­­­­­**Supplementary tables**

Supplementary Table 1: Days to heading and maturity of 249 weedy rice (*Oryza sativa* L*.*) accessions collected in the Rio Grande do Sul (RS) and Santa Catarina (SC).

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| **Mesoregion** | **State** | **Identification code** | **50% Heading** **(range - days)** | **Maturity****(range - days)** |
| 1 - Alto Vale do Itajaí | SC | 15-96; 15-97; 15-98; 15-99; 15-141; 15-269 | 86 - 98 | 125 - 134 |
| 2- Médio Vale do Itajaí | SC | 15-35; 15-36; 15-37; 15-38; 15-39; 15-40; 15-41; 15-42; 15-43; 15-44; 15-45; 15-46; 15-47; 15-48; 15-49; 15-50; 15-51; 15-52; 15-53; 15-54; 15-55; 15-56; 15-57; 15-58; 15-59; 15-60; 15-61; 15-62; 15-63; 15-64; 15-65; 15-66; 15-67; 15-68; 15-69; 15-70; 15-71; 15-72; 15-73; 15-74; 15-75; 15-76; 15-77; 15-78; 15-79; 15-80; 15-81; 15-82; 15-83; 15-84; 15-85; 15-86; 15-87; 15-88; 15-89; 15-90; 15-91; 15-92; 15-93; 15-94; 15-95; 15-106; 15-107; 15-108; 15-109; 15-110; 15-111; 15-112; 15-113; 15-114; 15-115; 15-116; 15-117; 15-118; 15-119; 15-120; 15-121; 15-122; 15-123; 15-124; 15-125; 15-126; 15-127; 15-128; 15-129; 15-130; 15-131; 15-267; 15-268; 15-271 | 82 - 110 | 110 - 144 |
| 3- Baixo Vale do Itajaí | SC | 15-18; 15-19; 15-20; 15-21; 15-22; 15-23; 15-24; 15-25; 15-26; 15-27; 15-28; 15-29; 15-30; 15-31; 15-32; 15-33; 15-34; 15-266 | 87 - 109 | 121 - 142 |
| 4- Sul | SC | 15-132; 15-133; 15-134; 15-135; 15-136; 15-137; 15-138; 15-139; 15-140; 15-142; 15-143; 15-144; 15-145; 15-146 | 78 - 109 | 106 - 140 |
| 5- Litoral Norte | SC | 15-100; 15-101; 15-102; 15-103; 15-104; 15-105; 15-147; 15-148; 15-149; 15-150; 15-270 | 86 - 99 | 121 - 134 |
| 6- Depressão Central | RS | 15-171; 15-172; 15-173; 15-174; 15-175; 15-176; 15-177; 15-178; 15-180; 15-181; 15-182; 15-183; 15-184; 15-190; 15-191; 15-192; 15-193; 15-194; 15-195; 15-196; 15-197; 15-198; 15-199; 15-200; 15-201; 15-202; 15-203; 15-204; 15-205; 15-272; 15-273; 15-275; 15-276; 15-282; 15-283 | 82 - 110 | 110 - 144 |
| 7- Zona Sul | RS | 15-152; 15-153; 15-154; 15-156; 15-157; 15-159; 15-160; 15-161; 15-162; 15-163; 15-165; 15-166; 15-167; 15-168; 15-169; 15-179; 15-230; 15-231; 15-232; 15-233; 15-234; 15-235; 15-236; 15-237; 15-238; 15-239; 15-240; 15-241; 15-242; 15-244; 15-245; 15-247; 15-248; 15-249; 15-250 | 88 - 110 | 118 - 144 |
| 8- Campanha | RS | 15-151; 15-155; 15-158; 15-164; 15-170; 15-185; 15-186; 15-187; 15-188; 15-189; 15-206; 15-207; 15-208; 15-209; 15-210; 15-211; 15-212; 15-213; 15-214; 15-215; 15-216; 15-217; 15-218; 15-219; 15-220; 15-221; 15-222; 15-223; 15-224; 15-225; 15-226; 15-227; 15-228; 15-229; 15-243; 15-246; 15-251; 15-274; 15-277; 15-278 | 77 - 110 | 106 - 141 |

Supplementary Table 2: List of 24 morphological descriptors evaluated in weedy rice (*Oryza sativa* L*.*) accessions.

