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auto-generated-by: OBO-Edit 2.1-beta4
default-namespace: rice_trait
namespace-id-rule: * CO_320:\$sequence(7,0,9999999)\$
remark: CGIAR rice trait ontology version 3. Compared with IRRI SES
and trait ontology.

[Term]
id: CO_320:0000000
name: CGIAR rice trait ontology

[Term]
id: CO_320:0000001
name: morphological trait
relationship: part_of CO_320:0000000 ! CGIAR rice trait ontology

[Term]
id: CO_320:0000002
name: panicle density
synonym: "PNDEN" EXACT []
xref: IRIS_TRAITID:1041
is_a: CO_320:0000001 ! morphological trait

[Term]
id: CO_320:0000003
name: seed shape
synonym: "SDSH" EXACT []
xref: IRIS_TRAITID:1042
is_a: CO_320:0000001 ! morphological trait

[Term]
id: CO_320:0000004
name: grain length
def: "Is the average length of the seed or caryopsis fruit in a cereal (with hull)." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
synonym: "GrL" EXACT []
synonym: "seed length" RELATED []
xref: IRIS_TRAITID:1051
xref: Gramene Plant Trait Ontology:TO\0000146
is_a: CO_320:0000001 ! morphological trait

[Term]
id: CO_320:0000005
name: grain width
def: "Width of the dehulled grain with pericarp." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
comment: Enter the actual measurement of width in millimeters as the distance across the fertile lemma and the palea at the widest point.
synonym: "GrW" EXACT []

synonym: "seed width" RELATED []
xref: IRIS_TRAITID:1052
xref: Gramene Plant Trait Ontology:TO\:0000149
xref: Gramene Plant Trait Ontology:TO\:0000402
is_a: CO_320:0000001 ! morphological trait
Sample size = 10. At growth stage: 9.

[Term]

id: CO_320:0000006
name: leaf blade color
def: "Color of the leaf lamina/blade." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
synonym: "LBC" EXACT []
synonym: "leaf lamina color" RELATED []
xref: IRIS_TRAITID:1054
xref: Gramene Plant Trait Ontology:TO\:0000299
is_a: CO_320:0000001 ! morphological trait

[Term]

id: CO_320:0000007
name: nodal rooting
def: "Extent of rooting from the nodes on a stem." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
xref: IRIS_TRAITID:1055
xref: Gramene Plant Trait Ontology:TO\:0000404
is_a: CO_320:0000001 ! morphological trait

[Term]

id: CO_320:0000008
name: nodal tillering
xref: IRIS_TRAITID:1056
xref: Gramene Plant Trait Ontology:TO\:0000285
is_a: CO_320:0000001 ! morphological trait

[Term]

id: CO_320:0000009
name: number of panicles
def: "Average number of panicles per plant in a study." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
synonym: "panicle number" RELATED []
xref: IRIS_TRAITID:1057
xref: Gramene Plant Trait Ontology:TO\:0000152
is_a: CO_320:0000001 ! morphological trait

[Term]

id: CO_320:0000010
name: seed weight
def: "Average weight of seeds obtained from a plant, representing the overall yields or produce from the field." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
synonym: "SDWT" EXACT []

xref: IRIS_TRAITID:1058
xref: Gramene Plant Trait Ontology:TO\0000181
is_a: CO_320:0000001 ! morphological trait

[Term]

id: CO_320:0000011
name: leaf length
def: "Actual measurement of the leaf just below the flag leaf. Expressed in centimeters." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
comment: At growth stage: 6.
synonym: "LL" EXACT []
xref: IRIS_TRAITID:1059
xref: Gramene Plant Trait Ontology:TO\0000135
is_a: CO_320:0000001 ! morphological trait

[Term]

id: CO_320:0000012
name: unfilled grain
def: "Number of unfilled grain." [CO:rs]
xref: IRIS_TRAITID:1060
xref: Gramene Plant Trait Ontology:TO\0000028
is_a: CO_320:0000001 ! morphological trait

[Term]

id: CO_320:0000013
name: leaf blade pubescence
def: "Extent of pubescence (presence of hairs) on the leaf blade surface." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
comment: Methodology: Aside from ocular inspection, rub fingers from the tip down on the leaf surface. Presence of hairs on the blade surface are classified as glabrous (1), Intermediate (2) and pubescent (3). At growth stage: 5-6.
synonym: "blade pubescence" RELATED []
synonym: "LBP" EXACT []
xref: IRIS_TRAITID:1061
xref: IRIS_TRAITID:1546
xref: Gramene Plant Trait Ontology:TO\0000055
is_a: CO_320:0000001 ! morphological trait

[Term]

id: CO_320:0000014
name: leaf angle
def: "The angle of openness of the blade tip is measured against the culm of the leaf below the flag leaf." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
synonym: "LA" EXACT []
xref: IRIS_TRAITID:1062
xref: Gramene Plant Trait Ontology:TO\0000206
is_a: CO_320:0000001 ! morphological trait

[Term]
id: CO_320:0000015
name: awning
def: "Presence of awn structure in the rice grain (kernel)." [CO:rs]
xref: IRIS_TRAITID:1063
is_a: CO_320:0000001 ! morphological trait

[Term]
id: CO_320:0000016
name: culm internode color
def: "Color of the outer surface of internodes on the culm/stem."
[CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
comment: At growth stage: 7-9.
synonym: "CmIC" EXACT []
synonym: "internode color" RELATED []
xref: IRIS_TRAITID:1064
xref: Gramene Plant Trait Ontology:TO\:0000426
is_a: CO_320:0000001 ! morphological trait

[Term]
id: CO_320:0000017
name: flag leaf angle
def: "It is measured near the collar as the angle of attachment between the flag leaf blade and the main panicle axis." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
comment: sample size: 5. At growth stage: 4-5.
synonym: "FLA" EXACT []
xref: IRIS_TRAITID:1065
xref: Gramene Plant Trait Ontology:TO\:0000124
is_a: CO_320:0000001 ! morphological trait

[Term]
id: CO_320:0000018
name: panicle type
def: "Panicle types are classified according to their mode of branching, angle of primary branches, and spikelet density." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
comment: At growth stage 8.
synonym: "PnT" EXACT []
xref: IRIS_TRAITID:1066
xref: Gramene Plant Trait Ontology:TO\:0000089
is_a: CO_320:0000001 ! morphological trait

[Term]
id: CO_320:0000019
name: panicle weight
def: "Average weight of the panicle from the plants or tillers in a given study." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]

xref: IRIS_TRAITID:1067
xref: Gramene Plant Trait Ontology:TO\:0000014
is_a: CO_320:0000001 ! morphological trait

[Term]

id: CO_320:0000020
name: grain thickness
def: "Thickness of the seed or fruit caryopsis with the hull." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
xref: IRIS_TRAITID:1070
xref: Gramene Plant Trait Ontology:TO\:0000304
is_a: CO_320:0000001 ! morphological trait

[Term]

id: CO_320:0000021
name: leaf width
def: "Measurement of the widest portion of the leaf blade just below the flag leaf. Expressed in centimeters." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
comment: At growth stage: 6.
synonym: "LW" EXACT []
xref: IRIS_TRAITID:1071
xref: Gramene Plant Trait Ontology:TO\:0000370
is_a: CO_320:0000001 ! morphological trait

[Term]

id: CO_320:0000022
name: stem thickness
def: "Thickness of the stem." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
xref: IRIS_TRAITID:1072
xref: Gramene Plant Trait Ontology:TO\:00000339
is_a: CO_320:0000001 ! morphological trait

[Term]

id: CO_320:0000023
name: basal leaf sheath color
def: "The changes in the color of basal leaf sheath." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
synonym: "BLSC" EXACT []
xref: IRIS_TRAITID:1073
xref: Gramene Plant Trait Ontology:TO\:0000367
is_a: CO_320:0000001 ! morphological trait

[Term]

id: CO_320:0000024
name: leaf sheath color
synonym: "LFSC" EXACT []
xref: IRIS_TRAITID:1073
xref: Gramene Plant Trait Ontology:TO\:0000367

is_a: CO_320:0000001 ! morphological trait

[Term]

id: CO_320:0000025

name: ligule length

def: "Actual measurement of ligules from the base of the collar to the tip. Expressed in millimeters." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]

synonym: "LgL" EXACT []

xref: IRIS_TRAITID:1074

xref: Gramene Plant Trait Ontology:TO\.:0000024

is_a: CO_320:0000001 ! morphological trait

[Term]

id: CO_320:0000026

name: ligule color

def: "Color of the ligule." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]

synonym: "LgC" EXACT []

xref: IRIS_TRAITID:1075

xref: Gramene Plant Trait Ontology:TO\.:0000197

is_a: CO_320:0000001 ! morphological trait

[Term]

id: CO_320:0000027

name: ligule shape

def: "Defines the actual shape of the ligule." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]

comment: sample size 5; At growth stage: 4-5.

synonym: "LS" EXACT []

xref: IRIS_TRAITID:1076

xref: Gramene Plant Trait Ontology:TO\.:0000335

is_a: CO_320:0000001 ! morphological trait

[Term]

id: CO_320:0000028

name: collar color

def: "Color changes monitored in leaf collar." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]

synonym: "CC" EXACT []

synonym: "leaf collar color" RELATED []

xref: IRIS_TRAITID:1077

xref: Gramene Plant Trait Ontology:TO\.:0000364

is_a: CO_320:0000001 ! morphological trait

[Term]

id: CO_320:0000029

name: auricle color

def: "Color of the auricle." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]

synonym: "AC" EXACT []

xref: IRIS_TRAITID:1078

xref: Gramene Plant Trait Ontology:TO\:0000294
is_a: CO_320:0000001 ! morphological trait

