Reducing the genetic vulnerability of cotton. (C07-paterson184903-Oral)

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Abstract:

The US cotton production system exemplifies the challenges that must be met to reduce the genetic vulnerability of a major crop. Genetic vulnerability is a complex problem that results from a crops evolutionary history, trends in breeding and biotechnology practices, and grower decisions based on limited information, all responding to the inevitable pressures of processor and consumer preferences. Genetic vulnerability reduces the ability of breeders to provide low cost intrinsic genetic solutions to biotic and abiotic hazards, or new needs in agronomics or quality. A solution requires integration of research, education, and extension activities, gaining the partnership of stakeholders to take steps that can be implemented quickly with discernible results, and elicit scientific and behavioural changes that outlive the funding period. Our goal is to reduce the genetic vulnerability of the US cotton crop by providing objective information about relatedness of genotypes as a management tool for producers to reduce field genetic uniformity, and by development of new interspecific gene combinations and supporting molecular tools useful to improve elite cotton genotypes.

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