps.1.67
Ultrastructural Analysis of Electrofused Protoplasts from Pansy and Wild Viola by Scanning Electron Microscopy		Sato T, et al.	1998	10.1626/pps.1.288	
Epidermal Cell Wall Biogenesis with Emphasis on Cuticular Layer Formation during Direct Somatic Embryogenesis in Rice		Mariani TS, et al.	1999	10.1626/pps.2.206	
Salinity-Induced Ultrastructural Alterations in Leaf Cells of Rice ( <i>Oryza sativa</i> L.)		Rahman S, et al.	2000	10.1626/pps.3.422	
Cellularization of the Free Nuclear Endosperm in Rice Caryopsis Revealed by Light and Electron Microscopy		Suzuki K, et al.	2000	10.1626/pps.3.446	
Effects of Salinity Stress on the Seminal Root Tip Ultrastructures of Rice Seedlings ( <i>Oryza sativa</i> L.)		Rahman S, et al.	2001	10.1626/pps.4.103	
Effects of Exogenous Glycinebetaine on Growth and Ultrastructure of Salt-Stressed Rice Seedlings ( <i>Oryza sativa</i> L.)		Rahman S, et al.	2002	10.1626/pps.5.33	
Relationship between the Distribution of Na and the Damages Caused by Salinity in the Leaves of Rice Seedlings Grown under a Saline Condition		Mitsuya S, et al.	2002	10.1626/pps.5.269	

Structure (continued)	Ultrastructure (continued)	Relationship between Salinity-Induced Damages and Aging in Rice Leaf Tissues	Mitsuya S, et al.	2003	10.1626/pps.6.213
		Light Dependency of Salinity-Induced Chloroplast Degradation	Mitsuya S, et al.	2003	10.1626/pps.6.219
		Pretreatment with Antioxidants Decreases the Effects of Salt Stress on Chloroplast Ultrastructure in Rice Leaf Segments ( <i>Oryza sativa</i> L.)	Yamane K, et al.	2004	10.1626/pps.7.292
		Pretreatment with a Low Concentration of Methyl Viologen Decreases the Effects of Salt Stress on Chloroplast Ultrastructure in Rice Leaves ( <i>Oryza sativa</i> L.)	Yamane K, et al.	2004	10.1626/pps.7.435
		Correlation between Chloroplast Ultrastructure and Chlorophyll Fluorescence Characteristics in the Leaves of Rice ( <i>Oryza sativa</i> L.) Grown under Salinity	Yamane K, et al.	2008	10.1626/pps.11.139
Suberized wall (1)		Histochemistry and Cell Wall Specialization of Oil Cells related to the Essential Oil Accumulation in the Bark of <i>Cinnamomum cassia</i> Presl. (Lauraceae)	Geng SL, et al.	2012	10.1626/pps.15.1
Substrate induced respiration (1)		Development of Substrate Induced Respiration (SIR) Method Combined with Selective Inhibition for Estimating Fungal and Bacterial Biomass in Humic Andosols	Nakamoto T, et al.	2004	10.1626/pps.7.70
Sucker (4)	Sucker (1)	Growth behavior of suckers derived from transplanted sago palm ( <i>Metroxylon sagu</i> Rottb.)	Nabeya K, et al.	2016	10.1080/1343943X.2016.1147928
	Sucker bud (1)	Position and Development of Differentiated Lateral Buds in Sago Palm ( <i>Metroxylon sagu</i> Rottb.)	Nabeya K, et al.	2015	10.1626/pps.18.435
	Sucker-derived plants (1)	Field Performance of <i>In vitro</i> -propagated and Sucker-derived Plants of Banana ( <i>Musa</i> spp.)	Buah JN, et al.	2000	10.1626/pps.3.124
	Transplanted sucker (1)	Growth Behavior of Sago Palm ( <i>Metroxylon sagu</i> Rottb.) from Transplantation to Trunk Formation	Nabeya K, et al.	2015	10.1626/pps.18.209
Sucrose (8)	Sucrose and starch partitioning (1)	Elevated Sucrose-phosphate Synthase Activity in Source Leaves of Potato Plants Transformed with the Maize SPS Gene	Tobias DJ, et al.	1999	10.1626/pps.2.92
	Sucrose concentration (1)	Relationships between nutrients and sucrose concentrations in sugarcane juice and use of juice analysis for nutrient diagnosis in Japan	Watanabe K, et al.	2016	10.1080/1343943X.2015.1128106
	Sucrose content (3)	Relationship between Ethylene Evolution and Sucrose Content in Excised Leaf Blades of Rice	Kobayashi H, et al.	2000	10.1626/pps.3.398
		Effects of duration and combination of drought and flood conditions on leaf photosynthesis, growth and sugar content in sugarcane	Jaiphong T, et al.	2016	10.1080/1343943X.2016.1159520
		Changes in photosynthesis, growth, and sugar content of commercial sugarcane cultivars and Erianthus under flood conditions	Jaiphong T, et al.	2017	10.1080/1343943X.2016.1275711
	Sucrose metabolism (1)	Diurnal Changes in Photosynthesis in Sugarcane Leaves. II. Enzyme activities and metabolite levels relating to sucrose and starch metabolism	Du Y-C, et al.	2000	10.1626/pps.3.9
	Sucrose transport (1)	Gene Expression of Enzymes for Starch and Sucrose Metabolism and Transport in Leaf Sheaths of Rice ( <i>Oryza sativa</i> L.) during the Heading Period in Relation to the Sink to Source Transition	Hirose T, et al.	1999	10.1626/pps.2.178
	Distribution of [ <sup>14</sup> C]-labeled sucrose (1)	Effects of Epibrassinolide on Sugar Transport and Allocation to the Epicotyl in Cucumber Seedlings	Nakajima N, et al.	1999	10.1626/pps.2.165
Suppression (1)	Growth suppression (1)	Tolerance of Rice ( <i>Oryza sativa</i> L.) and Echinochloa Weeds to Growth Suppression by Rice Straw Added to Paddy Soil in Relation to Iron Toxicity	Nozoe T, et al.	2010	10.1626/pps.13.314
Swelling (2)	Pollen grain swelling (2)	Rapid Swelling of Pollen Grains in Response to Floret Opening Unfolds Anther Locules in Rice ( <i>Oryza sativa</i> L.)	Matsui T, et al.	1999	10.1626/pps.2.196
		High Temperature at Flowering Inhibits Swelling of Pollen Grains, a Driving Force for Thecae Dehiscence in Rice ( <i>Oryza sativa</i> L.)	Matsui T, et al.	2000	10.1626/pps.3.430
Synthesis (3)	Protein synthesis (1)	Regulation of Ammonium Accumulation during Salt Stress in Rice ( <i>Oryza sativa</i> L.) Seedlings	Nguyen HTT, et al.	2005	10.1626/pps.8.397
	Starch synthesis (1)	Structural and Immunocytochemical Characterization of the Synthesis and Accumulation of Starch in Sweet Potato ( <i>Ipomoea batatas</i> Lam.) Tuberos Root	Kawasaki M, et al.	2002	10.1626/pps.5.152
	Starch synthesis and degradation (1)	Molecular physiological aspects of chalking mechanism in rice grains under high-temperature stress	Mitsui T, et al.	2016	10.1080/1343943X.2015.1128112