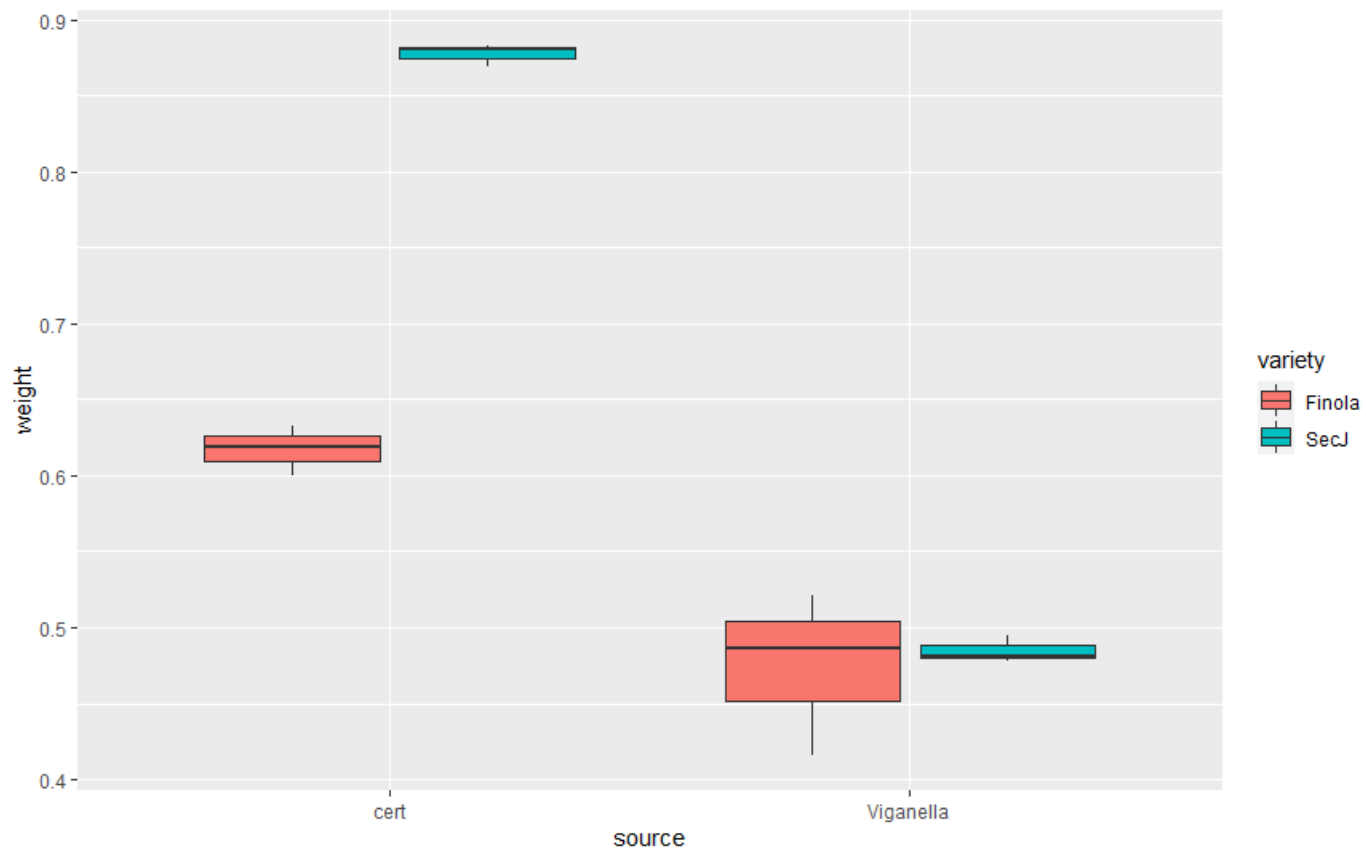
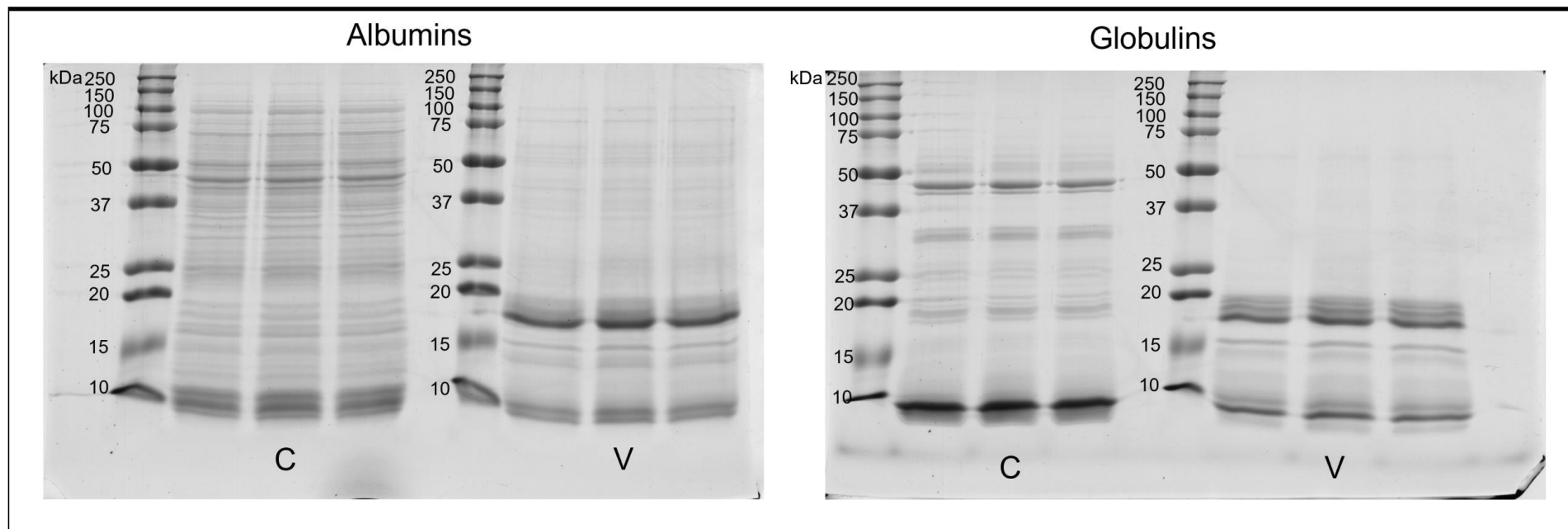


**Table S1.** Average air temperature and rainfall of the years 2018 and 2019, Viganella, Italy.

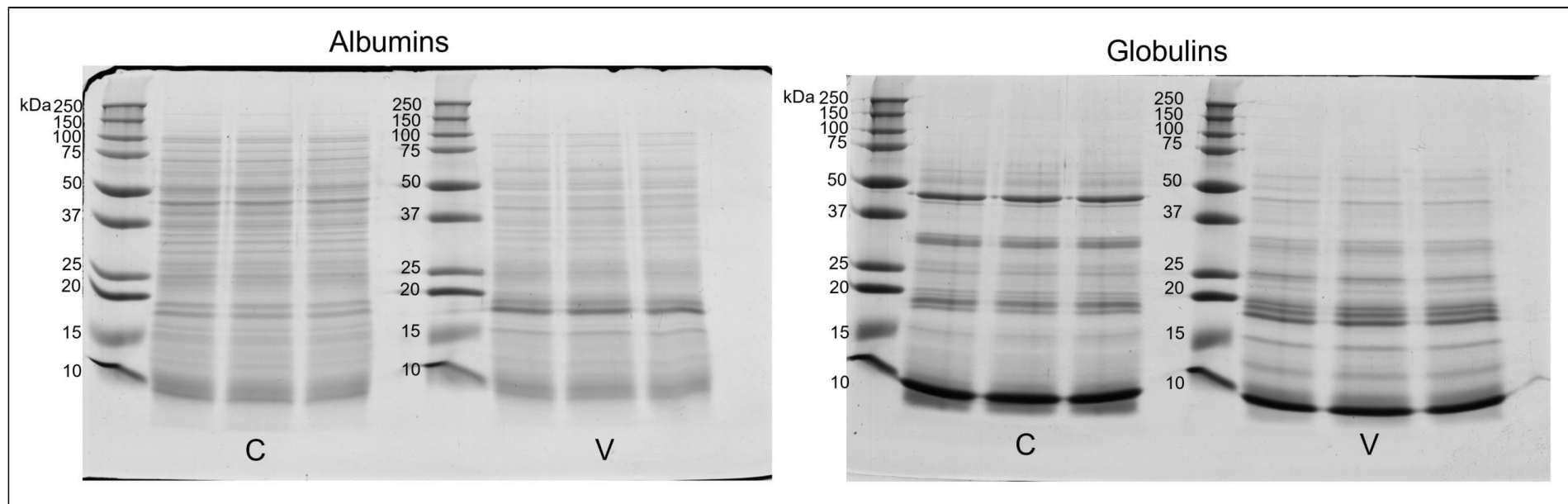
|           | Rainfall (mm) |       | Min Temperature (°C) |      | Max Temperature (°C) |       |
|-----------|---------------|-------|----------------------|------|----------------------|-------|
|           | 2018          | 2019  | 2018                 | 2019 | 2018                 | 2019  |
