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Biplot evaluation of test environments and identification of lentil genotypes with durable resistance to fusarium wilt in India

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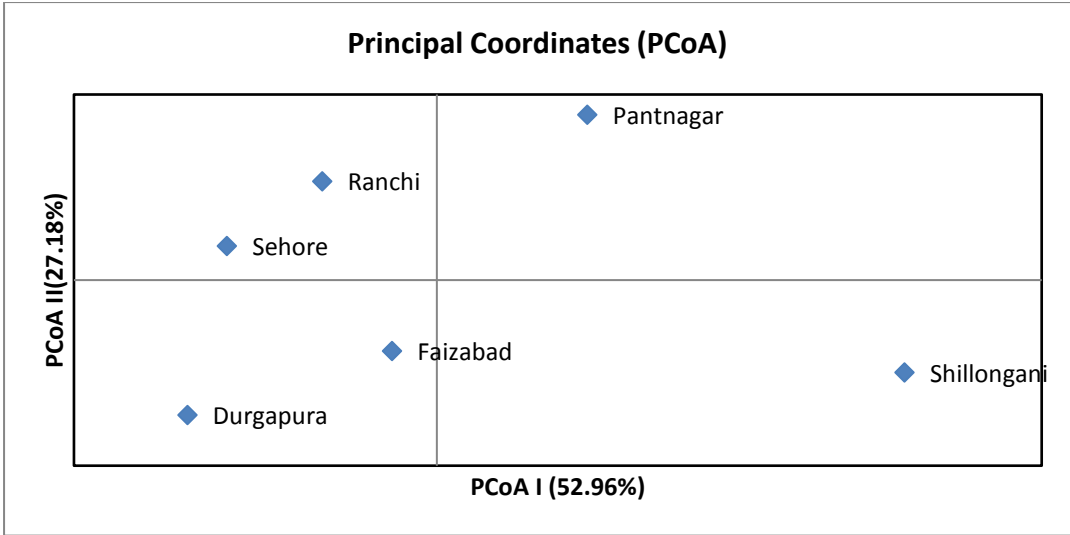
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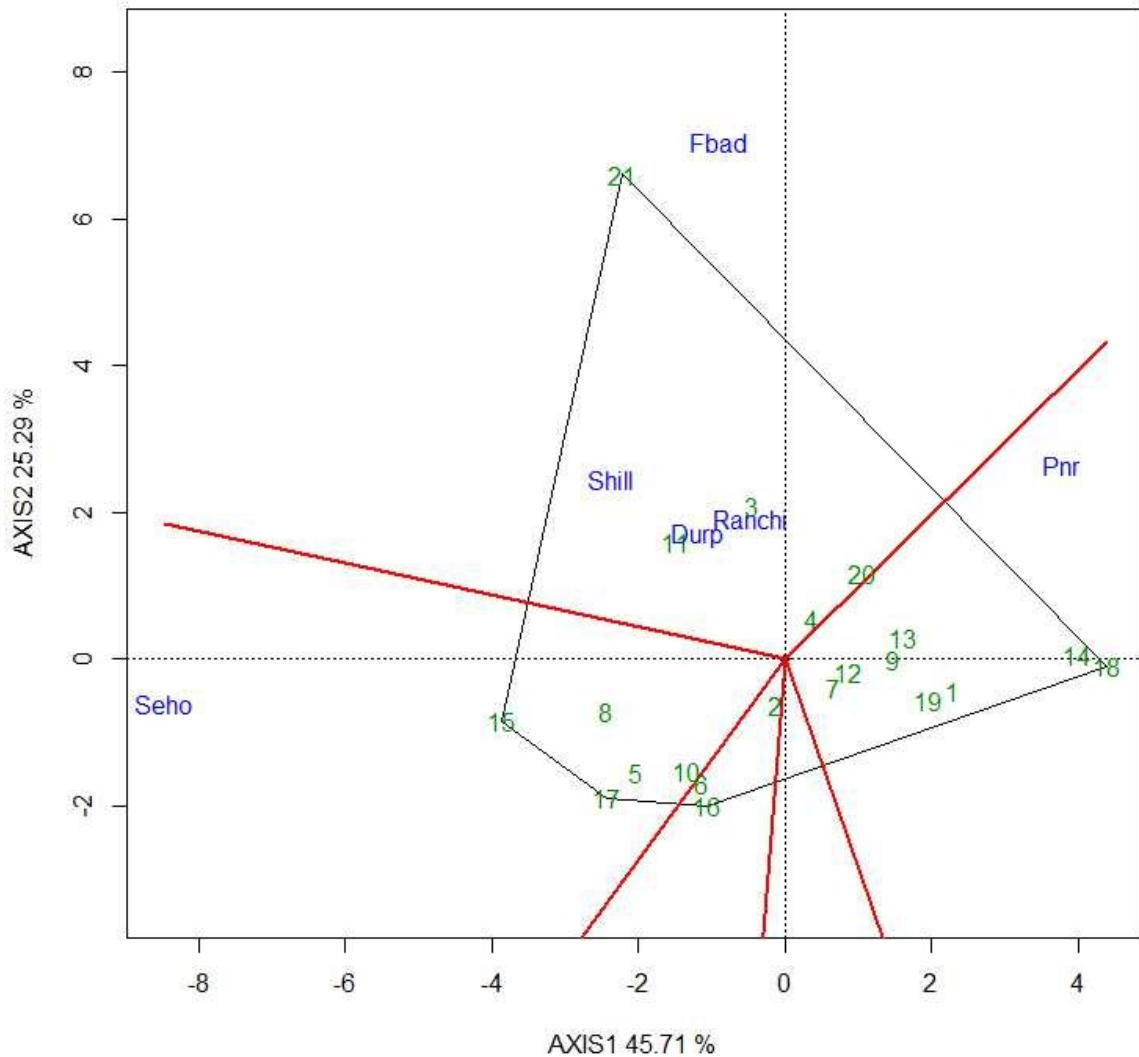
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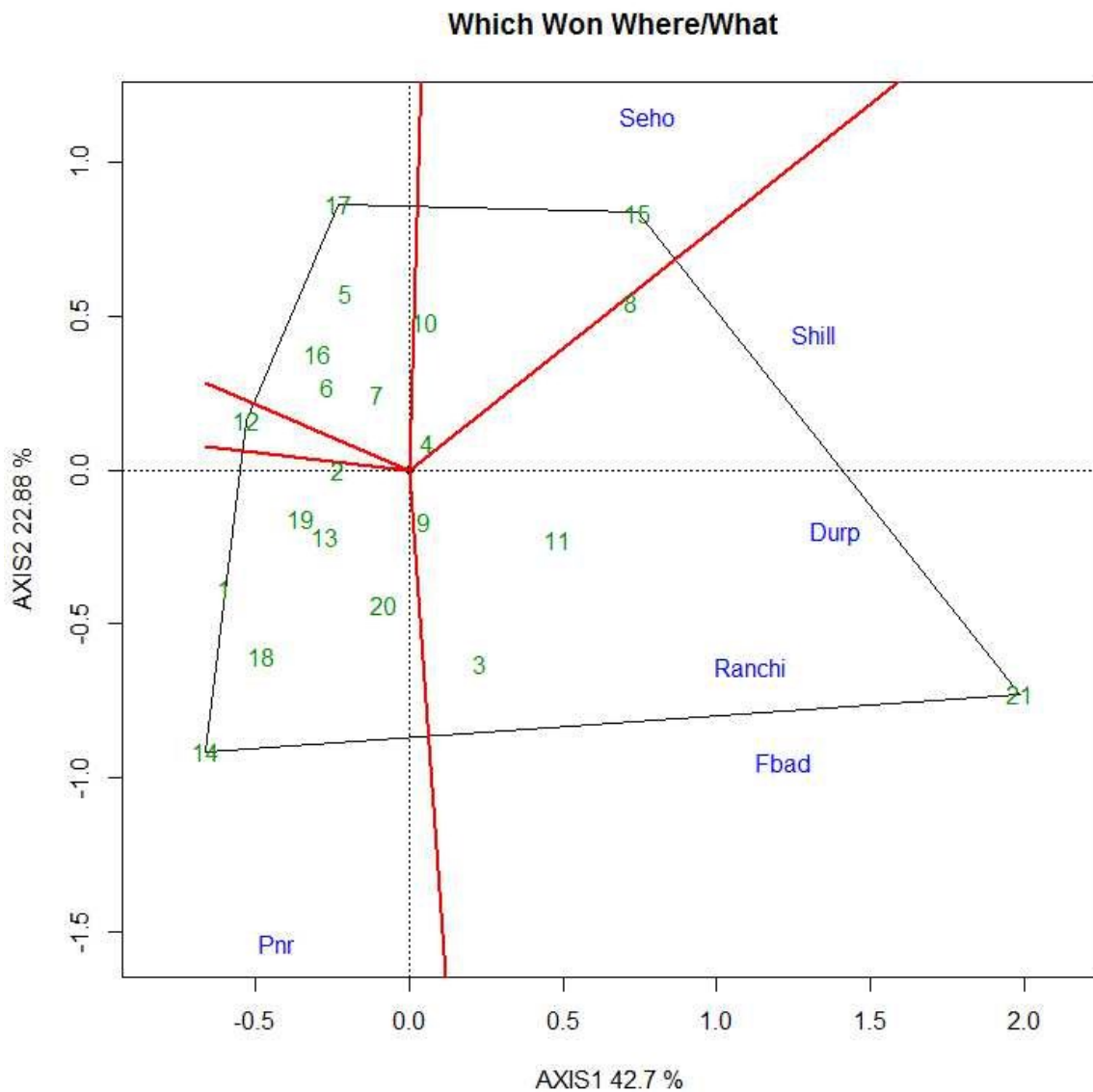


Supplementary Fig. 1. Principal component analysis for location considering climatic parameters i.e. seasonal rainfall, average rainfall, temperature, altitude, soil pH, organic carbon, Phosphorus and potassium.

