2018 DO YOU NEED PLANT PHENOTYPING?

The preparatory phase of EMPHASIS aims at the development of a long-term sustainable strategy for a user driven building, operation, and upgrading of plant phenotyping infrastructure.

In 2018 we have performed a mapping on the real user demands towards emphasis.

Here some of the results....

CHECK IT OUT
and stay tuned on the EMPHASIS activities!!

WHO are the EMPHASIS's USERS?

320

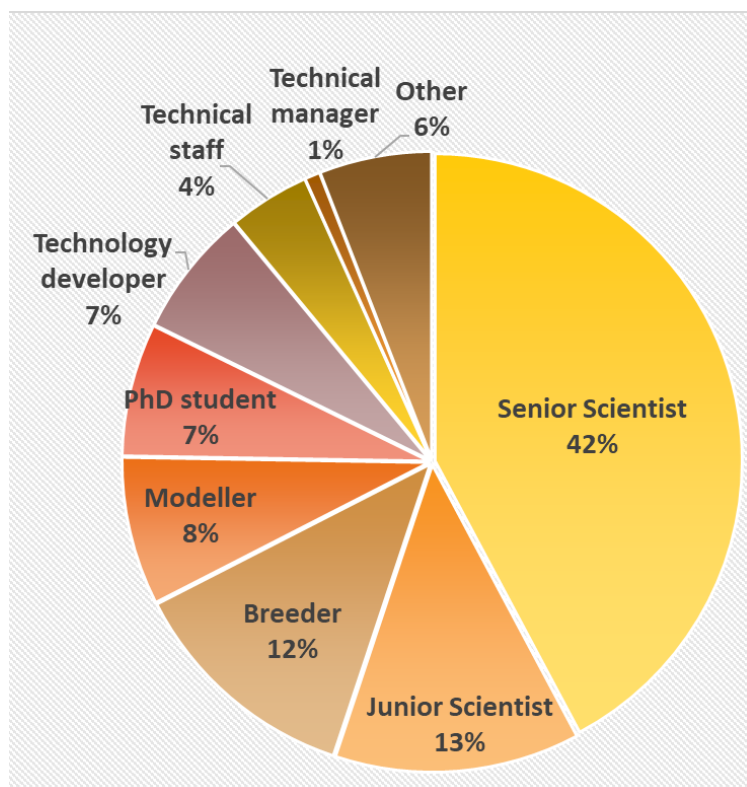People answered the survey

Participants belong to

20% Private companies

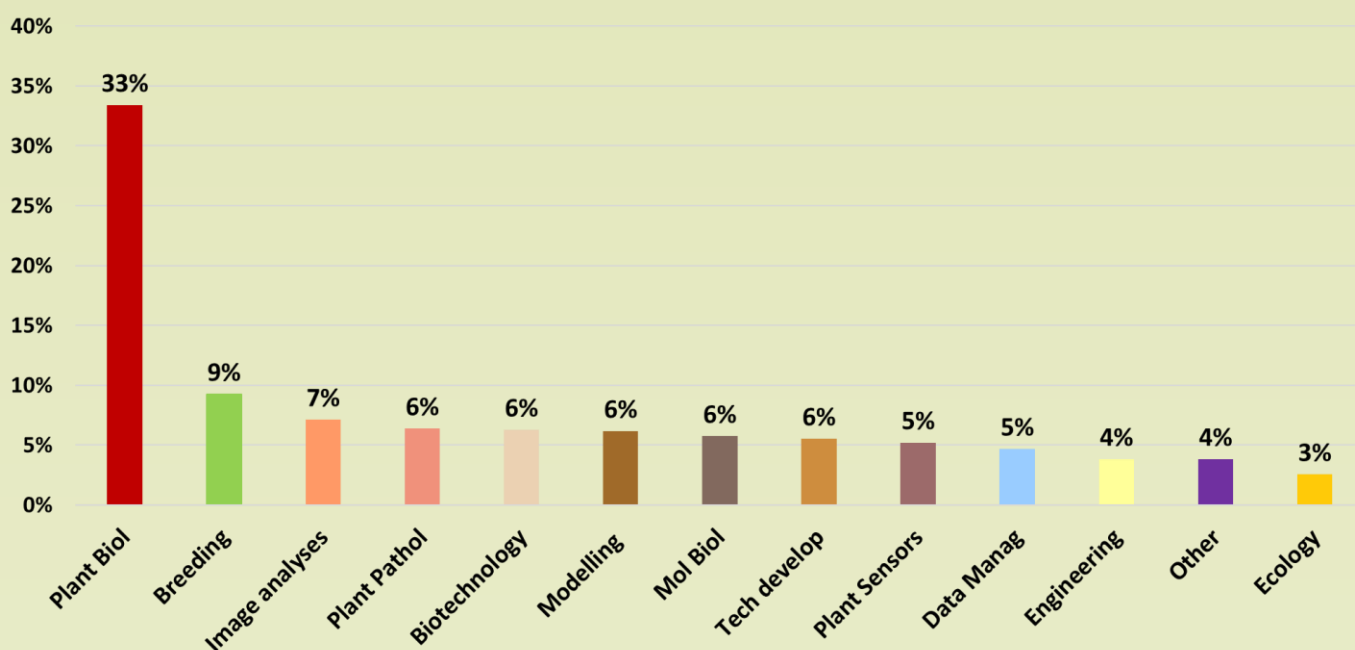**80%** Public institutions

What is the EMPHASIS users background?

- Technical staff 4%
- Technical manager 1%
- Other 6%
- Technology developer 7%
- PhD student 7%
- Modeller 8%
- Breeder 12%
- Junior Scientist 13%