| April     | -             | -     | -                    | -2.6 | -                    | 14.4  |
| May       | 306.6         | 86.8  | 1                    | -1.2 | 19.8                 | 17.1  |
| June      | 97.8          | 192.8 | 7.1                  | -    | 25.5                 | -     |
| July      | 94.2          | 134.4 | 11.2                 | 7    | 26.6                 | 25.4  |
| August    | 155.6         | 137.4 | 7.5                  | 8.8  | 26.5                 | 22.3  |
| September | 60.8          | 68.4  | 4.6                  | 5.4  | 21.4                 | 21.5  |
| Mean      |               |       | 6.28                 | 3.48 | 23.96                | 20.14 |
| Total     | 715           | 619.8 |                      |      |                      |       |



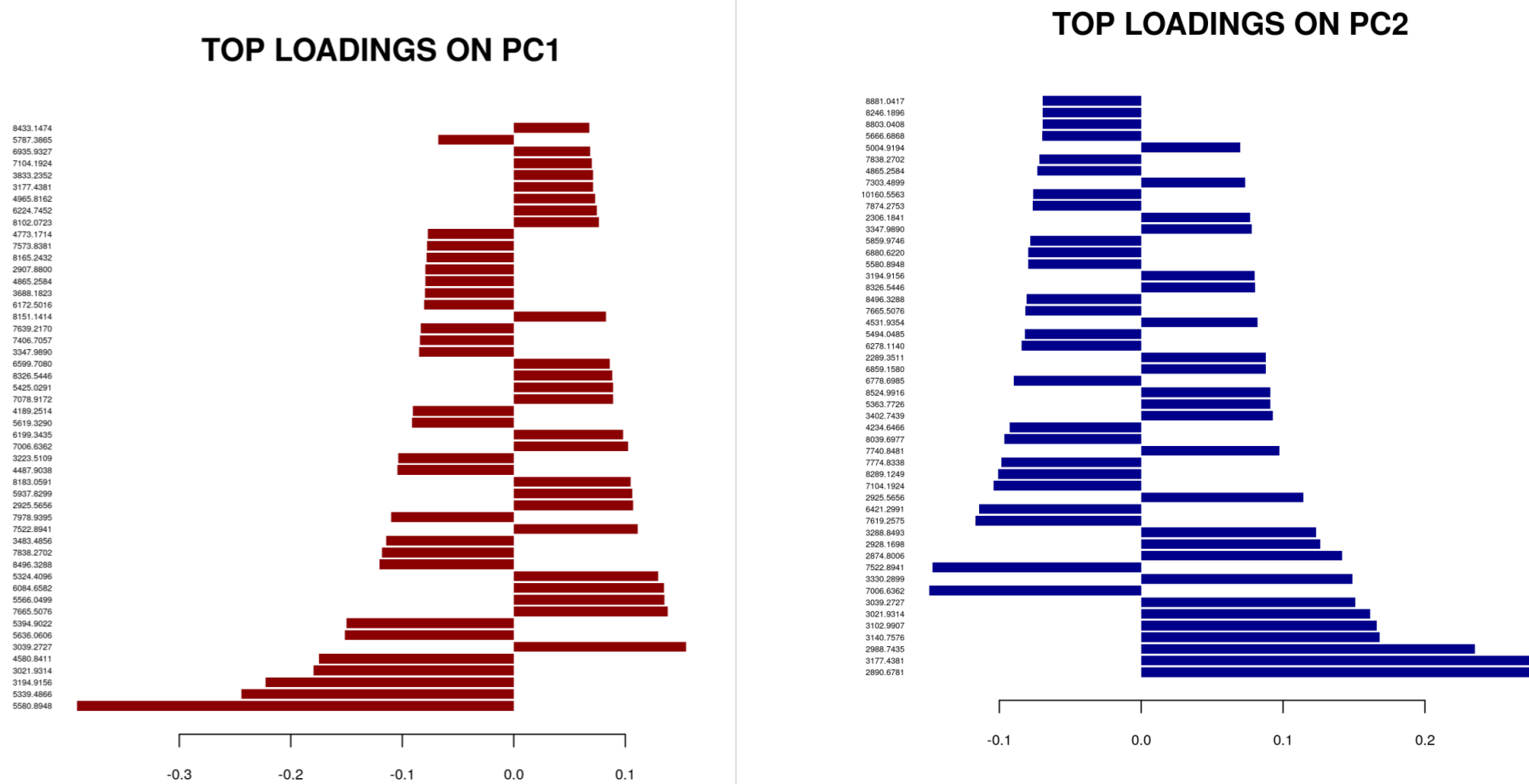
**Figure S1.** Box-plot representing the weight of 50 seeds of Finola and Secuieni J. hemp varieties. Harvested seeds from the experimental field (Viganella) are compared with certified (Cert) seeds as a reference.