[Term]

id: CO_320:0000030
name: culm length
def: "Length of culm (stem) which is measured from soil surface to panicle base in centimeters." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
comment: sample size: 5. At growth stage: 7-9.
synonym: "CmL" EXACT []
synonym: "stem length" RELATED []
xref: IRIS_TRAITID:1079
xref: Gramene Plant Trait Ontology:TO\:0000576
is_a: CO_320:0000001 ! morphological trait

[Term]

id: CO_320:0000031
name: culm angle
def: "The angle of the culm with respect to the ground surface in a grass plant." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
synonym: "CmA" EXACT []
xref: IRIS_TRAITID:1080
xref: Gramene Plant Trait Ontology:TO\:0000427
is_a: CO_320:0000001 ! morphological trait

[Term]

id: CO_320:0000032
name: basal internode diameter
def: "Actual measurements in millimeters from the outer diameter of the stems (culms) at the basal portion of the main stem (culm)." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
synonym: "DBI" EXACT []
xref: IRIS_TRAITID:1081
xref: Gramene Plant Trait Ontology:TO\:0000132
is_a: CO_320:0000001 ! morphological trait

[Term]

id: CO_320:0000033
name: panicle length
def: "Measurement from panicle base to tip. Expressed in cm." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
synonym: "PnL" EXACT []
xref: IRIS_TRAITID:1082
xref: Gramene Plant Trait Ontology:TO\:0000040
is_a: CO_320:0000001 ! morphological trait

[Term]

id: CO_320:0000034

name: secondary branching of panicles
def: "The extent of secondary branching usually determines the shape and compactness of the panicle." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
synonym: "PnBr" EXACT []
synonym: "secondary branching of inflorescence" RELATED []
xref: IRIS_TRAITID:1083
xref: Gramene Plant Trait Ontology:TO\:0000142
is_a: CO_320:0000001 ! morphological trait

[Term]

id: CO_320:0000035
name: panicle axis
def: "Represents the angle of panicle axis whether straight or droopy." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
comment: At growth stage 7-9.
synonym: "panicle axis angle" RELATED []
synonym: "PnAk" EXACT []
xref: IRIS_TRAITID:1084
xref: IRIS_TRAITID:1542
xref: Gramene Plant Trait Ontology:TO\:00000342
is_a: CO_320:0000001 ! morphological trait

[Term]

id: CO_320:0000036
name: awn color
def: "Describes the awn color." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
synonym: "AnC" EXACT []
xref: IRIS_TRAITID:1085
xref: Gramene Plant Trait Ontology:TO\:0000141
is_a: CO_320:0000001 ! morphological trait

[Term]

id: CO_320:0000037
name: apiculus color
def: "Color of the apiculus." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
synonym: "ApC" EXACT []
xref: IRIS_TRAITID:1086
xref: Gramene Plant Trait Ontology:TO\:0000140
is_a: CO_320:0000001 ! morphological trait

[Term]

id: CO_320:0000038
name: stigma color
def: "Color of stigma." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
comment: Stigma color is determined from blooming spikelets (between 9 a.m. to 2 p.m.) with the aid of a hand lens. At growth stage 6.
synonym: "SgC" EXACT []

xref: IRIS_TRAITID:1087
xref: Gramene Plant Trait Ontology:TO\ :0000185
is_a: CO_320:0000001 ! morphological trait

[Term]

id: CO_320:0000039
name: lemma and palea color
synonym: "hull color" RELATED []
synonym: "LmPC" EXACT []
xref: IRIS_TRAITID:1088
xref: Gramene Plant Trait Ontology:TO\ :0000264
is_a: CO_320:0000001 ! morphological trait

[Term]

id: CO_320:0000040
name: lemma and palea pubescence
def: "Extent of pubescence (hairs) on the lemma and palea." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
synonym: "hull cover" RELATED []
synonym: "LmPb" EXACT []
xref: IRIS_TRAITID:1089
xref: Gramene Plant Trait Ontology:TO\ :0000417
is_a: CO_320:0000001 ! morphological trait

[Term]

id: CO_320:0000041
name: sterile lemma color
def: "Color of the sterile lemma." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
comment: At growth stage 9.
synonym: "SLmC" EXACT []
xref: IRIS_TRAITID:1091
xref: Gramene Plant Trait Ontology:TO\ :0000400
is_a: CO_320:0000001 ! morphological trait

[Term]

id: CO_320:0000042
name: sterile lemma length
def: "Length of sterile lemma." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
comment: Measurement is made on each of the two sterile lemmas. The classification is based on 5-grain sample. At growth stage 9.
synonym: "SLmL" EXACT []
xref: IRIS_TRAITID:1091
xref: Gramene Plant Trait Ontology:TO\ :0000240
is_a: CO_320:0000001 ! morphological trait

[Term]

id: CO_320:0000043
name: lemma and palea structure
xref: IRIS_TRAITID:1092

is_a: CO_320:0000001 ! morphological trait

[Term]

id: CO_320:0000044
name: panicle structure
xref: IRIS_TRAITID:1093
is_a: CO_320:0000001 ! morphological trait

[Term]

id: CO_320:0000045
name: culm structure
synonym: "CMSR" EXACT []
xref: IRIS_TRAITID:1094
is_a: CO_320:0000001 ! morphological trait

[Term]

id: CO_320:0000046
name: leaf structure
xref: IRIS_TRAITID:1096
is_a: CO_320:0000001 ! morphological trait

[Term]

id: CO_320:0000047
name: genetic ratio (morphology)
xref: IRIS_TRAITID:1096
is_a: CO_320:0000001 ! morphological trait

[Term]

id: CO_320:0000048
name: inheritance (morphology)
synonym: "INMOR" EXACT []
xref: IRIS_TRAITID:1097
is_a: CO_320:0000001 ! morphological trait

[Term]

id: CO_320:0000049
name: genetic ratio
synonym: "GR" EXACT []
xref: IRIS_TRAITID:1098
is_a: CO_320:0000001 ! morphological trait

[Term]

id: CO_320:0000050
name: lesion mimic
synonym: "LSMM" EXACT []
xref: IRIS_TRAITID:1099
xref: Gramene Plant Trait Ontology:TO\:0000063
is_a: CO_320:0000001 ! morphological trait

[Term]

id: CO_320:0000051
name: panicle branch color

def: "Color of panicle branch." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
synonym: "PNBC" EXACT []
xref: IRIS_TRAITID:1100
is_a: CO_320:0000001 ! morphological trait

[Term]

id: CO_320:0000052
name: grain size
def: "Seed size is determined by its length to width ratio." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
xref: IRIS_TRAITID:1265
xref: Gramene Plant Trait Ontology:TO\:0000391
is_a: CO_320:0000001 ! morphological trait

[Term]

id: CO_320:0000053
name: stress trait
relationship: part_of CO_320:0000000 ! CGIAR rice trait ontology

[Term]

id: CO_320:0000054
name: acid tolerance
def: "When the soil pH is on acidic side." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
xref: IRIS_TRAITID:1201
xref: Gramene Plant Trait Ontology:TO\:0000178
is_a: CO_320:0000161 ! physicochemical stress trait

[Term]

id: CO_320:0000055
name: alkali tolerance
def: "Sensitivity to the zinc content in the growth environment." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
synonym: "Alk" RELATED []
synonym: "alkali injury" RELATED []
synonym: "ALKTOL" EXACT []
xref: IRIS_TRAITID:1202
xref: Gramene Plant Trait Ontology:TO\:0000351
is_a: CO_320:0000161 ! physicochemical stress trait

[Term]

id: CO_320:0000056
name: aluminum toxicity
def: "Assessed for sensitivity to aluminium toxicity." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
xref: IRIS_TRAITID:1203
xref: Gramene Plant Trait Ontology:TO\:0000354
is_a: CO_320:0000161 ! physicochemical stress trait

[Term]
id: CO_320:0000057
name: cold tolerance
synonym: "CTol" EXACT []
xref: IRIS_TRAITID:1204
xref: Gramene Plant Trait Ontology:TO\:0000303
is_a: CO_320:0000162 ! temperature stress trait

[Term]
id: CO_320:0000058
name: drought recovery
def: "Scores are taken after 10 days following soaking rain or watering- Indicate the degree of stress before recovery." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
synonym: "drought recovery (2nd stress drought)" RELATED []
synonym: "drought recovery (9-10 bars)" RELATED []
synonym: "DRR" EXACT []
synonym: "DRR2S" RELATED []
synonym: "DRR910" RELATED []
xref: IRIS_TRAITID:1205
xref: Gramene Plant Trait Ontology:TO\:0000458
is_a: CO_320:0000163 ! drought stress trait

[Term]
id: CO_320:0000059
name: drought resistance
def: "Becoming tolerant to drought like conditions of minimal or no water content in the growth environment." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
synonym: "drought resistance (early vegetative stage)" RELATED []
synonym: "drought resistance (late vegetative stage)" RELATED []
synonym: "drought resistance (reproductive stage)" RELATED []
xref: IRIS_TRAITID:1206
xref: Gramene Plant Trait Ontology:TO\:0000276
is_a: CO_320:0000163 ! drought stress trait

