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A conservation biologist's perspective on biocontrol of weeds

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Many conservation biologists have what might be called a 'green light -yellow light' attitude towards the use of classical biological control against weeds of natural areas. On the one hand, classical biological control gets a 'green light' or 'go ahead' since it has the potential to be one of the most powerful tools available for control of invasive plants in natural areas, wildlife preserves and other wildlands. Biocontrol is an attractive option in natural areas around the world, particularly because of its potential for specificity and ability to act over huge areas for the long term. It may be the only option capable of bringing certain widespread pests like leafy spurge and purple loosestrife under control over large areas at reasonable cost. Many land managers and researchers have urged that particular pests they have been unable to control be targeted for biocontrol. On the other hand, biocontrol gets a 'yellow light' (some might even say a 'red light') for caution due to concerns that biocontrol agents might have the potential to attack and damage populations of non-target native species. Natural area managers are typically concerned with the health and growth of a wide variety of organisms, far more species than most agriculturalists or foresters. If a biocontrol agent does in fact attack any native non-target species, its persistence and ability to spread to areas far from release sites become serious liabilities. The potential for harm to non-target organisms can be decreased with improved host-testing and risk reduction protocols for biocontrol. Use of formal risk assessment procedures, efforts to minimize the number of agents released against a given target, and requiring follow-up studies designed to assess target and non-target impacts and to improve later programs would answer many of the concerns of conservation biologists. While biocontrol offers great promise, it will provide long-term benefits to natural areas and biodiversity preservation only if it is practiced carefully and its potential risks are fully recognized and addressed.
