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On the Cover: The cover image shows *Alopecurus myosuroides* (black-grass) that has been transiently transformed with GREEN FLUORESCENT PROTEIN (GFP) using virus-mediated overexpression (VOX) driven by *Foxtail mosaic virus* (FoMV). These FoMV:GFP treated black-grass were photographed with a long pass filter and illuminated with blue light, which shows fluorescence from GFP in green and the plants' autofluorescence in red. This is the first time gain-of-function mutations have been induced in an agriculturally important weed species. Alongside VOX, we have also used virus-induced gene silencing (VIGS) to induce transient loss-of-function mutations in black-grass. VIGS and VOX are capable of generating mutations that change the herbicide resistance profiles of the transformed black-grass. The application of these virus-mediated gene modification techniques to black-grass establishes the ability to do reverse genetics in a species that poses a real threat to food security. Cover image credits: Macarena Mellado-Sánchez and Dana MacGregor, Rothamsted Research, Harpenden, UK.

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