[Term]
id: CO_320:0000060
name: drought sensitivity
comment: Drought sensitivity is highly interactive with crop phenology, plant growth prior to stress, and timing, duration, and intensity of drought stress.
synonym: "drought tolerance" RELATED []
synonym: "drought tolerance (3-4 bars)" RELATED []
synonym: "drought tolerance (9-10 Bars)" RELATED []
synonym: "DRS" EXACT []
synonym: "DRT34" RELATED []
synonym: "DRT910" RELATED []
xref: IRIS_TRAITID:1208
xref: Gramene Plant Trait Ontology:TO\:0000188

is_a: CO_320:0000163 ! drought stress trait

[Term]

id: CO_320:0000061
name: elongation ability
synonym: "Elon" EXACT []
synonym: "stem elongation" RELATED []
xref: IRIS_TRAITID:1209
xref: Gramene Plant Trait Ontology:TO\:0000170
is_a: CO_320:0000164 ! deepwater stress trait

[Term]

id: CO_320:0000062
name: heat tolerance
def: "tolerance to warm temperatures if plant is exposed to above than permissive temperature limits." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
synonym: "HTol" EXACT []
xref: IRIS_TRAITID:1210
xref: Gramene Plant Trait Ontology:TO\:0000259
is_a: CO_320:0000162 ! temperature stress trait

[Term]

id: CO_320:0000063
name: iron toxicity
def: "Sensitivity to the iron ion content in the growth environment." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
synonym: "FeTox" EXACT []
synonym: "iron sensitivity" RELATED []
xref: IRIS_TRAITID:1211
xref: Gramene Plant Trait Ontology:TO\:0000224
is_a: CO_320:0000161 ! physicochemical stress trait

[Term]

id: CO_320:0000064
name: kneeling ability
def: "The tiller angle measurement for kneeling." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
synonym: "KnA" EXACT []
xref: IRIS_TRAITID:1212
xref: Gramene Plant Trait Ontology:TO\:0000337
is_a: CO_320:0000164 ! deepwater stress trait

[Term]

id: CO_320:0000065
name: phosphorus deficiency
def: "Sensitivity to the phosphorous content in the growth environment." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
synonym: "PDef" EXACT []
synonym: "phosphorus sensitivity" RELATED []

xref: IRIS_TRAITID:1213
xref: Gramene Plant Trait Ontology:TO\ :0000102
is_a: CO_320:0000161 ! physicochemical stress trait

[Term]

id: CO_320:0000066
name: salt tolerance
def: "Tolerance to the high salt content in the growth medium." [CO:rs
"IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos,
Philippines."]
synonym: "Sal" RELATED []
synonym: "salinity tolerance" RELATED []
synonym: "salt injury" RELATED []
synonym: "salt sensitivity" RELATED []
synonym: "SALTOL" EXACT []
xref: IRIS_TRAITID:1214
xref: Gramene Plant Trait Ontology:TO\ :0000429
xref: Gramene Plant Trait Ontology:TO\ :0006001
is_a: CO_320:0000161 ! physicochemical stress trait

[Term]

id: CO_320:0000067
name: submergence tolerance
comment: Greenhouse screening: For greenhouse screening count or %
survival (S) of test entries and resistant control entry such as
FR13A. Compute for % comparative survival value as follows: % S of
entry / % S of control x 100. At growth stage: 2.
synonym: "Sub" EXACT []
synonym: "submergence sensitivity" RELATED []
xref: IRIS_TRAITID:1215
xref: Gramene Plant Trait Ontology:TO\ :0000286
xref: Gramene Plant Trait Ontology:TO\ :0000524
is_a: CO_320:0000164 ! deepwater stress trait
Field evaluation: The period of submergence varies and often is not
under full experimental control. Record actual % of plants that
survived.

[Term]

id: CO_320:0000068
name: survival ability (plant)
xref: IRIS_TRAITID:1216
is_a: CO_320:0000160 ! abiotic stress trait

[Term]

id: CO_320:0000069
name: zinc deficiency
synonym: "ZDef" EXACT []
synonym: "zinc sensitivity" RELATED []
xref: IRIS_TRAITID:1217
xref: Gramene Plant Trait Ontology:TO\ :0000351
is_a: CO_320:0000161 ! physicochemical stress trait

[Term]
id: CO_320:0000070
name: agronomic trait
relationship: part_of CO_320:0000000 ! CGIAR rice trait ontology

[Term]
id: CO_320:0000071
name: fertile panicles
xref: IRIS_TRAITID:1001
is_a: CO_320:0000070 ! agronomic trait

[Term]
id: CO_320:0000072
name: grain filling
def: "Stage of rapid, nearly linear increase in kernel dry matter, that begins about 2 weeks after pollination and lasts almost until physiological maturity." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
synonym: "filled grain" RELATED []
xref: GRO:0007029
xref: IRIS_TRAITID:1002
is_a: CO_320:0000070 ! agronomic trait

[Term]
id: CO_320:0000073
name: grain yield
def: "The grain yield, measured in kilograms per hectare at 14 percent moisture." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
synonym: "yield (grain)" RELATED []
synonym: "Yld" EXACT []
xref: IRIS_TRAITID:1003
xref: Gramene Plant Trait Ontology:TO\ :0000396
is_a: CO_320:0000070 ! agronomic trait

[Term]
id: CO_320:0000074
name: panicle exertion
def: "Trait is monitored by observing the extent of coverage of panicle by the flag leaf sheath." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
comment: At growth stage: 7-9.
synonym: "Exs" RELATED []
synonym: "panicle exertion of male sterile lines" RELATED []
xref: IRIS_TRAITID:1004
xref: Gramene Plant Trait Ontology:TO\ :0000165
is_a: CO_320:0000070 ! agronomic trait
is_a: CO_320:0000123 ! hybrid trait

[Term]
id: CO_320:0000075
name: phenotypic acceptability

def: "Breeding objectives for each variety and trait varies. The evaluation should reflect the overall acceptability of the variety." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
comment: At growth stage 9.
synonym: "PAcp" EXACT []
synonym: "phenotypic acceptability" RELATED []
xref: IRIS_TRAITID:1005
xref: Gramene Plant Trait Ontology:TO\.:0000322
is_a: CO_320:0000070 ! agronomic trait

[Term]

id: CO_320:0000076
name: plant height
def: "Plant height measured from the soil surface to the tip of the tallest panicle (awn excluded)." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
comment: At growth stage 7-9.
synonym: "Ht" RELATED []
synonym: "PLHT" RELATED []
xref: IRIS_TRAITID:1006
xref: Gramene Plant Trait Ontology:TO\.:0000207
is_a: CO_320:0000001 ! morphological trait
is_a: CO_320:0000070 ! agronomic trait

[Term]

id: CO_320:0000077
name: seedling vigor
def: "Represents the seedling growth of the plant." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
comment: At growth stage 2.
synonym: "germination vigor" RELATED []
synonym: "GRVG" RELATED []
synonym: "plant vigor" RELATED []
synonym: "PLVG" RELATED []
synonym: "SDVG" RELATED []
synonym: "seedling vigor" RELATED []
synonym: "Vg" RELATED []
xref: IRIS_TRAITID:1007
xref: Gramene Plant Trait Ontology:TO\.:0000280
is_a: CO_320:0000070 ! agronomic trait

[Term]

id: CO_320:0000078
name: panicle threshability
def: "Percentage of shattered grains, determined by firmly grasping and pulling the hand over the panicle." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
synonym: "leaf shattering" RELATED []
synonym: "PNTHR" RELATED []
synonym: "SHAT" RELATED []

synonym: "Thr" EXACT []
synonym: "threshability" RELATED []
xref: IRIS_TRAITID:1008
xref: Gramene Plant Trait Ontology:TO\ :0000406
is_a: CO_320:0000070 ! agronomic trait

[Term]

id: CO_320:0000079
name: tillering ability
def: "Degree of tillering is affected by variety, spacing of plants in the field, season of planting, and environmental conditions e.g. nitrogen levels." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
comment: At growth stage 5.
synonym: "Ti" RELATED []
synonym: "tiller number" RELATED []
synonym: "TN" RELATED []
xref: IRIS_TRAITID:1009
xref: Gramene Plant Trait Ontology:TO\ :0000329
is_a: CO_320:0000070 ! agronomic trait

[Term]

id: CO_320:0000080
name: lodging incidence
def: "Indicates percentage of plants that lodged." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
comment: At growth stage: 6-9.
synonym: "Lg" EXACT []
xref: IRIS_TRAITID:1010
is_a: CO_320:0000070 ! agronomic trait

[Term]

id: CO_320:0000081
name: heterosis in F1 hybrid
def: "Exceptional plant growth vigor in F1 hybrid." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
xref: IRIS_TRAITID:1011
xref: Gramene Plant Trait Ontology:TO\ :0000355
is_a: CO_320:0000070 ! agronomic trait

[Term]

id: CO_320:0000082
name: days to maturity
def: "Number of days required from seeding to seed/grain ripening (85% grains on panicle are mature)." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
comment: At growth stage: 9.
synonym: "DTM" RELATED []
synonym: "Mat" EXACT []
synonym: "maturity" RELATED []
xref: IRIS_TRAITID:1012

xref: Gramene Plant Trait Ontology:TO\ :0000469
is_a: CO_320:0000070 ! agronomic trait

