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| Table S1. Meteorological data for rainy, postrainy (2013) and summer (2014) seasons at ICRISAT, Patancheru, India.  |
| Season | Month | Day length (h) | Minimum temperature (oC) | Maximum temperature (oC) | Season total rainfall (mm) | Solar radiation (mj m-2) |
| 2013 rainy | June | 13.2 | 25.0 | 36.8 | 42.2 | 19.9 |
|  | July | 13.0 | 21.4 | 28.9 | 226.7 | 12.8 |
|  | August | 12.7 | 21.1 | 28.2 | 164.8 | 13.6 |
|  | September | 12.2 | 21.2 | 30.1 | 277.6 | 16.9 |
|  | October | 11.7 | 20.4 | 29.4 | 207.2 | 18.9 |
|  | Mean | 12.6 | 21.8 | 30.7 | 918.5 | 16.4 |
|  |  |  |  |  |  |  |
| 2013 postrainy | November | 11.3 | 15.3 | 30.3 | 55.8 | 16.2 |
|  | December | 11.1 | 11.4 | 27.8 | 0.0 | 16.6 |
|  | January | 11.2 | 14.8 | 28.4 | 0.0 | 15.3 |
|  | February | 11.5 | 15.6 | 30.5 | 0.0 | 17.4 |
|  | March | 12.0 | 19.4 | 33.1 | 12.8 | 18.8 |
|  | Mean | 11.4 | 15.3 | 30.0 | 68.6 | 16.9 |
|  |  |  |  |  |  |  |
| 2014 summer | Feb | 11.5 | 15.6 | 30.5 | 0.0 | 17.4 |
|  | March | 12.0 | 19.4 | 33.1 | 12.8 | 18.6 |
|  | April | 12.5 | 23.2 | 37.1 | 85.4 | 19.8 |
|  | May | 12.9 | 24.8 | 37.1 | 40.8 | 20.9 |
|  | June | 13.2 | 25.0 | 36.5 | 42.2 | 19.9 |
|   | Mean | 12.4 | 21.6 | 34.9 | 181.2 | 19.3 |

Table S2. Percent (%) variation explained by principal components and their vector loadings for fodder related traits.

|  |  |
| --- | --- |
| Particulars | Principal components |
|  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Percent variation explained  | 56.74 | 20.05 | 7.34 | 5.30 | 4.44 | 3.28 | 2.85 |
| *Vector loadings of traits* |  |  |  |  |  |  |  |
| Days to 50% flowering  | 0.338 | 0.452 | -0.588 | 0.147 | 0.129 | 0.529 | 0.131 |
| Plant height (cm) | 0.383 | 0.290 | 0.562 | -0.507 | 0.007 | 0.171 | 0.408 |
| Stem thickness (mm) | 0.394 | -0.391 | 0.190 | 0.005 | -0.310 | 0.504 | -0.553 |
| Total tillers per plant (no.) | -0.330 | 0.463 | 0.519 | 0.491 | 0.189 | 0.269 | -0.241 |
| Number of leaves per plant (no.) | 0.348 | 0.501 | -0.019 | 0.123 | -0.522 | -0.510 | -0.283 |
| Leaf length (cm) | 0.441 | -0.025 | 0.038 | -0.024 | 0.760 | -0.308 | -0.362 |
| Leaf width (mm) | 0.399 | -0.304 | 0.175 | 0.682 | -0.037 | -0.104 | 0.491 |

Table S3.Clusters of fodder type pearl millet germplasm identified based on Ward’s method.

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| --- | --- |
| Cluster No. | IP No.  |
| 1 | 261, 1746, 2700, 2706, 3070, 3080, 3088, 3474, 3476, 3489, 3593, 3604, 3613, 3625, 3627, 3628, 3629, 3636, 3645, 3663, 3665, 6775, 6797, 6857, 6860, 6863, 6867, 6883, 6891, 6892, 8190, 8327, 8633, 8635, 8639, 11000, 11005, 11361, 11431, 11593, 12447, 12448, 12898, 13352, 13599, 13613, 13817, 13833, 13892, 14343, 14447, 14448,14536, 14607,14644,14724, 14787, 15070,15160, 15257, 15285, 15288, 15289, 15290, 15301, 15302, 15304, 15306, 15307, 15320, 15321, 15322, 15341, 15342, 15343, 15344, 15348, 15351, 15369, 15438, 15559, 15591, 15602, 17201, 17369, 17494, 20266, 20273, 20333, 20339, 20344, 20345, 20346, 20347, 20348, 20349, 20350, 20379, 21178, 21185, 21189, (control: 17862**)** |
| 2 | 2659, 2702, 2703, 2709, 2716, 2722, 2729,2741, 2451, 3021, 3110, 3122, 3471, 3481, 3509, 3596, 3642, 5116, 5311, 5447, 5735, 5741, 5836, 5920, 5964, 6061, 6140, 6165, 6202, 6410, 6494, 6798, 6858, 6866, 6890, 8512, 8575, 8631, 8637, 8650, 8689, 8777, 9283, 9664, 9778, 9786, 10077, 10437, 10573, 10685, 11229, 11354, 11525, 11595, 11606, 11626, 11627,11767, 11890, 12140, 12482, 13016, 13363, 13927, 14185, 14248, 14281, 14294, 14439, 14450, 14452, 14511, 14521, 14522, 14619, 14668, 14687, 14691, 14700, 14706, 14731, 14780, 14953, 15533, 15535, 15540, 15545, 15556, 15564, 15585, 15601, 15615, 15890, 16248, 17189, 17193, 17195, 17199, 17211, 17213, 17214, 17215, 17217, 17245, 17268, 17311, 17312, 17314, 17315, 17316, 17342, 17350, 17354, 17360, 17364, 17389, 17390, 17397, 17401, 17405, 17415, 17416, 17418, 17423, 17427, 17428, 17442, 17452, 17457, 17492, 17493, 17534, 17535, 17538, 17541, 17545, 18523, 19125, 19368, 19415, 20193, 20334, 20338, 20341, 20389, 20416, 20440, 20443, 20447, 20450, 20471, 20473, 20475, 20500, 20518, 20553, 20554, 20734, 20745, 20764, 20788, 20991, 21061, 21266, 21512, (controls: 22269, 3616, ICMV 05555) |
| 3 | 7436, 8900, 10429, 11003, 11009, 11830, 11834, 11835, 11836, 11838, 11839, 11840, 11841, 11843,11846, 11847, 11849, 12128, 15287, 15710, 15735, 15752, 17287, 17367, 17391, 17394, 17398, 17408, 17409, 17421, 17424, 17426, 17435, 18308, 20415, 20418, 20419, 20420, 20424, 20426, 20439, 20451, 20463, 20485, 20509, 20538, 20539, 20540, 20544, 20550, 20555, 20560, 20563, 20571, 20574, 20584, 20585, 20593, 20594, 20963 |