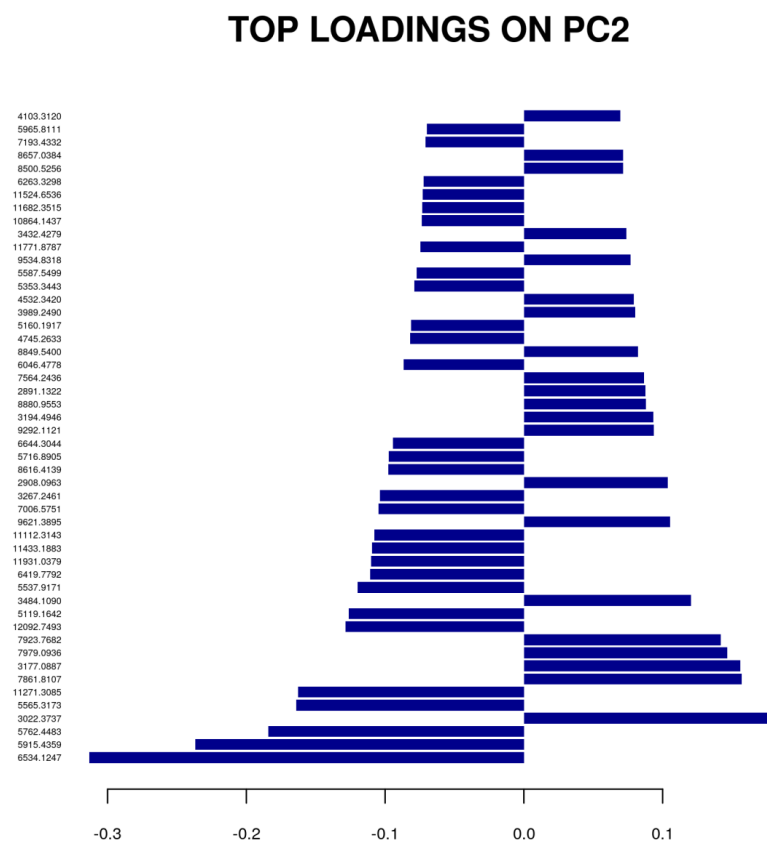
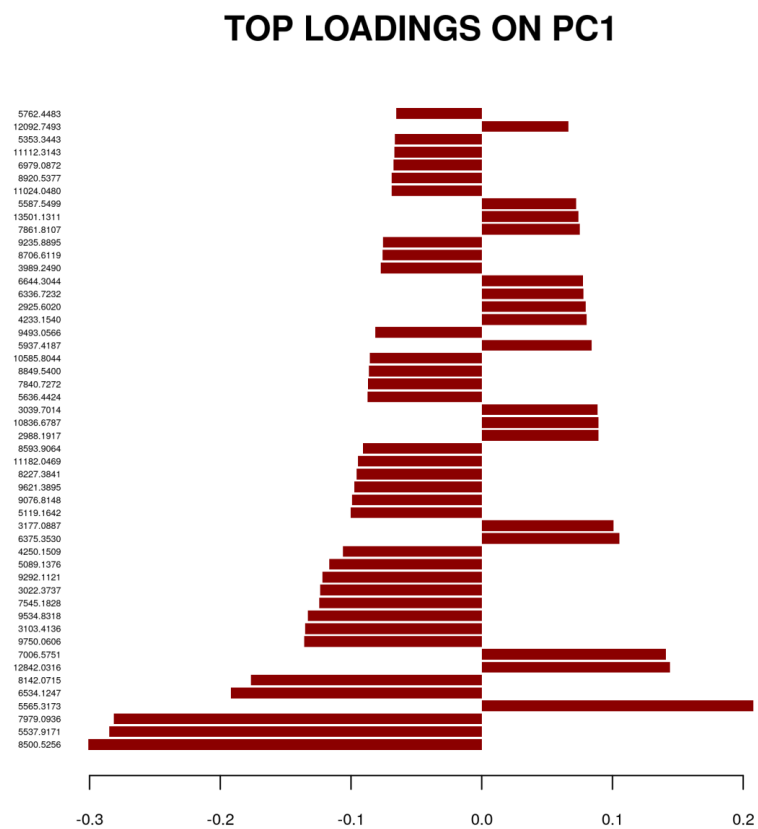
**Figure S2.** Uncropped gels obtained after SDS-PAGE of albumin and globulin extracts from Finola certified (C) and harvested seeds from the field of Viganella (V). Three replicates for each sample extract were run on the same gel.