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| **Descriptor** | **Variable type** | **Particulars** |
| 1. Leaf color | Qualitative | The blade and sheath color were recorded at the beginning of panicle exertion: 1= Light green; 2= Green; 3= Dark green; 4= Purple at the tip; 5= Purple at the margin; 6= Purple |
| 2. Flag leaf length (FLL) | Quantitative | Distance (cm) between the collar and the tip of the flag leaf, at the beginning of flowering |
| 3. Flag leaf width (FLW) | Quantitative | Measured (cm) at the widest section of the leaf blade of the flag leaf at the beginning of flowering |
| 4. Flag leaf pubescence (FLP) | Qualitative | Between the booting and heading stage: 1 = Absent (glabrous); 2 = pubescent |
| 5. Auricle color (AuC) | Qualitative | Observed on the penultimate leaf, between the booting stage and anthesis: 1= light green; 2 = Purple |
| 6. Ligule color (LgC) | Qualitative | Observed on the penultimate leaf, between the booting stage and anthesis: 1= light green; 2= Purple |
| 7. Flag Leaf Angle (FLA) | Qualitative | Estimated angle concerning the stem, at anthesis: 1= Erect – lower than 30º; 2= Intermediate – between 31 and 60º; 3= Horizontal – between 61 and 90º; 4= Descendent – greater than 90º |
| 8. Ligule shape (LS) | Qualitative | Observed on the penultimate leaf, between the booting stage and anthesis: 1= Acute to acuminate; 2= Cleft; 3= Truncate |
| 9. Plant height (Ht) | Quantitative | Culm length (cm), from the soil level to the tip of the flag leaf |
| 10. Panicle exsertion (EXS) | Quantitative | Distance between the flag leaf collar and the base of the panicle As known as uppermost internode. |
| 11. Seed shattering (SS) | Qualitative | Percentage of shattered grains after lightly pressing on the panicle by hand: 1= Low: less than 25% of the grains removed; 2=Intermediate: between 25 and 50% of the grains removed; 3)=High: more than 50% of the grains removed |
| 12. Subspecies group (SG) | Qualitative | Classification of subspecies group using the phenol reaction test: 1= *indica*; 2= *japonica* |
| 13. Panicle type (PnT) | Qualitative | At maturity, according to the classification of primary branch: 1= Compact; 2= Intermediate; 3= Open |
| 14. Panicle length (PnL) | Quantitative | Distance (cm) between the base of the panicle and the last spikelet on the panicle, at grain filling |
| 15. Awn presence and distribution (APD) | Qualitative | After grain filling: 0= Absent; 1= Only at tip of panicle; 2= ¼ superior; 3= ½ superior; 4= 2/3 superior; 5 = all spikelets awned |
| 16. Awn length (AL) | Quantitative | At maturity (cm) |
| 17. Apiculus color (ApC) | Qualitative | At anthesis: 1= White; 2= Green; 3= Yellow; 4= Brown; 5= Red; 6= Purple; 7= Black |
| 18. Glumella pubescence (GP) | Qualitative | At maturity: 1= Absent (glabrous); 2= pubescent |
| 19. Glumella color (GC) | Qualitative | Mature seeds 1= Straw; 2= Golden; 3= Brown strains; 4= Purple; 5= Black |
| 20. Grain length (GrL) | Quantitative | After harvest (mm) |
| 21. Grain width (GrW) | Quantitative | After harvest (mm) |
| 22. Grain thickness (GrT) | Quantitative | After harvest (mm) |
| 23. Ratio of length and width of the grain (RGLW) | Quantitative | After harvest  |
| 24. Pericarp color (PeC) | Qualitative | After harvest, sample seeds were hulled but not polished: 1= White; 2= Straw; 3= Red; 4= Purple |

Source: IRRI (2002); Nascimento et al. (2011).

**Supplementary Table 3:** Summary of analysis of variance for quantitative traits in 249 weedy rice (*Oryza sativa* L*.*) accessions from RS and SC.

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| **Variable (DF)** | **Mean Squares** |
| **AL** | **EXS** | **Ht** | **GrL** | **GrT** | **GrW** | **RGLW** | **FLL** | **FLW** | **PnL** |
| Accession (248) | 1014.8\*\* | 17.53\*\* | 1013.7\*\* | 1.01\*\* | 0.03\*\* | 0.11\*\* | 0.33\*\* | 189.7\*\* | 0.19\*\* | 37.1\*\* |
| Residue (498) | 11.2 | 0.10 | 25.09 | 0.13 | 0.1 | 0.02 | 0.01 | 4.2 | 0.01 | 1.07 |
| Mean | 22.9 | 3.39 | 123.38 | 9.10 | 2.00 | 2.90 | 3.15 | 30.6 | 1.34 | 20.4 |
| CV (%) | 14.6 | 9.22 | 4.05 | 4.02 | 2.01 | 5.01 | 3.55 | 6.69 | 6.74 | 5.07 |

\*\* - significant at 1% by the F.

AL - Awn length; EXS - Panicle exsertion; Ht - Plant height; GrL – Grain length; GrT - Grain thickness; GrW - Grain width; RGLW - Ratio between length and width of the grain; FLL - Flag leaf length; FLW - Flag leaf width; PnL - Panicle length.