

Interesting times

 Check for updates

The new US administration has been very quick to enact their agenda in the first quarter of 2025. This has generated some changes that affect support for plant research and agricultural security.

In 1898 the British politician Joseph Chamberlain, father to both a Nobel Peace Prize winner and a subsequent UK Prime Minister, made a speech in Liverpool in which he opined that “I never remember myself a time in which our history was so full, in which day by day brought us new objects of interest, and, let me say also, new objects for anxiety.” We are not even a third of the way through this current year and yet it seems likely that, were he still alive to see it, Chamberlain would concede that 2025 has been more interesting still.

Since the inauguration of Donald Trump for his second term as President of the United States of America on 20 January, and even before, there has been so constant a flow of events and announcements of global relevance that it is difficult to identify the most important. There is thus a danger that equally significant happenings, albeit in more focused areas such as plant science, have not been given the attention they deserve.

One of the prime concerns of the new US administration has been a reduction in government spending by attempts at the identification and cessation of waste in federal funding, a task given mainly to the newly established Department of Government Efficiency (DOGE). Many areas have been identified for cuts, with funding for scientific research both directly and indirectly among them.

For example, the US National Institutes of Health (NIH) has been subject to mass layoffs of staff from the directors of several institutes downwards¹. Simultaneously, temporary changes in communication policies have resulted in the cancellation or delay of crucial grant review meetings, which has effectively stalled the awarding and renewal of research grants². Plant science research is not a major focus of NIH funding, but there are still many

plant scientists doing interdisciplinary work who are being left in limbo, unable to plan future work or hire into their labs.

Greater funding for plant research in the USA has been provided by the National Science Foundation (NSF) than by the NIH. The NSF – under its director, Sethuraman Panchanathan, who was appointed during the first Trump presidency – does not seem to have been overtly affected by cost-cutting initiatives so far. However, an analysis by David Miller, a psychologist at the not-for-profit American Institutes of Research (AIR), has shown that in the period since the presidential inauguration, the number and total value of grants awarded by the NSF has dropped to approximately half their previous levels³. These figures are disputed by the NSF. Also, the foundation is only awarding half as many research fellowships to graduate students as in previous years⁴.

Another major source of support for plant research is the United States Department of Agriculture (USDA), which directly employs many plant scientists. For example, the paper by Sreedasyam et al.⁵ published in *Nature Plants* in 2024, which presents high-quality genomes for three modern cotton varieties, involved a number of scientists from the USDA’s Agricultural Research Service.

The USDA has been subject to a substantial reduction in its staffing levels this year. In mid-February, around 5,700 of its probationary employees (those within their probation period of employment, typically one year), had their contracts terminated⁶. This action was reversed on 5 March following a ruling by a California court, but that only provides a 45-day stay of termination while the US Merit Systems Protection Board reviews the case⁷. The fate of these employees, around half of whom work for the Forestry Division, once the 45 days is up has yet to be determined.

Amongst those affected by these job losses are staff at the USDA’s National Plant Germplasm System (NPGS), including its national program leader, Neha Kothari (although she was quite quickly reinstated)⁸. More than 10% of these people, again probationary employees, have lost their jobs, while others have

been encouraged to leave voluntarily and will not be replaced. The NPGS comprises a seed bank and cryopreservation facility in Fort Collins, Colorado, plus nine ‘clonal repositories’ throughout the USA that maintain living collections of crop varieties, such as the collection of citrus fruit at the University of California Riverside that contains around 4,500 trees representing more than 1,000 citrus accessions.

The NPGS has a small staff of only a few hundred employees, but these people have a vital role in preserving the resource. Some seeds cannot be preserved by freezing, hence the need for the live collections, and those that can be stored deteriorate over time. The condition of the seeds must therefore be monitored regularly so that when their viability falls below an acceptable level they can be germinated and fresh plants grown to provide new seeds for the bank. Disruption of such curation tasks compromises food security by risking the loss of accessions with traits that can be used to breed varieties that are resistant to new diseases or to climatic conditions that may assault our crops in the future.

Plants grow slowly and breed on timescales longer than news or political cycles; studying them is easier and more productive in a consistent and predictable funding environment. Let us therefore hope then that less interesting times are just around the corner.

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References

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