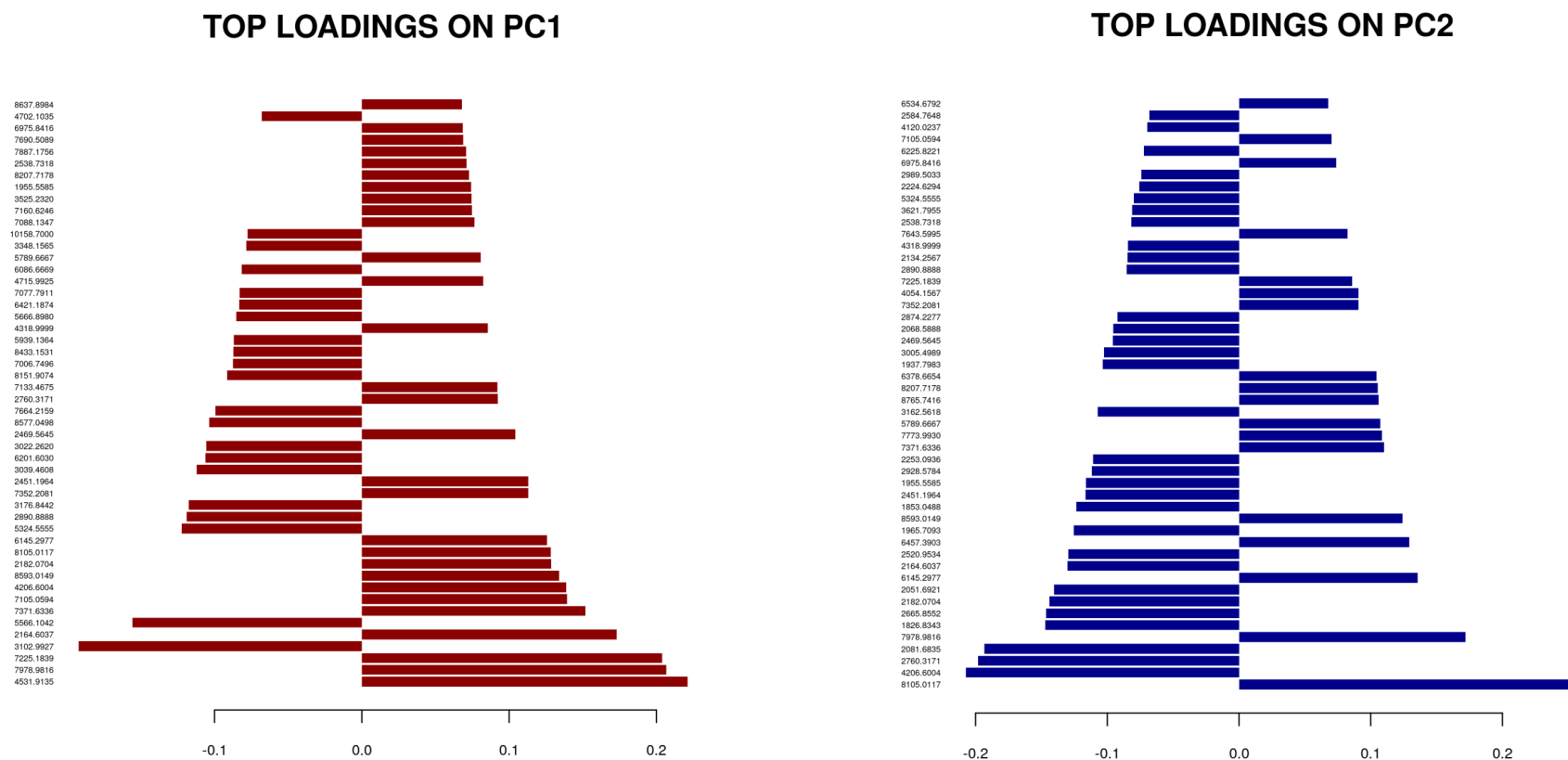
**Figure S3.** Uncropped gels obtained after SDS-PAGE of albumin and globulin extracts from Secuieni Jubileu certified (C) and harvested seeds from the field of Viganella (V). Three replicates for each sample extract were run on the same gel.