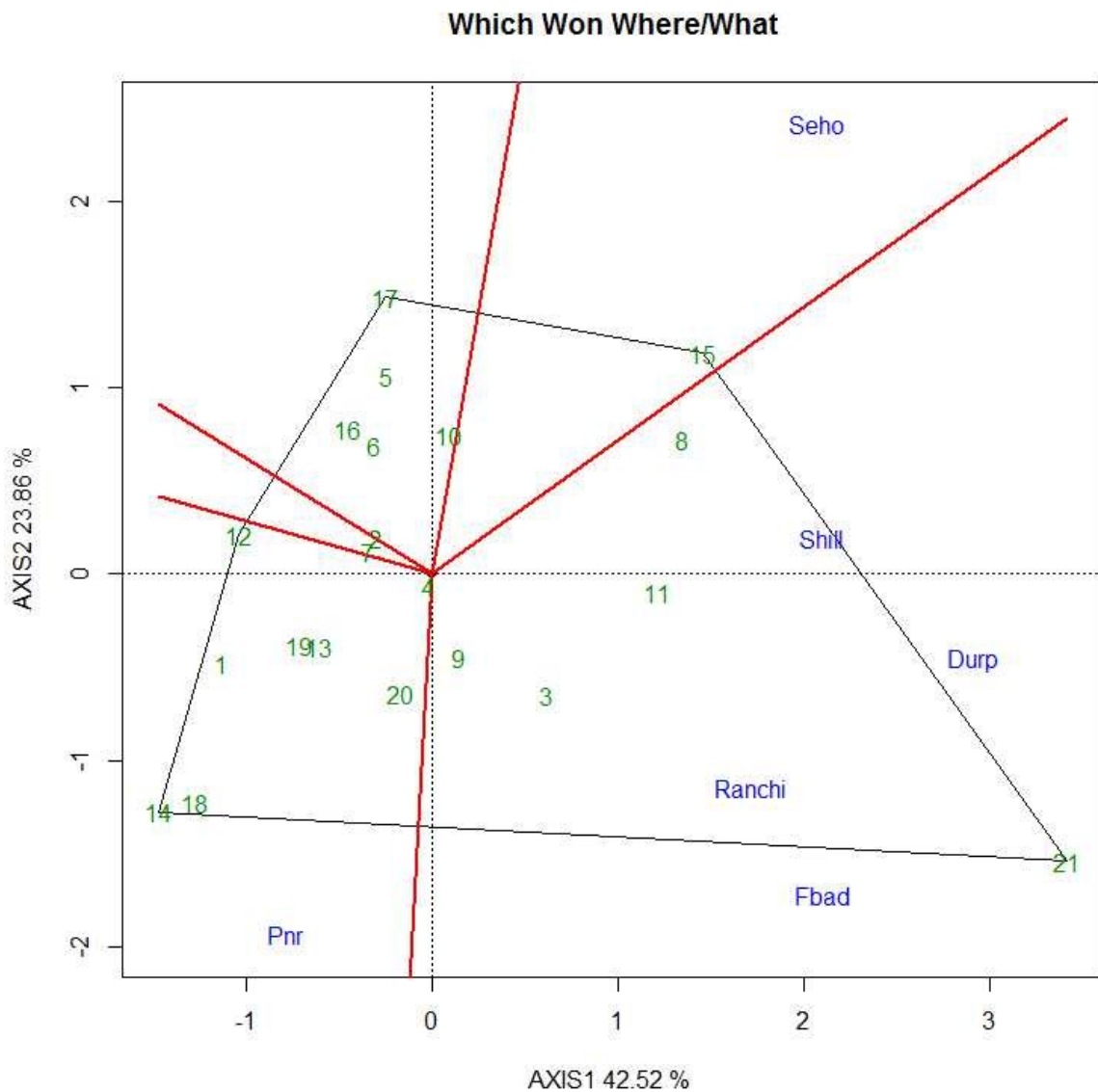
Which Won Where/What



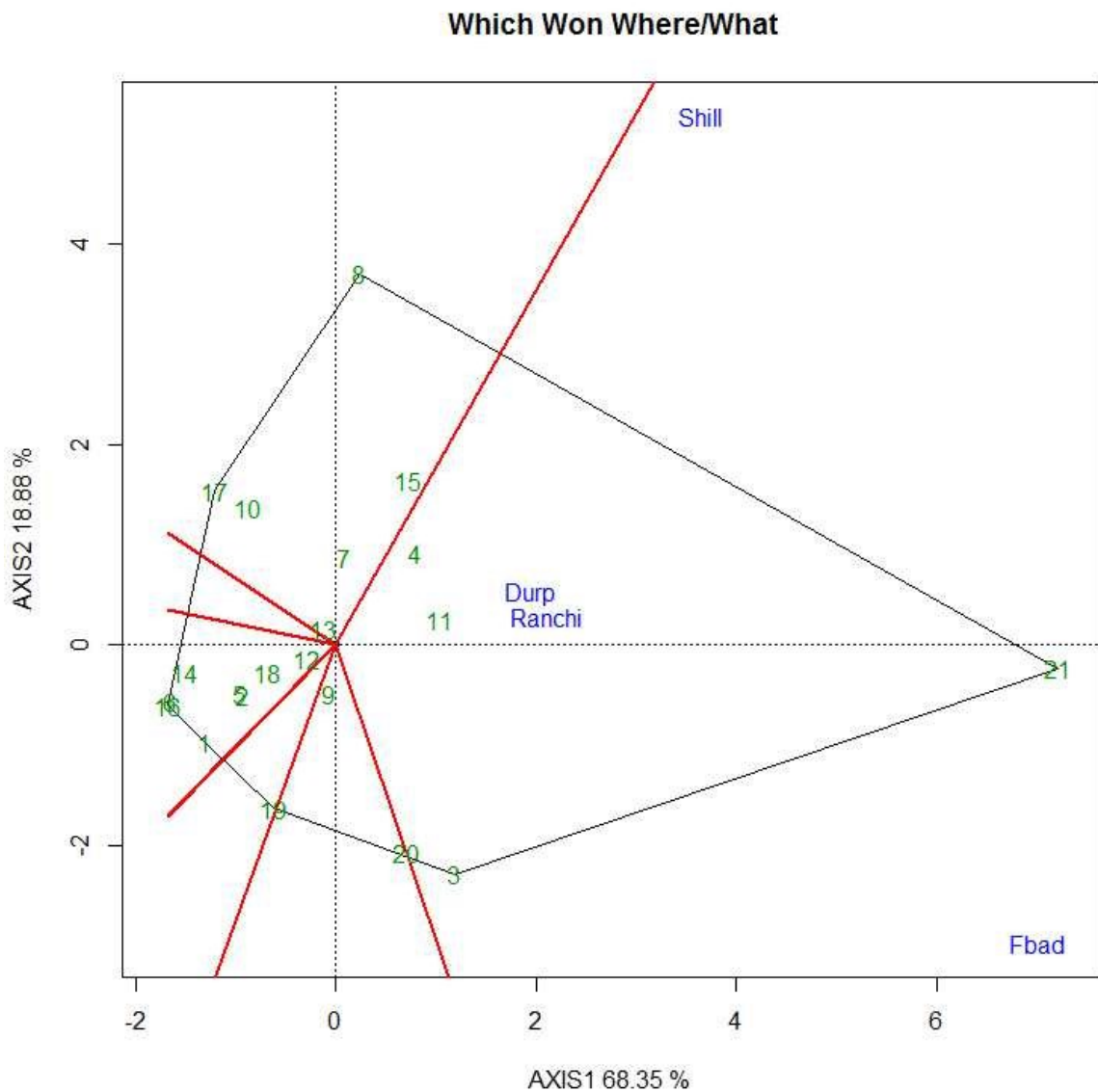
Supplementary Fig. 2. The ‘which-won-where’ view of the ‘Un-scaled GGE biplot’ based on the two year data in Table 1. Means data were not scaled; no transformation of data (‘Transform=0’); and data were centred by means of the environments (‘centring =2’). The biplot was based on ‘symmetric scaling’ means genotypes and environments focused singular value partitioning and therefore it is appropriate for visualising the relationship among both genotypes and environments.