[Term]

id: CO_320:0000083
name: days to flowering
def: "Number of days from the seed sowing or the seedling transplant date to the anthesis (flowering) stage." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
synonym: "days to flower" RELATED []
synonym: "DTF" RELATED []
synonym: "FLW" EXACT []
xref: IRIS_TRAITID:1013
xref: Gramene Plant Trait Ontology:TO\ :0000344
is_a: CO_320:0000070 ! agronomic trait

[Term]

id: CO_320:0000084
name: culm strength
def: "The test gives indication of culm stiffness and resilience." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
synonym: "CMST" RELATED []
synonym: "Cs" RELATED []
synonym: "stem strength" RELATED []
xref: IRIS_TRAITID:1014
is_a: CO_320:0000070 ! agronomic trait

[Term]

id: CO_320:0000085
name: leaf senescence
def: "A measure of aging of leaf. Rapid senescence of leaves can be detrimental to yield." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
comment: It is commonly thought that rapid senescence of leaves can be detrimental to yield if the rice grains have not completely filled.
\nAt growth stage: 9.
synonym: "Sen" EXACT []
xref: IRIS_TRAITID:1015
xref: Gramene Plant Trait Ontology:TO\ :0000249
is_a: CO_320:0000070 ! agronomic trait

[Term]

id: CO_320:0000086
name: seed germination
def: "The physiological and developmental changes that occur in a seed commencing with water uptake (imbibition) and terminating with the elongation of the embryonic axis." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
xref: GO:0009845
xref: IRIS_TRAITID:1016
is_a: CO_320:0000070 ! agronomic trait

[Term]
id: CO_320:0000087
name: growth stage
def: "The gross developmental stages defined for the plant." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
comment: When reporting results for specific characters, use this code to identify the stage of plant growth at which the observation was recorded.
xref: GRO:0007001
xref: IRIS_TRAITID:1017
is_a: CO_320:0000070 ! agronomic trait

[Term]
id: CO_320:0000088
name: days to heading
def: "Number of days required for the inflorescence (head/cob/panicle) to emerge from the flag leaf of a plant or a group of plants in a study." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
synonym: "DTH" RELATED []
synonym: "HEAD" RELATED []
synonym: "heading" RELATED []
xref: IRIS_TRAITID:1019
xref: Gramene Plant Trait Ontology:TO\:0000137
is_a: CO_320:0000070 ! agronomic trait

[Term]
id: CO_320:0000089
name: yield (biomass)
def: "The material produced by the growth of plants, especially as a product of farming." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
synonym: "biomass" RELATED []
synonym: "YLDBIO" EXACT []
xref: IRIS_TRAITID:1020
xref: Gramene Plant Trait Ontology:TO\:0000327
is_a: CO_320:0000070 ! agronomic trait

[Term]
id: CO_320:0000090
name: spikelet fertility
def: "Determined by pressing the spikelets with the fingers and counting those that have no grains or the percent seed setting." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
comment: At growth stage 9.
synonym: "fertile spikelets" RELATED []
synonym: "SpFert" EXACT []
xref: IRIS_TRAITID:1021
xref: Gramene Plant Trait Ontology:TO\:0000180

is_a: CO_320:0000070 ! agronomic trait

[Term]

id: CO_320:0000091
name: male sterility group
xref: IRIS_TRAITID:1022
is_a: CO_320:0000123 ! hybrid trait

[Term]

id: CO_320:0000092
name: abortion pattern
def: "Observations are made on staining behavior and number of nuclei in most of the pollens." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
synonym: "abortion pattern of male sterile line" RELATED []
synonym: "pollen abortion type" RELATED []
xref: IRIS_TRAITID:1023
xref: Gramene Plant Trait Ontology:TO\:0000218
is_a: CO_320:0000123 ! hybrid trait

[Term]

id: CO_320:0000093
name: stigma exsertion
def: "Trait is monitored by counting number of flowers or florets that have completed anthesis on a given day and showing exerted stigma. Trait expressed as percent stigma exsertion." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
synonym: "stigma exsertion in male sterile lines" RELATED []
xref: IRIS_TRAITID:1024
xref: Gramene Plant Trait Ontology:TO\:0000044
is_a: CO_320:0000070 ! agronomic trait

[Term]

id: CO_320:0000094
name: glume opening
def: "Angle of opening of glumes is measured on each floret, assessment based on mean angle of glume opening." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
synonym: "glume opening" RELATED []
synonym: "opening of glume of male sterile lines" RELATED []
xref: IRIS_TRAITID:1025
is_a: CO_320:0000070 ! agronomic trait

[Term]

id: CO_320:0000095
name: male sterility
def: "In plants, it represents the incompetence of the pollen to fertilize the ovum. Reasons could be non-viable pollen, incompatibility, pollen abortion, toxicity, genetic etc. Usually determined by either the pollen sterility or spikelet fertility (percent seed set)." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]

synonym: "degree of male sterility of male sterile lines" RELATED []
xref: IRIS_TRAITID:1026
xref: Gramene Plant Trait Ontology:TO\:0000437
is_a: CO_320:0000123 ! hybrid trait

[Term]

id: CO_320:0000096
name: outcrossing potential
def: "It is a measure of percent seed set on the out-pollinated primary panicle." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
synonym: "extent of outcrossing on male sterile lines" RELATED []
xref: IRIS_TRAITID:1027
xref: Gramene Plant Trait Ontology:TO\:0000330
is_a: CO_320:0000123 ! hybrid trait

[Term]

id: CO_320:0000097
name: fertility
xref: IRIS_TRAITID:1028
xref: Gramene Plant Trait Ontology:TO\:0000392
is_a: CO_320:0000070 ! agronomic trait

[Term]

id: CO_320:0000098
name: fertility restoration
synonym: "fertility restoration in F1 hybrids" RELATED []
synonym: "male fertility restoration trait" RELATED []
xref: IRIS_TRAITID:1029
xref: Gramene Plant Trait Ontology:TO\:0000497
is_a: CO_320:0000123 ! hybrid trait

[Term]

id: CO_320:0000099
name: anthesis
def: "The trait associated with the timing of the flowering." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
synonym: "6.1-flowering stage" RELATED []
synonym: "ANTH" EXACT []
synonym: "DTA" RELATED []
xref: GRO:0007151
xref: IRIS_TRAITID:1030
xref: Gramene Plant Trait Ontology:TO\:0002616
is_a: CO_320:0000070 ! agronomic trait

[Term]

id: CO_320:0000100
name: grain weight
def: "Weight of the dehulled grains. Expressed in kilograms or grams." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]

synonym: "100-grain weight" RELATED []
synonym: "1000-grain weight" RELATED []
synonym: "1000GW" RELATED []
synonym: "100GW" RELATED []
xref: IRIS_TRAITID:1264
xref: Gramene Plant Trait Ontology:TO\:0000181
xref: Gramene Plant Trait Ontology:TO\:0000269
xref: Gramene Plant Trait Ontology:TO\:0000590
is_a: CO_320:0000070 ! agronomic trait
is_a: CO_320:0000101 ! grain quality trait

[Term]

id: CO_320:0000101
name: grain quality trait
relationship: part_of CO_320:0000000 ! CGIAR rice trait ontology

[Term]

id: CO_320:0000102
name: amylose content
def: "Percent amylose of milled rice." [CO:rs]
synonym: "AMY" RELATED []
synonym: "amylose content of grain" RELATED []
xref: IRIS_TRAITID:1251
xref: Gramene Plant Trait Ontology:TO\:0000196
is_a: CO_320:0000101 ! grain quality trait

[Term]

id: CO_320:0000103
name: aroma
def: "The aroma of the cooked/uncooked grains." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
synonym: "scent" RELATED []
synonym: "SCT" RELATED []
xref: IRIS_TRAITID:1252
xref: Gramene Plant Trait Ontology:TO\:0000087
is_a: CO_320:0000101 ! grain quality trait

[Term]

id: CO_320:0000104
name: chalkiness of endosperm
def: "Defines a representative milled sample for the degree (extent) of chalkiness that will best describe the sample with respect to (a) white belly, (b) white center, (c) white back." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
synonym: "CLK" RELATED []
xref: IRIS_TRAITID:1253
xref: Gramene Plant Trait Ontology:TO\:0000266
is_a: CO_320:0000101 ! grain quality trait

[Term]

id: CO_320:0000105
name: elongation in deepwater

def: "Elongation or growing of rice in areas annually flooded to varying depths. The scale is based on the performance of check varieties." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
comment: Specify water depth under which the data was recorded. At growth stage: 5-6.
synonym: "elongation (grain)" RELATED []
xref: IRIS_TRAITID:1254
xref: Gramene Plant Trait Ontology:TO\:0000377
is_a: CO_320:0000101 ! grain quality trait

[Term]

id: CO_320:0000106
name: gel consistency
def: "Scoring of carbohydrate composition in grain by gel consistency type in mm. It measures the tendency of cooked rice to harden when it cools down." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
comment: It is classified as hard (27-35 mm), medium hard (36-40), medium (41-60) and soft (61-100).
synonym: "GELC" EXACT []
xref: IRIS_TRAITID:1255
xref: Gramene Plant Trait Ontology:TO\:0000211
is_a: CO_320:0000101 ! grain quality trait