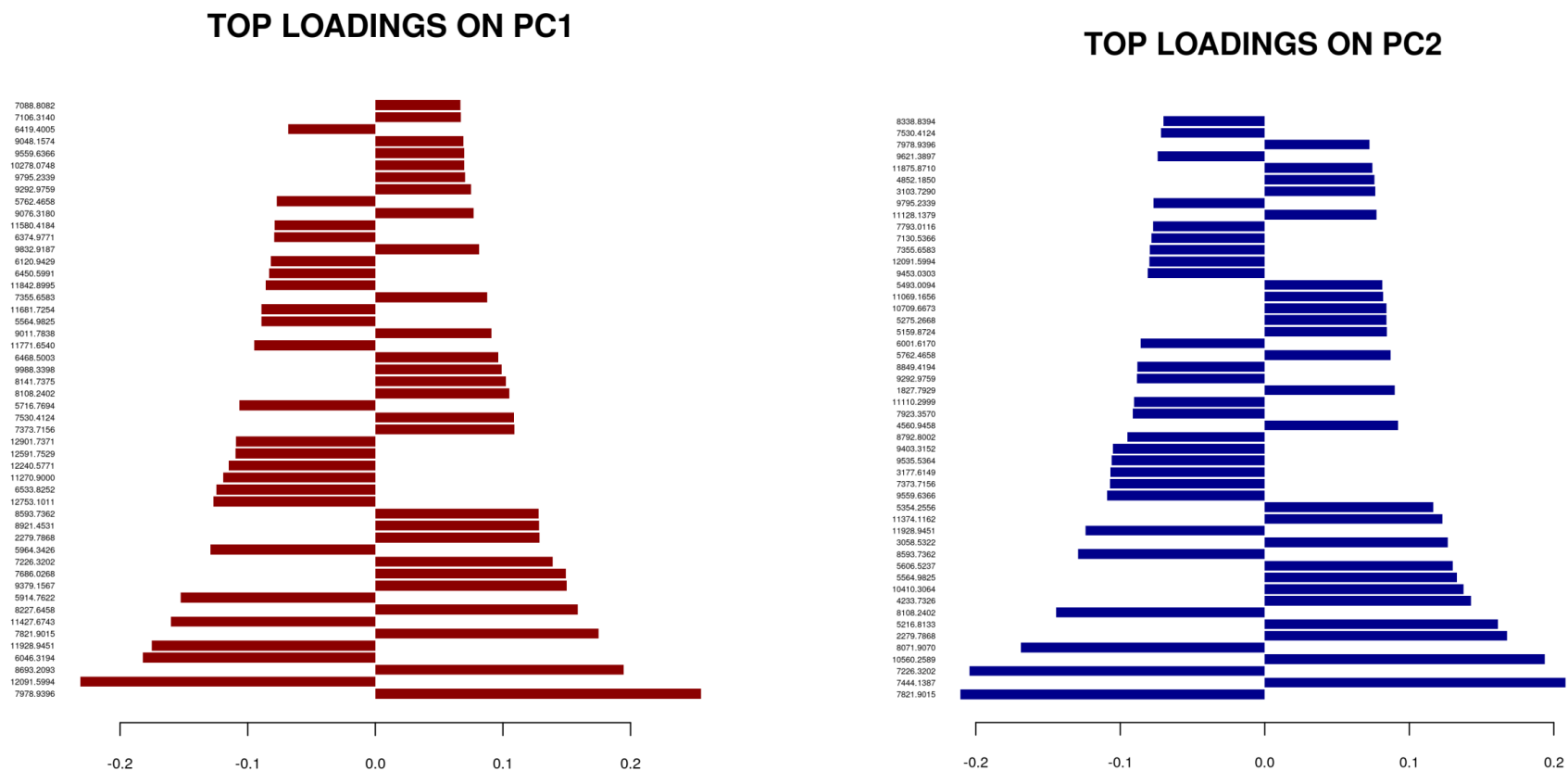
**Figure S4.** Top loadings on PC1 and PC2 from PCA analysis of albumin extracts from certified seeds of Finola and Secuieni J. varieties.



