

# Presidential Order Could Change Golf Course Turf

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Last February I was contacted by a colleague who gave me a "sneak-peek" at a list of potential noxious weed species being developed by the Wisconsin DNR. Included on that list were plants with names like redtop, annual ryegrass, perennial ryegrass, tall fescue, and Kentucky bluegrass. When I contacted the person in charge at DNR to express my concerns, I was told this was only a proposed list: I was not supposed to see the list and I did not know what I was talking about. I was surprised when several weeks later I

received a letter from the same person stating "my name came up as a person who was quite knowledgeable about plants", and to please review the accompanying list of potentially noxious weed species. The list was a similar list to that which I had seen before although the ryegrasses had now been removed.

With the advent of the summer research season beginning I was unable to give the situation much more time. Later in the summer I received information that this activity went far beyond Wisconsin.

Indeed, the Wisconsin DNR was merely responding to a federal initiative. As I delved deeper into the situation I began to better understand the reasoning behind such an act. During late August I attended a meeting of the American Seed Trade Association in Chicago to discuss the effects of the Native Species Act on the seed industry, which had connotations for the green industry including golf courses.

**Background.** Of the 2,000 or so non-native species in the U.S., approximately 350 are considered



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serious and dangerous invaders. Some of the alien species may invade and outcompete native plant species, decreasing biodiversity. Plant and wildlife populations can be seriously altered as alien species take over ecosystems. A study released by Cornell University in June 1999 estimated the effects of alien plant species cost Americans \$138 billion annually.

**What's going on?** On 3 Feb. 1999 Clinton signed Executive Order 13112 which seeks to prevent the introduction of invasive species and provide for their control (plants and animals). The order mandated the establishment of a federal Invasive Species Council to be established by the Secretary of the Interior. A citizens advisory committee of private sector nominees will be formed to assist the Council. The spirit of the order is sound: "to prevent the introduction of invasive species and to provide for their control and to minimize the economic, ecological, and human health impacts that invasive species cause".

**How will this affect me?** Unfortunately the manner in which the situation is progressing may seriously impact the plant industry, including golf course superintendents. A federal invasive weed list won't likely be issued before summer 2000. In the absence of a federal list several existing lists, developed largely by native plant advocacy groups, are being referred to when plans are made for implementing the executive order. These lists from native species advocacy groups were often developed without

an appropriate peer-review or risk-benefit analysis. When placed on the internet, the lists can appear very official, a situation exacerbated when persons involved work for the federal government.

**Politics roll on.** By August 2000 the Council is to have developed and issued a National Invasive Species Management Plan. Currently the Plant Conservation Alliance/Alien Plant Working Group (PCA/APWG) is compiling information on species which various groups or individuals have identified as being invasive in natural areas. The mindset of the PCA/APWG is that even though turf, forage and ornamental plants have been used by the general public for decades or even centuries, they are invasive in either natural "or managed situations" and "will need to be restricted in the future". Given the existing lists, pressure from advocacy groups, and the short time-line for development of a federal list, there is good reason to believe certain economically and environmentally useful species will be placed on the federal invasive weed list. This could seriously impact the superintendent's ability to purchase seed for the golf course: if the federal government declares Kentucky bluegrass a noxious weed, its production and interstate transport will be curtailed or eliminated. It will also hamper or prevent new golf course development which needs approval from state and local agencies.

**Addressing key issues can ensure this remains a beneficial executive order.** A sound decision-making process must ensue in order for the order to be executed in a responsible manner. Input from the plant industry and university research and extension people should bring forth the following issues:

*Item 1: The terms noxious, invasive, and alien are being used interchangeably by groups when assembling their lists of invasive weeds. The federal and state councils and advisory groups need to define and stick to the terminology.*

*Item 2: Too many groups are working unsupervised on their own lists and are placing them on the internet. Some groups misidentify species when the Latin and common names are listed, making it difficult to determine the exact species being listed (Table 1). These lists should not be used for decision-making without proper peer-review.*

*Item 3: When lists of undesirable plants are not properly developed, useful species (e.g., tall fescue) may be inadvertently placed on lists. While easy to get on a list, they are difficult to get off and will likely retain a stigma from the listing which may hurt their future use. The executive order specifies an "invasive species" as an "alien species whose introduction does or is likely to cause economic or environmental harm or harm to human health". Some of the species listed as "invasive" on the various lists promulgated by native species groups do not fit these terms, they sim-*