[Term]

id: CO_320:0000107
name: gelatinization temperature
def: "Temperature for the gelatinization process." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
comment: it is observed by placing six milled-grains/kernels in 10ml 1.7% KOH in a shallow container and arrange them so that they do not touch.
synonym: "GELT" EXACT []
xref: IRIS_TRAITID:1256
xref: Gramene Plant Trait Ontology:TO\:0000462
is_a: CO_320:0000101 ! grain quality trait

[Term]

id: CO_320:0000108
name: head rice
def: "The 3/4 or longer whole milled kernels separated from the total milled rice." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
synonym: "HDR" EXACT []
xref: IRIS_TRAITID:1257
xref: Gramene Plant Trait Ontology:TO\:0000222
is_a: CO_320:0000101 ! grain quality trait

[Term]

id: CO_320:0000109
name: brown rice shape

def: "Shape of the brown rice. Measure after harvesting, cleaning, and dehulling." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
synonym: "BRLWR" RELATED []
synonym: "brown rice length-width ratio" RELATED []
synonym: "BRS" EXACT []
synonym: "kernel length/width ratio" RELATED []
synonym: "KLWR" RELATED []
xref: IRIS_TRAITID:1258
xref: Gramene Plant Trait Ontology:TO\:0000287
is_a: CO_320:0000101 ! grain quality trait

[Term]

id: CO_320:0000110
name: brown rice length
def: "Length of the grain monitored after dehulling but before polishing. The grain should contain pericarp." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
synonym: "KLEN" RELATED []
synonym: "LEN" EXACT []
synonym: "length of kernel" RELATED []
xref: IRIS_TRAITID:1259
xref: Gramene Plant Trait Ontology:TO\:0000041
is_a: CO_320:0000101 ! grain quality trait

[Term]

id: CO_320:0000111
name: brown rice protein
def: "Percent of total brown rice weight (at 14% moisture) to one decimal place." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
comment: At growth stage: 9 (after dehulling).
synonym: "protein content" RELATED []
synonym: "PRT" EXACT []
xref: IRIS_TRAITID:1260
xref: Gramene Plant Trait Ontology:TO\:0000138
is_a: CO_320:0000101 ! grain quality trait

[Term]

id: CO_320:0000112
name: milled rice
def: "Kernels that have been milled to remove the bran, leaving \"white\" or milled rice." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
xref: IRIS_TRAITID:1261
xref: Gramene Plant Trait Ontology:TO\:0000144
is_a: CO_320:0000101 ! grain quality trait

[Term]

id: CO_320:0000113
name: endosperm quality

def: "Quality of endosperm associated with texture, content, composition, size etc." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
synonym: "END" EXACT []
synonym: "endosperm type" RELATED []
xref: IRIS_TRAITID:1262
xref: Gramene Plant Trait Ontology:TO\:0000150
xref: Gramene Plant Trait Ontology:TO\:0000587
is_a: CO_320:0000101 ! grain quality trait

[Term]

id: CO_320:0000114
name: grain moisture
def: "Moisture content of grain. Expressed in percentage." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
synonym: "moisture (grain)" RELATED []
xref: IRIS_TRAITID:1263
xref: Gramene Plant Trait Ontology:TO\:0000057
is_a: CO_320:0000101 ! grain quality trait

[Term]

id: CO_320:0000115
name: seed coat color
def: "The color of the seed coat." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
comment: At growth stage: 9.\nColor code: 1, white; 2, light brown; 3, speckled brown; 4, brown; 5, red; 6, variable purple and 7, purple.
synonym: "bran color" RELATED []
synonym: "BRC" RELATED []
synonym: "SCC" EXACT []
xref: IRIS_TRAITID:1266
xref: Gramene Plant Trait Ontology:TO\:0000190
is_a: CO_320:0000101 ! grain quality trait

[Term]

id: CO_320:0000116
name: alkali digestion
def: "Indirect measure of gelatinization temperature. Observed by placing six milled-rice kernels in 10ml 1.7% KOH in a shallow container and arrange them so that they do not touch. Let them stand for 23hrs at 30degC temperature and score for spreading. Measure for Alkali digestion is inversely proportional to the gelatinization temperature, e.g. if alkali digestion is low, the gelatinization temperature is high." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
synonym: "ALKD" EXACT []
xref: IRIS_TRAITID:1267
xref: Gramene Plant Trait Ontology:TO\:0000134
is_a: CO_320:0000101 ! grain quality trait

[Term]

id: CO_320:0000117
name: brown rice width
def: "Width of the grain monitored after dehulling but before polishing." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
comment: The grain should contain pericarp.
synonym: "KWID" RELATED []
synonym: "WID" EXACT []
synonym: "width of kernel" RELATED []
xref: IRIS_TRAITID:1268
is_a: CO_320:0000101 ! grain quality trait

[Term]

id: CO_320:0000118
name: seed viability
synonym: "SDVIA" EXACT []
xref: IRIS_TRAITID:1031
xref: Gramene Plant Trait Ontology:TO\:0000345
is_a: CO_320:0000070 ! agronomic trait

[Term]

id: CO_320:0000119
name: grain shape
def: "An assay to determine the variation in the shape of the dehulled grain." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
synonym: "GRS" EXACT []
xref: IRIS_TRAITID:1053
xref: Gramene Plant Trait Ontology:TO\:0002730
is_a: CO_320:0000001 ! morphological trait

[Term]

id: CO_320:0000120
name: sterile lemma texture
xref: IRIS_TRAITID:1501
is_a: CO_320:0000001 ! morphological trait

[Term]

id: CO_320:0000121
name: sterile lemma shape
def: "Shape of sterile lemma." [CO:rs]
xref: IRIS_TRAITID:1502
xref: Gramene Plant Trait Ontology:TO\:0002726
is_a: CO_320:0000001 ! morphological trait

[Term]

id: CO_320:0000122
name: sterile lemma apex
xref: IRIS_TRAITID:1503
is_a: CO_320:0000001 ! morphological trait

[Term]

id: CO_320:0000123
name: hybrid trait
relationship: part_of CO_320:0000000 ! CGIAR rice trait ontology

[Term]

id: CO_320:0000124
name: rhizome formation
xref: IRIS_TRAITID:1506
xref: Gramene Plant Trait Ontology:TO\::0002767
is_a: CO_320:0000001 ! morphological trait

[Term]

id: CO_320:0000125
name: rachilla shape
def: "Shape of rachilla." [CO:rs]
xref: IRIS_TRAITID:1507
is_a: CO_320:0000001 ! morphological trait

[Term]

id: CO_320:0000126
name: pedicel presence
def: "Presence or absence of pedicel." [CO:rs]
xref: IRIS_TRAITID:1508
is_a: CO_320:0000001 ! morphological trait

[Term]

id: CO_320:0000127
name: pedicel length
def: "Length of pedicel." [CO:rs]
xref: IRIS_TRAITID:1509
is_a: CO_320:0000001 ! morphological trait

[Term]

id: CO_320:0000128
name: panicle axis texture
xref: IRIS_TRAITID:1510
is_a: CO_320:0000001 ! morphological trait

[Term]

id: CO_320:0000129
name: nodal septum color
def: "Color of nodal septum." [CO:rs]
xref: IRIS_TRAITID:1511
is_a: CO_320:0000001 ! morphological trait

[Term]

id: CO_320:0000130
name: leaf texture
xref: IRIS_TRAITID:1513
is_a: CO_320:0000001 ! morphological trait

[Term]

id: CO_320:0000131
name: lemma and palea surface
xref: IRIS_TRAITID:1514
is_a: CO_320:0000001 ! morphological trait

[Term]

id: CO_320:0000132
name: ligule pubescence
def: "Presence or absence of hairs in ligule." [CO:rs]
xref: IRIS_TRAITID:1516
is_a: CO_320:0000001 ! morphological trait

[Term]

id: CO_320:0000133
name: life cycle
xref: IRIS_TRAITID:1517
is_a: CO_320:0000070 ! agronomic trait

[Term]

id: CO_320:0000134
name: grain attachment to pedicel
xref: IRIS_TRAITID:1520
is_a: CO_320:0000001 ! morphological trait

[Term]

id: CO_320:0000135
name: growth habit
def: "Estimated by the angle of inclination of the main shoot/stem against the soil/growth medium surface." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
xref: IRIS_TRAITID:1521
xref: Gramene Plant Trait Ontology:TO\ :0002756
is_a: CO_320:0000001 ! morphological trait

[Term]

id: CO_320:0000136
name: flag leaf ligule
xref: IRIS_TRAITID:1522
is_a: CO_320:0000001 ! morphological trait

[Term]

id: CO_320:0000137
name: flag leaf width
def: "Width of flag leaf." [CO:rs]
xref: IRIS_TRAITID:1523
is_a: CO_320:0000001 ! morphological trait

[Term]

id: CO_320:0000138
name: flag leaf length
def: "Length of flag leaf." [CO:rs]
xref: IRIS_TRAITID:1524

is_a: CO_320:0000001 ! morphological trait

[Term]

id: CO_320:0000139
name: fertile lemma texture
def: "Texture of fertile lemma." [CO:rs]
xref: IRIS_TRAITID:1525
is_a: CO_320:0000001 ! morphological trait

[Term]

id: CO_320:0000140
name: embryo size
def: "Measurement of embryo size." [CO:rs]
xref: IRIS_TRAITID:1526
is_a: CO_320:0000001 ! morphological trait

[Term]

id: CO_320:0000141
name: panicle distance from base
xref: IRIS_TRAITID:1527
is_a: CO_320:0000001 ! morphological trait

