Deliverable achievement report

D3.2.1 Analyze field performances across research station locations for management practices
Description of completion

To define better agroecological practices, ten (10) genotypes of 2 crops (Durum and Barley), including two checks (Commercial and landrace), were planted at four research stations (Morocco, Tunisia, Algeria, and Lebanon) under various agro-ecological interventions using an RCBD design with three replicates. Algeria was unable to receive the project seeds in the first year, and these were replaced by other breeding accessions already available. Tunisia was also affected by the worst drought of this century with only 69 mm total rainfall and nearly 3 months without any moisture. As such the trial was completely loss. The status for these research stations can be found in Table 1.

<table>
<thead>
<tr>
<th>Country</th>
<th>Location</th>
<th>GPS</th>
<th>Sowing date</th>
<th>Harvesting date</th>
<th>Reason for loss</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morocco</td>
<td>Annoceur</td>
<td>33°41'5.2&quot;N 4°51'19.9&quot;W</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Algeria</td>
<td>Setif</td>
<td></td>
<td>29/12/2022</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tunisia</td>
<td>El Kef</td>
<td>36° 7'44.31&quot;N 8°43'8.37&quot;E</td>
<td>5/12/2022</td>
<td>Loss due to drought</td>
<td></td>
</tr>
<tr>
<td>Lebanon</td>
<td>Tal Amara</td>
<td>33° 51'17.2&quot;N 35°58'54.7&quot;E</td>
<td>13/12/2022</td>
<td>14/07/2023</td>
<td></td>
</tr>
</tbody>
</table>

The Breeding Management System (BMS)

The BMS has been adopted by the partners of MountainHER to record, store, and distribute datasets. The MountainHER portal was also successfully established. The MountainHER BMS is used for the data collected from the field experiments, and the field books are being reported for the Durum trial of MountainHER as well as for Barley trial.

Field performances Analysis across research station locations

R-Software was used to analyse the data collected from Tal Amara Lebanon station for MountainHER Durum trial as well as for Barley trial.

A summary for all parameters and their distribution in the collection, the correlation and PCA analysis as well as the heritability.

Analysis of variance ANOVA of 2023 growing season at Tal Amara station under conventional practices was also performed.

Justification of delay

No delay

Supporting documents

D3.2.1 Analyze MNT-HER 2023 Durum wheat field performances across TAL AMARA station under agroecological practices.
D3.2.1 Analyze MNT-HER 2023 Barley field performances across TALAMARA station under agroecological practices.