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**Table 1. A partial listing of turf and forage species which are on the Alien Plant Working Group list of invasive weeds (from <http://www.nps.gov/plants/alien/sciname.htm>)**

| Scientific name             | Common name                                      | Typical use in U.S.         |
|-----------------------------|--|-----------------------------|
| <i>Agrostis capillaris</i>  | Colonial bentgrass                               | Golf course fairways (rare) |
| <i>Bromus inermis</i>       | Smooth brome grass                               | Forage                      |
| <i>Cynodon dactylon</i>     | Common bermudagrass                              | Turf (southern U.S.)        |
| <i>Dactylis glomerata</i>   | Orchard grass                                    | Forage                      |
| <i>Festuca arundinacea</i>  | Tall fescue                                      | Turf, forage                |
| <i>Festuca ovina</i>        | Sheep fescue                                     | Turf                        |
| <i>Festuca pratensis</i>    | Ryegrass <sup>1</sup>                            | Turf (Europe)               |
| <i>Festuca rubra</i>        | Red fescue <sup>2</sup>                          | Turf                        |
| <i>Lotus corniculatus</i>   | Bird's Foot trefoil                              | Forage, erosion control     |
| <i>Paspalum notatum</i>     | Bahiagrass                                       | Turf                        |
| <i>Phalaris arundinacea</i> | Reed canarygrass                                 | Forage                      |
| <i>Phleum pratense</i>      | Timothy  | Forage, (Europe-also turf)  |
| <i>Poa trivialis</i>        | Rough bluegrass                                  | Turf                        |
| <i>Poa pratensis</i>        | Kentucky bluegrass<br>Smooth-stalked meadowgrass | Turf                        |

<sup>1</sup> This is the wrong common name but is listed as it appears on the website. The correct common name is meadow fescue. If ryegrass was intended, then the genus name should read *Lolium*.

<sup>2</sup> Three subspecies exist: *F. rubra rubra* (strong creeping red fescue), *F. rubra longifolia* (slender creeping red fescue), and *F. rubra commutata* (Chewings fescue).

ply happen to be alien species but may actually have functional purposes in our environments which cannot readily be replaced (e.g., Kentucky bluegrass for fairways).

Item 4: Certain turfgrasses are on existing lists. According to the definitions in the executive order turfgrasses do not warrant status as invasive weeds. Turfgrasses do not generally thrive in non-managed environments—they require mowing, fertilizing and sometimes irrigation and pest control to keep them surviving. Mowing removes reproductive structures (seed), ensuring the plant stays non-invasive. Turfgrasses benefit the environment by inhibiting erosion from areas such as roadside banks, provide dust control at airports, and filter pollutants from air and water. Turfgrasses provide recreational areas and are less likely to support rodents near homes and schools than unmanaged “natural” areas. **There are no native plants which can replace existing turfgrasses throughout the U.S.**

Item 5: Most of the population does not live in a natural environment. We have shaped the land, removed topsoil, and drained wetlands in many areas while attempting to create wetlands elsewhere. People require manicured green spaces for recreational and functional purposes. We have removed animals from areas which may have been important pollinators of native species or kept native species from being invasive themselves. Human activity has likely altered global and regional climates, and evidence is increas-

ing that we continue to do so at an accelerated rate: can native species thrive in all areas under these conditions? Many of the alien species which have adapted to North America now perform vital functions, such as the use of perennial ryegrass for children's soccer fields. In many cases there are no native species which can take the place of alien species in our many environments.

Item 6: Federal and state lists need to be developed by knowledgeable persons using research data and mapping information for their decisions. A risk-benefit analysis will be necessary for some species such as Kentucky bluegrass. A complicated species analysis will be required where *Poa annua* is concerned: by law, a noxious weed must be removed or prevented from seeding. How will this be accomplished when *P. annua* is found throughout Wisconsin, and can set seed even at putting green height?

**What you can do.** Stay abreast of current developments. Support your seed/green industry organizations by participating on committees, writing letters, and garnering support from within and without your specific industry. Promote sound judgements on the state invasive species councils by nominating and encouraging knowledgeable, unbiased representatives to be appointed.

If the seed, crop, and green industries act swiftly and intelligently, we can help ensure Executive Order 13112 will be enacted to help the environment as it was intended, and without shredding the golf course community. ♣