[Term]

id: CO_320:0000142
name: panicle distance to spikelet
xref: IRIS_TRAITID:1528
is_a: CO_320:0000001 ! morphological trait

[Term]

id: CO_320:0000143
name: panicle base pubescence
def: "Presence or absence of hairs in panicle base." [CO:rs]
xref: IRIS_TRAITID:1530
is_a: CO_320:0000001 ! morphological trait

[Term]

id: CO_320:0000144
name: awn thickness
xref: IRIS_TRAITID:1531
is_a: CO_320:0000001 ! morphological trait

[Term]

id: CO_320:0000145
name: awn texture
def: "Texture of own." [CO:rs]
xref: IRIS_TRAITID:1532
is_a: CO_320:0000001 ! morphological trait

[Term]

id: CO_320:0000146
name: awn length
def: "Length of own. Expressed in mm." [CO:rs]

xref: IRIS_TRAITID:1063
xref: IRIS_TRAITID:1533
xref: Gramene Plant Trait Ontology:TO\0000072
is_a: CO_320:0000001 ! morphological trait

[Term]
id: CO_320:0000147
name: auricle pubescence
def: "Presence of hairs in auricle." [CO:rs]
xref: IRIS_TRAITID:1534
is_a: CO_320:0000001 ! morphological trait

[Term]
id: CO_320:0000148
name: auricle presence
def: "Presence or absence of auricle." [CO:rs]
xref: IRIS_TRAITID:1535
is_a: CO_320:0000001 ! morphological trait

[Term]
id: CO_320:0000149
name: apiculus pubescence
def: "Presence or absence of hairs in apiculus." [CO:rs]
xref: IRIS_TRAITID:1536
is_a: CO_320:0000001 ! morphological trait

[Term]
id: CO_320:0000150
name: anther length
def: "Anther length in mm." [CO:rs]
xref: IRIS_TRAITID:1537
is_a: CO_320:0000001 ! morphological trait

[Term]
id: CO_320:0000151
name: varietal group
synonym: "variety group" RELATED []
xref: IRIS_TRAITID:1538
is_a: CO_320:0000001 ! morphological trait

[Term]
id: CO_320:0000152
name: panicle shattering
def: "Measurement of extent of panicle shattering." [CO:rs]
xref: IRIS_TRAITID:1540
is_a: CO_320:0000001 ! morphological trait

[Term]
id: CO_320:0000153
name: population composition
xref: IRIS_TRAITID:1541
is_a: CO_320:0000070 ! agronomic trait

[Term]
id: CO_320:0000154
name: node color
def: "Color of node." [CO:rs]
xref: IRIS_TRAITID:1543
is_a: CO_320:0000001 ! morphological trait

[Term]
id: CO_320:0000155
name: culm diameter
def: "Measurement of culm diameter." [CO:rs]
synonym: "culm width" RELATED []
synonym: "stem width" RELATED []
xref: IRIS_TRAITID:1545
xref: Gramene Plant Trait Ontology:TO\:0001035
is_a: CO_320:0000001 ! morphological trait

[Term]
id: CO_320:0000156
name: awn presence
def: "The presence or absence of awn. Observation may include relative awn size." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
xref: IRIS_TRAITID:1548
xref: Gramene Plant Trait Ontology:TO\:0002734
is_a: CO_320:0000001 ! morphological trait

[Term]
id: CO_320:0000157
name: seedling recovery
comment: Scores are taken after 10 days following soaking rain or watering. Indicate the degree of stress before recovery.
xref: IRIS_TRAITID:1566
is_a: CO_320:0000160 ! abiotic stress trait

[Term]
id: CO_320:0000158
name: pollen sterility
def: "Determination of sterile pollen. Expressed in percentage." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
comment: Observed under a microscope at magnification 10x10 after staining with 1% iodine potassium iodide (IKI) solution.
xref: Gramene Plant Trait Ontology:TO\:0000053
is_a: CO_320:0000095 ! male sterility

[Term]
id: CO_320:0000159
name: spikelet sterility
xref: Gramene Plant Trait Ontology:TO\:0000436
is_a: CO_320:0000095 ! male sterility

[Term]
id: CO_320:0000160
name: abiotic stress trait
is_a: CO_320:0000053 ! stress trait

[Term]
id: CO_320:0000161
name: physicochemical stress trait
synonym: "chemical stress sensitivity" RELATED []
xref: Gramene Plant Trait Ontology:TO\0000482
is_a: CO_320:0000160 ! abiotic stress trait

[Term]
id: CO_320:0000162
name: temperature stress trait
synonym: "temperature response trait" RELATED []
xref: Gramene Plant Trait Ontology:TO\0000432
is_a: CO_320:0000160 ! abiotic stress trait

[Term]
id: CO_320:0000163
name: drought stress trait
synonym: "drought related trait" RELATED []
xref: Gramene Plant Trait Ontology:TO\0000394
is_a: CO_320:0000160 ! abiotic stress trait

[Term]
id: CO_320:0000164
name: deepwater stress trait
is_a: CO_320:0000160 ! abiotic stress trait

[Term]
id: CO_320:0000165
name: 100-grain weight
def: "Weight of the 100-dehulled grain having pericarp (seed coat). Expressed in grams." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
xref: IRIS_TRAITID:1264
xref: Gramene Plant Trait Ontology:TO\0000591
is_a: CO_320:0000100 ! grain weight
created_by: RSHRESTHA
creation_date: 2010-01-19T11:02:48Z

[Term]
id: CO_320:0000166
name: 1000-grain weight
def: "Weight of the 1000-dehulled grains having pericarp (seed coat). Expressed in grams." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
xref: IRIS_TRAITID:1264
xref: Gramene Plant Trait Ontology:TO\0000592

is_a: CO_320:0000100 ! grain weight
created_by: RSHRESTHA
creation_date: 2010-01-19T11:07:31Z

[Term]

id: CO_320:0000167
name: vegetative vigor
def: "Represents the growth of plant." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
comment: Used to evaluate genetic material under stress and non-stress conditions, several factors may interact, influencing the seedling vigor (e.g. tillering ability, plant height, etc).\nAt growth stage 3.
xref: Gramene Plant Trait Ontology:TO\ :0000296
is_a: CO_320:0000070 ! agronomic trait
created_by: RSHRESTHA
creation_date: 2010-01-19T12:05:14Z

[Term]

id: CO_320:0000168
name: biotic stress trait
is_a: CO_320:0000053 ! stress trait
creation_date: 2010-08-02T09:57:23Z

[Term]

id: CO_320:0000169
name: bacterial disease
def: "Scored for the plant response to the diseases caused by several bacteria." [CO:rs]
is_a: CO_320:0000168 ! biotic stress trait
created_by: RSHRESTHA
creation_date: 2010-08-02T09:57:49Z

[Term]

id: CO_320:0000170
name: fungal disease
def: "Scored for the plant response to fungi causing several fungal diseases." [CO:rs]
is_a: CO_320:0000168 ! biotic stress trait
created_by: RSHRESTHA
creation_date: 2010-08-02T10:00:03Z

[Term]

id: CO_320:0000171
name: viral disease
def: "Scored for plant response to the diseases caused by several viruses." [CO:rs]
is_a: CO_320:0000168 ! biotic stress trait
created_by: RSHRESTHA
creation_date: 2010-08-02T10:00:45Z

[Term]

id: CO_320:0000172

name: insect damage
def: "Scored for the damages caused by insects." [CO:rs]
xref: Gramene Plant Trait Ontology:TO\0000261
is_a: CO_320:0000168 ! biotic stress trait
created_by: RSHRESTHA
creation_date: 2010-08-02T10:01:20Z

[Term]

id: CO_320:0000173
name: bacterial leaf blight
def: "Scored for the plant response to the agent *Xanthomonas oryzae* pv. *oryzae* causing bacterial leaf blight." [CO:rs]
comment: Symptoms: Lesions usually start near the leaf tips or leaf margins or both, and extend down the outer edge(s).
synonym: "Bacterial blight (BB)" RELATED []
synonym: "Bacterial Blight Kreak (BBK)" RELATED []
synonym: "Bacterial Blight Race 1 (BB1)" RELATED []
synonym: "Bacterial Blight Race 2 (BB2)" RELATED []
xref: Gramene Plant Trait Ontology:TO\0000175
xref: TRAITID_IRIS:1101
is_a: CO_320:0000169 ! bacterial disease
created_by: RSHRESTHA
creation_date: 2010-08-02T10:03:11Z

[Term]

id: CO_320:0000174
name: bacterial leaf streak
def: "Scored for the plant response to the agent *Xanthomonas oryzae* pv. *oryzicola* causing bacterial leaf streak." [CO:rs]
xref: Gramene Plant Trait Ontology:TO\0000203
xref: TRAITID_IRIS:1102
is_a: CO_320:0000169 ! bacterial disease
created_by: RSHRESTHA
creation_date: 2010-08-02T10:10:21Z

[Term]

id: CO_320:0000175
name: black streak dwarf virus
def: "Scored for the plant response to the agent black streak dwarf virus (BSDV)." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
xref: Gramene Plant Trait Ontology:TO\0000020
xref: TRAITID_IRIS:1103
is_a: CO_320:0000171 ! viral disease
created_by: RSHRESTHA
creation_date: 2010-08-02T10:11:46Z