Supplementary Fig. 3. The ‘which-won-where’ view of the SD-scaled GGE biplot based on the two year data in Table 1. Means data were scaled by the standard deviation of genotypes means within environments; no transformation of data (‘Transform=0’); and data were centred by means of the environments (‘centring =2’). The biplot was based on ‘symmetric scaling’ means genotypes and environments focused singular value partitioning and therefore it is appropriate for visualising the relationship among both genotypes and environments.



Supplementary Fig. 4. The ‘which-won-where’ view of the Heritability adjusted GGE biplot (HA- GGE biplot) based on the two year data in Table 1. Means data were scaled by the heritability adjusted, which means multiplying the heritability in each environment to the environment-standardized data; no transformation of data (‘Transform=0’); and data were centred by means of the environments (‘centring =2’). The biplot was based on ‘dual metric preserve scaling’ means genotypes and environments focused singular value partitioning and therefore it is appropriate for visualising the relationship among both genotypes and environments.



Supplementary Fig. 5. The ‘which-won-where’ view of the ‘Un-scaled GGE biplot’ based on the two year data of four location (ME-I). Means data were not scaled; no transformation of data (‘Transform=0’); and data were centred by means of the environments (‘centring =2’). The biplot was based on ‘symmetric scaling’; means genotypes and environments focused singular value partitioning and therefore it is appropriate for visualising the relationship among both genotypes and environments. It explained 87.23% of the total G+GE for the sub set.