- Senior Scientist 42%

2018 DO YOU NEED PLANT PHENOTYPING?

EMPHASIS

WHO are the EMPHASIS USERS?

What is the EMPHASIS's users field of work?

Field	%
Plant Biol	33%
Breeding	9%
Image analyses	7%
Plant Pathol	6%
Biotechnology	6%
Modelling	6%
Mol Biol	6%
Tech develop	6%
Plant Sensors	5%
Data Manag	5%
Engineering	4%
Other	4%
Ecology	3%

How can EMPHASIS support your activities?

%	Activity
62%	Training and Education
50%	Expand the network
47%	Access the platforms
42%	Support innovation
39%	Access data
38%	Rising funds
32%	Coordinate New IR
30%	Harmonising the IR
29%	Benchmark technology
15%	Support marketing

2018 DO YOU NEED PLANT PHENOTYPING?

EMPHASIS

🌱 DO WE USE PLANT PHENOTYPING?

74%

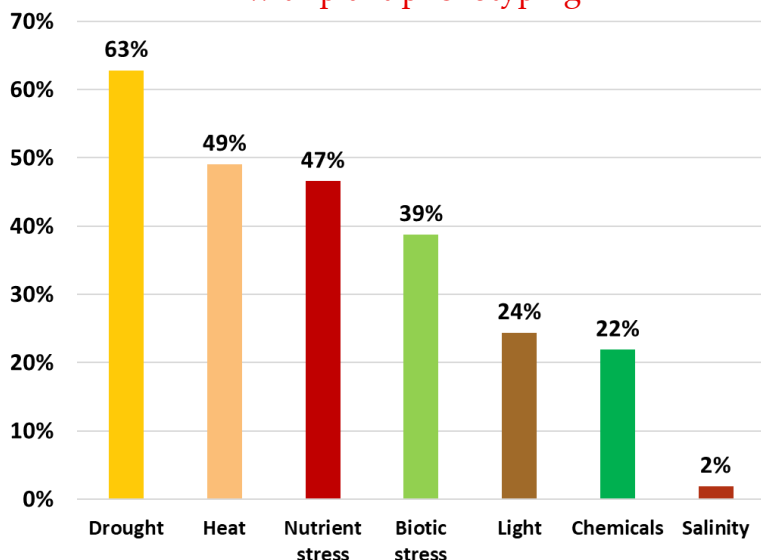Use plant phenotyping in their activities