[Term]

id: CO_320:0000176
name: rice leaf blast
synonym: "Blast" RELATED []
synonym: "leaf blast" RELATED []

synonym: "rice blast" RELATED []
xref: TRAITID_IRIS:1104
is_a: CO_320:0000170 ! fungal disease
created_by: RSHRESTHA
creation_date: 2010-08-02T10:13:48Z

[Term]

id: CO_320:0000177
name: brown spot
def: "Scored for the plant response to the agent Cochliobolus miyabeanus (Bipolaris oryzae, Drechslera oryzae) causing brown spot."
[CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
xref: Gramene Plant Trait Ontology:TO\:0000356
xref: TRAITID_IRIS:1105
is_a: CO_320:0000170 ! fungal disease
created_by: RSHRESTHA
creation_date: 2010-08-02T10:20:00Z

[Term]

id: CO_320:0000178
name: false smut
def: "Scored for the plant response to the agent Ustilaginoidea virens causing false smut." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
xref: Gramene Plant Trait Ontology:TO\:0000129
xref: TRAITID_IRIS:1106
is_a: CO_320:0000170 ! fungal disease
created_by: RSHRESTHA
creation_date: 2010-08-02T10:21:31Z

[Term]

id: CO_320:0000179
name: grassy stunt virus
def: "Scored for the plant response to the agent rice grassy stunt virus (RGSV). There are two known RGSV strains, rice grassy stunt virus 1 (RGSV1) and rice grassy stunt virus 2 (RGSV2)." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
synonym: "RSGV" RELATED []
synonym: "RSGV1" RELATED []
synonym: "RSGV2" RELATED []
xref: Gramene Plant Trait Ontology:TO\:0000213
xref: TRAITID_IRIS:1108
is_a: CO_320:0000171 ! viral disease
created_by: RSHRESTHA
creation_date: 2010-08-02T10:27:26Z

[Term]

id: CO_320:0000180
name: kernel smut

def: "Scored for the plant response to the agent *Tilletia barclayana* causing kernel smut." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
comment: Symptoms: Infected grains show minute black pustules or streaks bursting through the glumes. In severe infection, the rupturing glumes produce short beak-like or spur-like growths.\nAt growth stage: 9.
xref: TRAITID_IRIS:1109
is_a: CO_320:0000170 ! fungal disease
created_by: RSHRESTHA
creation_date: 2010-08-02T10:31:09Z

[Term]

id: CO_320:0000181
name: leaf scald
def: "Scored for the plant response to the agent *Monographella albescens* (*Microdochium oryzae*) causing leaf scald." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
comment: Symptoms: The lesions occurs mostly near leaf tips, but sometimes starts at the margin of the blade and develops into large ellipsoid areas encircled by dark-brown, narrow bands accompanied by a light-brown halo.\n\nAt growth stage: 5-8.
xref: TRAITID_IRIS:1110
is_a: CO_320:0000170 ! fungal disease
created_by: RSHRESTHA
creation_date: 2010-08-02T10:33:22Z

[Term]

id: CO_320:0000182
name: narrow brown leaf spot
def: "Scored for the plant response to the agent *Sphaerulina oryzina* (*Cercospora janseana*) causing narrow brown leaf spot." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
synonym: "NBLS" RELATED []
xref: TRAITID_IRIS:1111
is_a: CO_320:0000170 ! fungal disease
created_by: RSHRESTHA
creation_date: 2010-08-02T10:35:04Z

[Term]

id: CO_320:0000183
name: ragged stunt
xref: TRAITID_IRIS:1112
is_a: CO_320:0000170 ! fungal disease
created_by: RSHRESTHA
creation_date: 2010-08-02T10:36:18Z

[Term]

id: CO_320:0000184
name: rice tungro virus

def: "Scored for the plant response to the agent rice tungro bacilliform virus (RTBV) and rice tungro spherical virus (RTSV)." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
xref: Gramene Plant Trait Ontology:TO\ :0000413
xref: TRAITID_IRIS:1113
is_a: CO_320:0000171 ! viral disease
created_by: RSHRESTHA
creation_date: 2010-08-02T10:37:50Z

[Term]

id: CO_320:0000185
name: sheath rot
def: "Scored for the plant response to the agent Soracladium oryzae causing sheath rot." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
comment: Symptoms: Oblong or irregular brown to grey lesions on the leaf sheath near panicle; sometimes coalescing to prevent emergence of panicle.\n\nAt growth stage: 7-9.
xref: TRAITID_IRIS:1114
is_a: CO_320:0000170 ! fungal disease
created_by: RSHRESTHA
creation_date: 2010-08-02T10:39:29Z

[Term]

id: CO_320:0000186
name: stem rot
xref: TRAITID_IRIS:1115
is_a: CO_320:0000170 ! fungal disease
created_by: RSHRESTHA
creation_date: 2010-08-02T10:42:40Z

[Term]

id: CO_320:0000187
name: ufra
def: "Scored for the plant response to the agent Nymphula depunctalis causing ufra." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
xref: TRAITID_IRIS:1116
is_a: CO_320:0000170 ! fungal disease
created_by: RSHRESTHA
creation_date: 2010-08-02T10:43:53Z

[Term]

id: CO_320:0000188
name: seedling blight
xref: TRAITID_IRIS:1117
is_a: CO_320:0000170 ! fungal disease
created_by: RSHRESTHA
creation_date: 2010-08-02T10:44:40Z

[Term]

id: CO_320:0000189
name: sheath blight
def: "Scored for the plant response to the agent Thanethoporus cucumeris (Rhizoctonia solani) causing narrow sheath blight." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
comment: Symptoms: Grayish-green lesions may enlarge and coalesce with other lesions, mostly on lower leaf sheaths, but occasionally on the leaves.
xref: TRAITID_IRIS:1117
is_a: CO_320:0000170 ! fungal disease
created_by: RSHRESTHA
creation_date: 2010-08-02T10:45:15Z

[Term]

id: CO_320:0000190
name: neck blast
xref: TRAITID_IRIS:1119
is_a: CO_320:0000170 ! fungal disease
created_by: RSHRESTHA
creation_date: 2010-08-02T10:47:05Z

[Term]

id: CO_320:0000191
name: leaf smut
xref: TRAITID_IRIS:1120
is_a: CO_320:0000170 ! fungal disease
created_by: RSHRESTHA
creation_date: 2010-08-02T10:48:50Z

[Term]

id: CO_320:0000192
name: yellow mottle
def: "Scored for the plant response to the agent rice yellow mottle virus (RYMV)." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
synonym: "RYMV" RELATED []
xref: Gramene Plant Trait Ontology:TO\:0000088
xref: TRAITID_IRIS:1121
is_a: CO_320:0000171 ! viral disease
created_by: RSHRESTHA
creation_date: 2010-08-02T10:50:18Z

[Term]

id: CO_320:0000193
name: hoja blanca
def: "Scored for the plant response to the agent rice hoja blanca virus (RHBV) causing hoja blanca." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
synonym: "HBVRS" RELATED []
synonym: "RHBV " RELATED []
xref: Gramene Plant Trait Ontology:TO\:0000147

xref: TRAITID_IRIS:1122
is_a: CO_320:0000171 ! viral disease
created_by: RSHRESTHA
creation_date: 2010-08-02T10:53:02Z

[Term]

id: CO_320:0000194
name: udbatta disease
def: "Scored for the plant response to the agent *Balansia oryzae-sativae* (*Ephelis oryzae*) causing udbatta disease." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
comment: Symptoms: A white mycelial mat ties panicle branches together so that they emerge as single, small, cylindrical rods.
xref: TRAITID_IRIS:1123
is_a: CO_320:0000170 ! fungal disease
created_by: RSHRESTHA
creation_date: 2010-08-02T10:54:49Z

[Term]

id: CO_320:0000195
name: bakanae disease
def: "Scored for the plant response to the agent *Gibberella fujikuroi* causing bakanae disease." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
comment: Causal agent: *Gibberella fujikuroi*. Symptoms: the plant elongates abnormally, has few tillers and usually dies before producing grains.
xref: TRAITID_IRIS:1124
is_a: CO_320:0000170 ! fungal disease
created_by: RSHRESTHA
creation_date: 2010-08-02T10:55:35Z

[Term]

id: CO_320:0000196
name: brown planthopper damage
def: "Scored for the plant damage caused by brown plant hopper (*Nilaparvata lugens*)." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
synonym: "BPH1" RELATED []
synonym: "BPH2" RELATED []
synonym: "BPH3" RELATED []
xref: Gramene Plant Trait Ontology:TO\ :0000424
xref: TRAITID_IRIS:1152
is_a: CO_320:0000215 ! planthopper damage
created_by: RSHRESTHA
creation_date: 2010-08-02T11:01:44Z

[Term]

id: CO_320:0000197
name: caseworm damage

def: "Scored for the plant damage caused by caseworm (*Nymphula depunctalis*). " [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
xref: Gramene Plant Trait Ontology:TO\ :0000405
xref: TRAITID_IRIS:1153
is_a: CO_320:0000172 ! insect damage
created_by: RSHRESTHA
creation_date: 2010-08-02T11:10:57Z

[Term]

id: CO_320:0000198
name: cutworm damage
def: "Scored for the plant damage caused by cutworm (*Spodoptera litura*). " [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
xref: Gramene Plant Trait Ontology:TO\ :0000317
xref: TRAITID_IRIS:1154
is_a: CO_320:0000172 ! insect damage
created_by: RSHRESTHA
creation_date: 2010-08-02T12:31:33Z