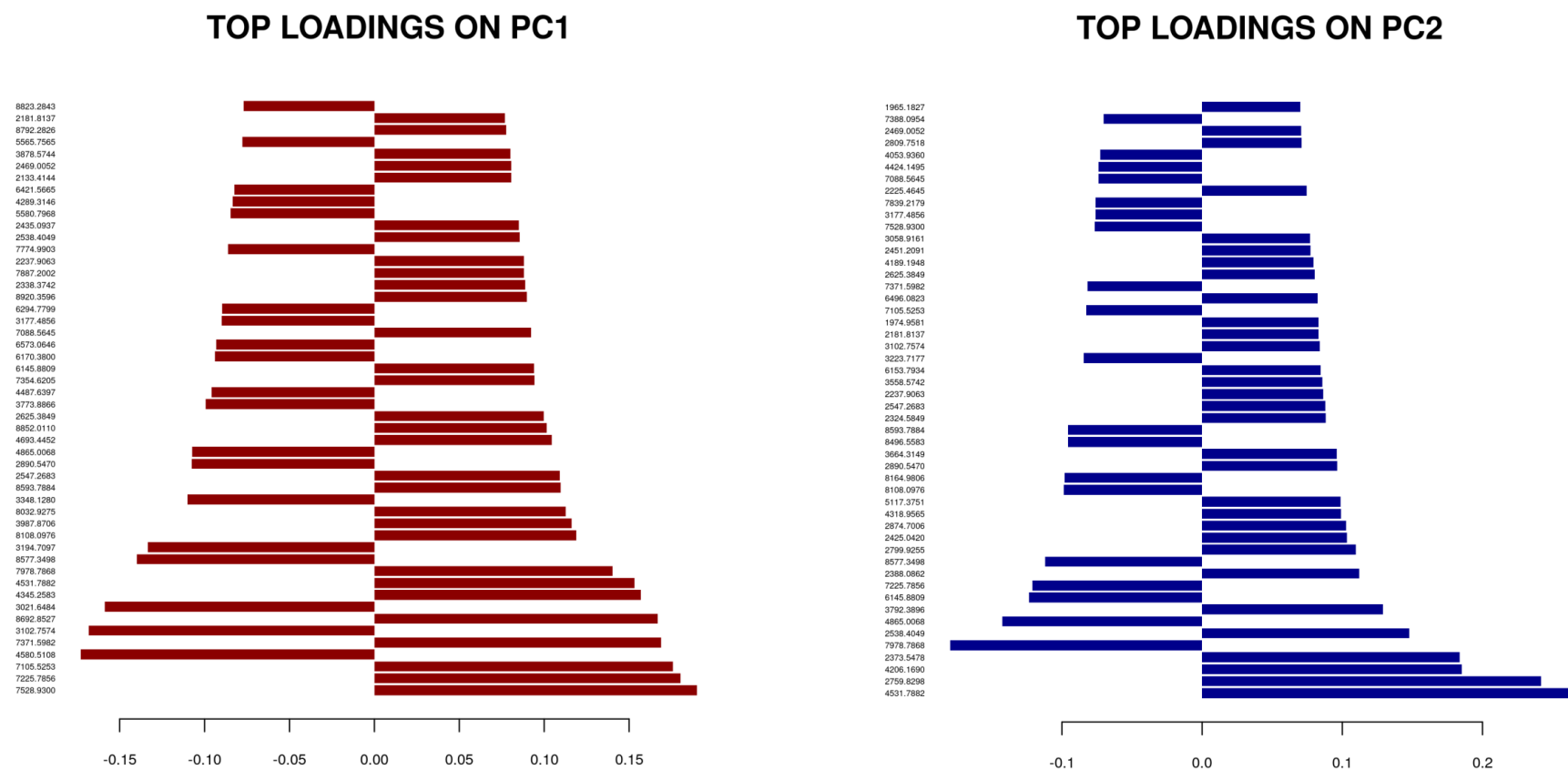
**Figure S5.** Top loadings on PC1 and PC2 from PCA analysis of globulin extracts from certified seeds of Finola and Secuieni J. varieties.