90%
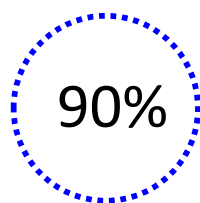
Plan to use plant phenotyping in the future

71%
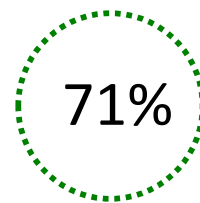
Plan to have increasing needs plant phenotyping experiments in the future

Drought, heat, nutrients supply, and biotic stresses are the main stress treatments explored with plant phenotyping
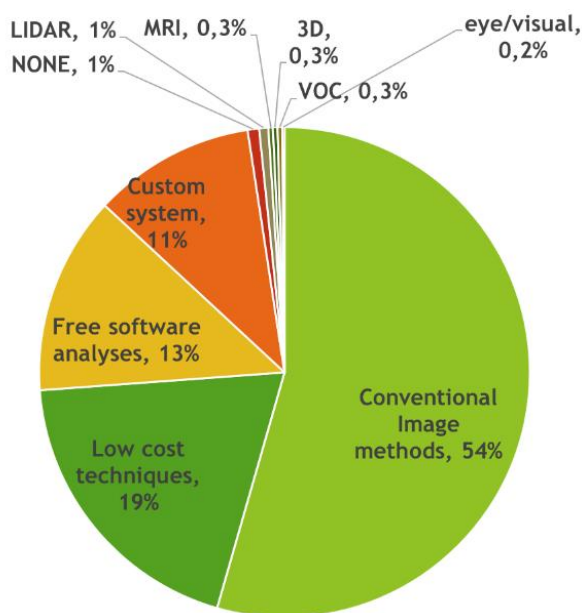
Category	Value
Drought	63%
Heat	49%
Nutrient stress	47%
Biotic stress	39%
Light	24%
Chemicals	22%
Salinity	2%

scarcity of natural resources

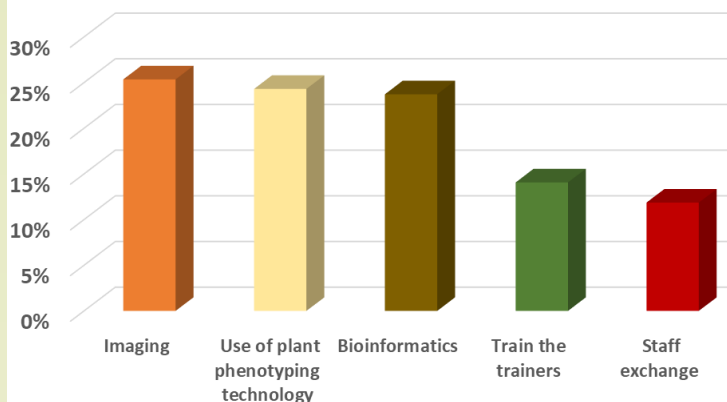yield losses

2018 DO YOU NEED PLANT PHENOTYPING?

🌱 DO WE USE PLANT PHENOTYPING?

An increased demand for low cost affordable techniques and software emerged from the survey

Better training and education are major expectations towards EMPHASIS. We investigated where training and education are needed?
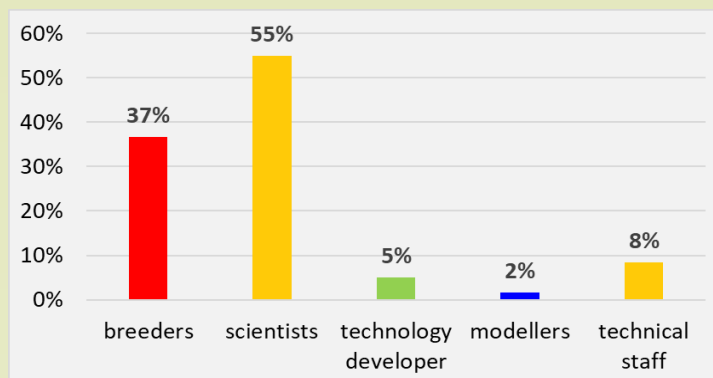

