The user can go to the Meta-phenome tab by selecting any of the two tabs which are highlighted (Phenomics and Transcriptomics).

If the user clicks the Transcriptomics tab, then the user will be redirected to the corresponding transcriptomics web page. By clicking on the "Meta-phenome" tab which is highlighted below, the user will be redirected to the corresponding Meta-phenome section.

Shown below is the Meta-phenome section, which shows the user the net impact of the stress combination in plant performance. The user needs to select a maximum of 3 individual stresses

(result will be displayed if such a triple stress combination data exists or otherwise provide 2 stresses) and the plant species which they are interested to check from the highlighted portion shown below and click on the "Go" button which is also highlighted.

Step 1 : Select the stress 1 from the highlighted drop down menu as shown below

Step 2 : Select the stress 2 from the highlighted drop down menu as shown below.

Combined stress: Meta-Phenome data

The interactive view represented below shows the net impact of stress combinations on plant performance. Positive (green colour or its graded shade) and negative (red colour or its graded shade) interactions indicate that the plant parameter is less and more affected under combined stress as compared to individual stresses, respectively. Once the user selects stress 1 from the drop-down menu, automatically stress 2 drop-down menus will show the list of stresses that are reported interaction with stress 1. Option to choose stress 3 is also provided if such a combination is reported in the literature. Once stresses are selected user can choose the plant species, and after that, the outcome will be displayed. The display will show the plant species name, stress combination, whether the interaction is positive or negative, along with the number of studies reported the trend and the measured parameter, which was considered to conclude. Finally, one representative graph for one of the listed parameters showing the actual values under different stress treatments, along with control, will also be displayed

Choose the combination and plant species:

| Stress 1 | Salt | Stress 2 | Make a se ⬍ | Stress 3 | Make a se ⬍ | Plant species | Make ⬍ | Go |

Make a selection
Heat
Drought
High Light
Cold/freezing
weeds

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Step 3 : Select the plant species from the drop down menu as highlighted below.

Combined stress: Meta-Phenome data

The interactive view represented below shows the net impact of stress combinations on plant performance. Positive (green colour or its graded shade) and negative (red colour or its graded shade) interactions indicate that the plant parameter is less and more affected under combined stress as compared to individual stresses, respectively. Once the user selects stress 1 from the drop-down menu, automatically stress 2 drop-down menus will show the list of stresses that are reported interaction with stress 1. Option to choose stress 3 is also provided if such a combination is reported in the literature. Once stresses are selected user can choose the plant species, and after that, the outcome will be displayed. The display will show the plant species name, stress combination, whether the interaction is positive or negative, along with the number of studies reported the trend and the measured parameter, which was considered to conclude. Finally, one representative graph for one of the listed parameters showing the actual values under different stress treatments, along with control, will also be displayed

Choose the combination and plant species:

| Stress 1 | Salt | Stress 2 | heat | Plant species | Make a s ⬍ | Go |

Make a selection
Rice
Quinoa
Maize
Jatropha
Tomato
Thale cress

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0042858

Step 4 : Click on the "Go" button which is highlighted and shown below.

| Home | Phenome | Transcriptome | Meta-phenome |

Combined stress: Meta-Phenome data

The interactive view represented below shows the net impact of stress combinations on plant performance. Positive (green colour or its graded shade) and negative (red colour or its graded shade) interactions indicate that the plant parameter is less and more affected under combined stress as compared to individual stresses, respectively. Once the user selects stress 1 from the drop-down menu, automatically stress 2 drop-down menus will show the list of stresses that are reported interaction with stress 1. Option to choose stress 3 is also provided if such a combination is reported in the literature. Once stresses are selected user can choose the plant species, and after that, the outcome will be displayed. The display will show the plant species name, stress combination, whether the interaction is positive or negative, along with the number of studies reported the trend and the measured parameter, which was considered to conclude. Finally, one representative graph for one of the listed parameters showing the actual values under different stress treatments, along with control, will also be displayed

Click Here to Submit

Choose the combination and plant species:

| Stress 1 | Salt | Stress 2 | Heat | Plant species | Quinoa | Go |

If the user selects the Stress 1 as "Salt", Stress 2 as "Heat" and Plant species as "Quinoa" corresponding Meta-phenome page will be displayed. A colour bar will be shown which is highlighted below to indicate whether the stress combination is deleterious or not. If it's deleterious

the colour will be red, if not it will be green.

Combined stress: Meta-Phenome data

The interactive view represented below shows the net impact of stress combinations on plant performance. Positive (green colour or its graded shade) and negative (red colour or its graded shade) interactions indicate that the plant parameter is less and more affected under combined stress as compared to individual stresses, respectively. Once the user selects stress 1 from the drop-down menu, automatically stress 2 drop-down menus will show the list of stresses that are reported interaction with stress 1. Option to choose stress 3 is also provided if such a combination is reported in the literature. Once stresses are selected user can choose the plant species, and after that, the outcome will be displayed. The display will show the plant species name, stress combination, whether the interaction is positive or negative, along with the number of studies reported the trend and the measured parameter, which was considered to conclude. Finally, one representative graph for one of the listed parameters showing the actual values under different stress treatments, along with control, will also be displayed

Choose the combination and plant species:

| Stress 1 | Salt ⇕ | Stress 2 | heat ⇕ | Plant species | Quinoa ⇕ | Go |

Quinoa

Salt+heat stress combination

Net impact of combined stress

Study showed negative interaction

(*Parameters considered: *Seed yield*)

For details/other parameters, visit the phenome section of the SCIPdb

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Yield graph and the image of the plant species will also be displayed which is highlighted below.

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Stress Combination and their Interactions in Plants (SCIP) Database

Website link- htttp://www.nipgr.ac.in/SCIPdb.php

Combined stress: Meta-Phenome data

The interactive view represented below shows the net impact of stress combinations on plant performance. Positive (green colour or its graded shade) and negative (red colour or its graded shade) interactions indicate that the plant parameter is less and more affected under combined stress as compared to individual stresses, respectively. Once the user selects stress 1 from the drop-down menu, automatically stress 2 drop-down menus will show the list of stresses that are reported interaction with stress 1. Option to choose stress 3 is also provided if such a combination is reported in the literature. Once stresses are selected user can choose the plant species, and after that, the outcome will be displayed. The display will show the plant species name, stress combination, whether the interaction is positive or negative, along with the number of studies reported the trend and the measured parameter, which was considered to conclude. Finally, one representative graph for one of the listed parameters showing the actual values under different stress treatments, along with control, will also be displayed

Choose the combination and plant species:

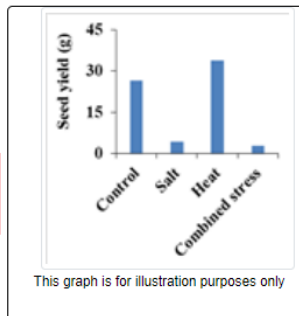| Stress 1 | Salt | Stress 2 | heat | Plant species | Quinoa | Go |

Quinoa

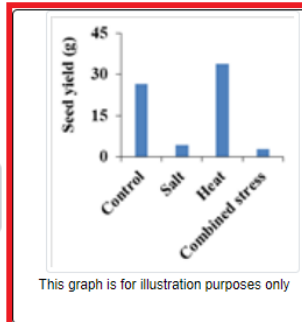## Salt+heat stress combination
Net impact of combined stress

Study showed negative interaction

(*Parameters considered: *Seed yield*)

For details/other parameters, visit the phenome section of the SCIPdb

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