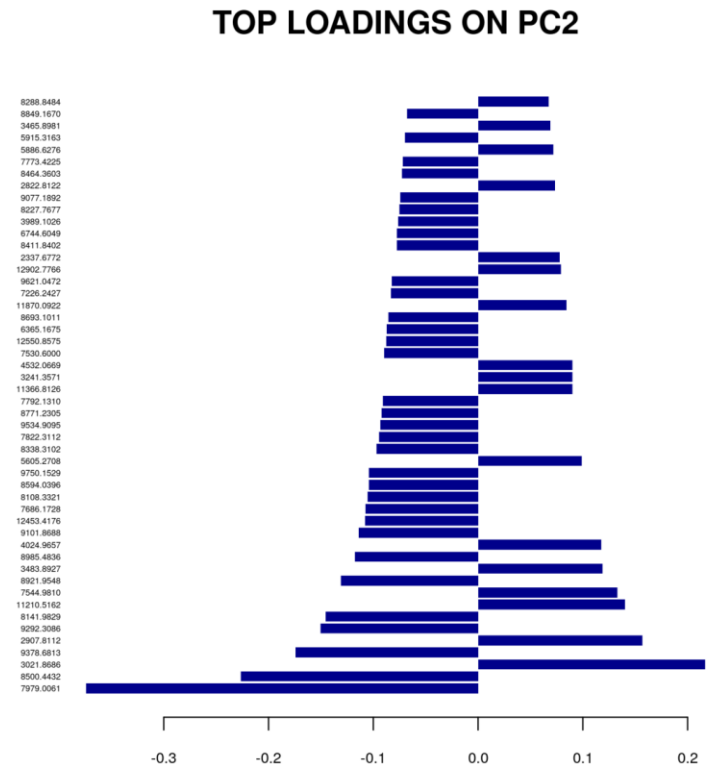
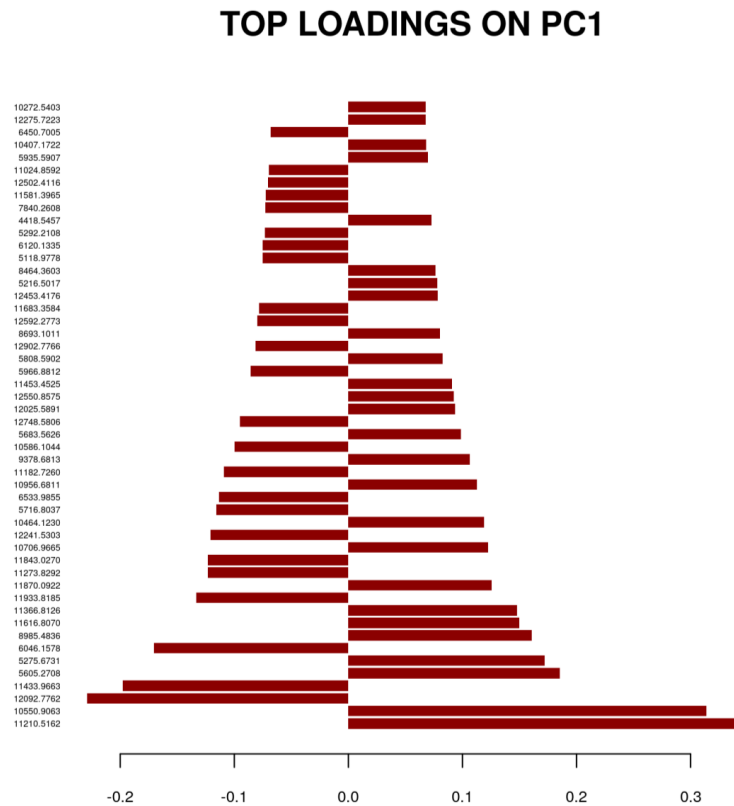
**Figure S6.** Top loadings on PC1 and PC2 from PCA analysis of albumin extracts from certified and Viganella seeds of Finola variety.



**Figure S7.** Top loadings on PC1 and PC2 from PCA analysis of globulin extracts from certified and Viganella seeds of Finola variety.



**Figure S8.** Top loadings on PC1 and PC2 from PCA analysis of albumin extracts from certified and Viganella seeds of Secuieni J. variety.



**Figure S9.** Top loadings on PC1 and PC2 from PCA analysis of globulin extracts from certified and Viganella seeds of Secuieni J. variety.