Pie chart:
- LIDAR, 1%
- NONE, 1%
- MRI, 0,3%
- 3D, 0,3%
- VOC, 0,3%
- eye/visual, 0,2%
- Custom system, 11%
- Free software analyses, 13%
- Low cost techniques, 19%
- Conventional Image methods, 54%

Bar chart (30% to 0%):
- Imaging
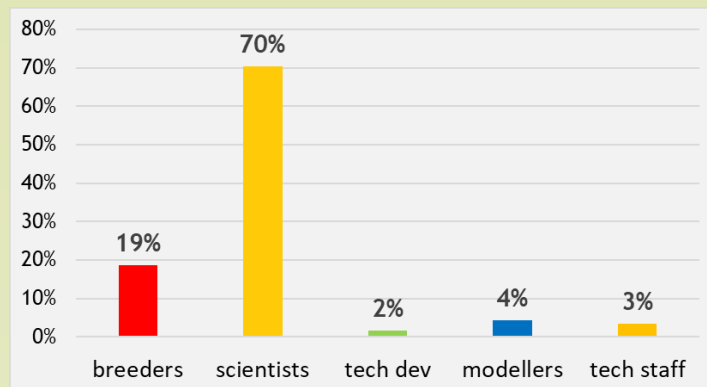- Use of plant phenotyping technology
- Bioinformatics
- Train the trainers
- Staff exchange

2018 DO YOU NEED PLANT PHENOTYPING?

ACCESS DEMAND TO EMPHASIS's INFRASTRUCTURES

Access demand to installations

CONTROLLED CONDITIONS

Controlled conditions chart:
- breeders: 19%
- scientists: 70%
- tech dev: 2%
- modellers: 4%
- tech staff: 3%

INTENSIVE FIELD

Intensive field chart:
- breeders: 37%
- scientists: 55%
- technology developer: 5%
- modellers: 2%
- technical staff: 8%

While scientists highly demand to access to controlled conditions installations, breeders demand is more focused on intensive field for plant phenotyping
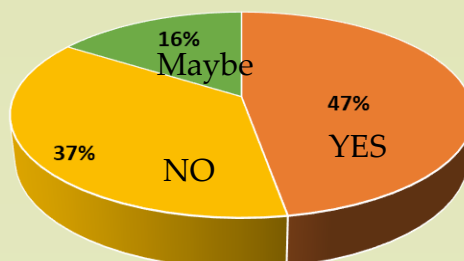

Developing field analysis

2018 DO YOU NEED PLANT PHENOTYPING?

DO WE NEED MODELLING ?

Combining and analysing different data for plant modelling

MODELLING

Have you been or are you using models to represent plant traits or their environment?

16% Maybe
37% NO
47% YES

60% of respondent will use modelling in combination with phenotyping

Which plant traits are mainly represented with models?

Major traits analysed with models	% of hits /total answers
Plant Growth	25%
Yield	20%
Soil water or nutrients	14%
Plant Architecture	13%
Genomics	10%
Atmospheric conditions	9%
Plant hydraulic	6%
Not applicable	2%

With this survey, EMPHASIS clearly engaged new users and stakeholders and acquired useful information for shaping the EMPHASIS business plan

THANKS TO ALL THE CONTRIBUTORS TO THIS SURVEY!

Continue to follow us and participate to our initiatives

https://emphasis.plant-phenotyping.eu/

linkedin.com/company/emphasis-on-plant-phenomics

@EMPHASIS_EU