[Term]

id: CO_320:0000199
name: gall midge damage
def: "Scored for the plant damage caused by gall midge (*Orseolia oryzae*). " [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
comment: At growth stage: 2-5.\nNote: For the field test to be valid more than 60% of the plants should be affected with not less than 15% silver shoot in the susceptible check.
xref: Gramene Plant Trait Ontology:TO\ :0000423
xref: TRAITID_IRIS:1155
is_a: CO_320:0000172 ! insect damage
created_by: RSHRESTHA
creation_date: 2010-08-02T12:32:52Z

[Term]

id: CO_320:0000200
name: green leafhopper damage
def: "Scored for the plant damage caused by green leafhopper (*Nephotettix virescens* and *Nephotettix cincticeps*). " [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
xref: Gramene Plant Trait Ontology:TO\ :0000212
xref: TRAITID_IRIS:1156
is_a: CO_320:0000172 ! insect damage
created_by: RSHRESTHA
creation_date: 2010-08-02T12:34:11Z

[Term]

id: CO_320:0000201
name: leaf folder

def: "Scored for the plant damage caused by leaf folder (*Marasmia patnalis*).\" [CO:rs \"IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines.\"]
xref: Gramene Plant Trait Ontology:TO\\:0000403
xref: TRAITID_IRIS:1157
is_a: CO_320:0000172 ! insect damage
created_by: RSHRESTHA
creation_date: 2010-08-02T12:36:07Z

[Term]

id: CO_320:0000202
name: leaf roller
def: "Scored for the plant damage caused by leaf-roller (*Cnaphalocrocis medinalis*).\" [CO:rs \"IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines.\"]
xref: Gramene Plant Trait Ontology:TO\\:0000192
xref: TRAITID_IRIS:1157
is_a: CO_320:0000172 ! insect damage
created_by: RSHRESTHA
creation_date: 2010-08-02T12:36:49Z

[Term]

id: CO_320:0000203
name: rice bug damage
def: "Scored for the plant damage caused by rice bug (*Leptocorisa oratorisa*).\" [CO:rs \"IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines.\"]
xref: Gramene Plant Trait Ontology:TO\\:0000220
xref: TRAITID_IRIS:1159
is_a: CO_320:0000172 ! insect damage
created_by: RSHRESTHA
creation_date: 2010-08-02T12:37:43Z

[Term]

id: CO_320:0000204
name: rice hispa damage
def: "Scored for the plant damage caused by rice hispa (*Di cladispa armigera*).\" [CO:rs \"IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines.\"]
xref: Gramene Plant Trait Ontology:TO\\:0000191
xref: TRAITID_IRIS:1160
is_a: CO_320:0000172 ! insect damage
created_by: RSHRESTHA
creation_date: 2010-08-02T12:40:42Z

[Term]

id: CO_320:0000205
name: rice skipper damage
def: "Scored for the plant damage caused by rice (*Pelopidas mathias* and *Parnara guttata*).\" [CO:rs \"IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines.\"]
xref: Gramene Plant Trait Ontology:TO\\:0000151

xref: TRAITID_IRIS:1161
is_a: CO_320:0000172 ! insect damage
created_by: RSHRESTHA
creation_date: 2010-08-02T12:41:50Z

[Term]

id: CO_320:0000206
name: rice whorl maggot
def: "Scored for the plant damage caused by rice whorl maggot (*Hydrellia philippina*)." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
xref: Gramene Plant Trait Ontology:TO\0000332
xref: TRAITID_IRIS:1162
is_a: CO_320:0000172 ! insect damage
created_by: RSHRESTHA
creation_date: 2010-08-02T12:42:52Z

[Term]

id: CO_320:0000207
name: sogatodes
def: "Scored for the plant damage caused by *Sogatodes orizicola* and *S. cubanus*." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
comment: *Sogatella orizicola* is also a vector for the rice black streaked dwarf fijivirus and rice hoja blanca virus (RHBV).
xref: Gramene Plant Trait Ontology:TO\0000348
xref: TRAITID_IRIS:1163
is_a: CO_320:0000172 ! insect damage
created_by: RSHRESTHA
creation_date: 2010-08-02T12:44:17Z

[Term]

id: CO_320:0000208
name: stem borer damage
def: "Scored for the plant damage caused by stem borers, *Chilo suppressalis* (striped), *C. polychrysus* (dark headed), *Rupela albinella* (South American white), *Scirpophaga incertulas* (yellow), *S. innotata* (white), *Sesamia inferens* (pink), *Maliarpha separata* (african whiteheads), *Diopsis macrophthalma* (stalked-eyed fly), and several other species." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
comment: At growth stage: 3-5 (deadhearts); 8-9 (white heads).
synonym: "stem borer deadheart" RELATED []
synonym: "striped stem borer" RELATED []
synonym: "yellow stem borer" RELATED []
xref: Gramene Plant Trait Ontology:TO\0000454
xref: TRAITID_IRIS:164
is_a: CO_320:0000172 ! insect damage
created_by: RSHRESTHA
creation_date: 2010-08-02T12:45:34Z

[Term]

id: CO_320:0000209
name: stink bug damage
def: "Scored for the plant damage caused by stink bug (Oebalus pugnax)." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
xref: Gramene Plant Trait Ontology:TO\ :0000022
xref: TRAITID_IRIS:1165
is_a: CO_320:0000172 ! insect damage
created_by: RSHRESTHA
creation_date: 2010-08-02T12:48:57Z

[Term]

id: CO_320:0000210
name: thrips damage
def: "Scored for the plant damage caused by thrips (Stenchaetothrips biformis)." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
comment: At growth stage: 2-3
xref: Gramene Plant Trait Ontology:TO\ :0000154
xref: TRAITID_IRIS:1166
is_a: CO_320:0000172 ! insect damage
created_by: RSHRESTHA
creation_date: 2010-08-02T12:50:03Z

[Term]

id: CO_320:0000211
name: white black planthopper damage
xref: TRAITID_IRIS:1167
is_a: CO_320:0000215 ! planthopper damage
created_by: RSHRESTHA
creation_date: 2010-08-02T12:52:24Z

[Term]

id: CO_320:0000212
name: zigzag leaf hopperdamage
xref: TRAITID_IRIS:1168
is_a: CO_320:0000215 ! planthopper damage
created_by: RSHRESTHA
creation_date: 2010-08-02T12:53:20Z

[Term]

id: CO_320:0000213
name: bird damage
def: "Scored for the plant damage caused by bird." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
synonym: "rodent damage" RELATED []
xref: TRAITID_IRIS:1169
is_a: CO_320:0000168 ! biotic stress trait
created_by: RSHRESTHA
creation_date: 2010-08-02T12:55:00Z

[Term]

id: CO_320:0000214
name: rat damage
def: "Scored for the plant damage caused by rat." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
xref: Gramene Plant Trait Ontology:TO\:0000117
xref: TRAITID_IRIS:1170
is_a: CO_320:0000168 ! biotic stress trait
created_by: RSHRESTHA
creation_date: 2010-08-02T12:55:50Z

[Term]

id: CO_320:0000215
name: planthopper damage
def: "Scored for the plant damage caused by planthopper." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
xref: TRAITID_IRIS:1171
is_a: CO_320:0000172 ! insect damage
created_by: RSHRESTHA
creation_date: 2010-08-02T12:57:09Z

[Term]

id: CO_320:0000216
name: rice delphacid damage
def: "Scored for the plant damage caused by rice delphacid [Sogatodes oryzicola (Tagosodes orizicolus)]." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
comment: Symptoms: Similar to whitebacked planthopper (WBHP).\nAt growth stage: 2 (green house); 2-6 (field).\nNote: The scale is based on symptoms. Incidence of dead plants could be considered for final evaluation.
synonym: "RDel" RELATED []
xref: Gramene Plant Trait Ontology:TO\:0000246
xref: TRAITID_IRIS:1172
is_a: CO_320:0000172 ! insect damage
created_by: RSHRESTHA
creation_date: 2010-08-02T12:57:42Z

[Term]

id: CO_320:0000217
name: army worm damage
def: "Scored for the plant damage caused by army worm (Pseudaletia unipuncta)." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
xref: Gramene Plant Trait Ontology:TO\:0000273
xref: TRAITID_IRIS:1151
is_a: CO_320:0000172 ! insect damage
created_by: RSHRESTHA
creation_date: 2010-08-02T03:29:28Z

[Term]

id: CO_320:0000218

name: seedling height
def: "Actual measurements of 10 seedlings in centimeters, from the base of the shoot to the tip of the tallest leaf blade." [CO:rs "IRRI. 1996. Standard evaluation system for rice. IRRI: Los Banos, Philippines."]
comment: At growth stage 2-3 (5-leaf stage)
xref: IRIS_TRAITID:1006
is_a: CO_320:0000001 ! morphological trait

[Term]

id: CO_320:0000219
name: first heading
def: "Date on which the first flush of flowers is observed. It is specified either as the number of days from effective seeding date to first heading date or as the date of effective seeding and date of first heading." [CO:rs]
comment: The trait is mainly observed for wild rice.
is_a: CO_320:0000070 ! agronomic trait

[Typedef]

id: part_of
name: part_of
is_transitive: true
creation_date: 2011-03-04T01:01:54Z