

WISE USE OF GENOMICS IN IMPROVING FOREST HEALTH

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Over the last several hundred years, colonialism and international trade have had the unintended consequence of introducing destructive insects, microbial pathogens and invasive weeds into native forests throughout the world. Programs intended to save native forest species from destructive pests are often led by single discipline investigators who focus first on the insect or the pathogen, then on methods of external control (i.e., containment, pesticides and biocontrol agents). Investigation of genetic mechanisms using structured populations may be dismissed as “too expensive” while genomics costing at least as much if not more may be embraced without serious evaluation of the likelihood of success. The interdisciplinary approach to pests and pathogens used by the most successful private sector companies frequently succeeds and not for the reason you might think. These successful approaches include cost-benefit analysis of all strategies, including traditional breeding and genomics.

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