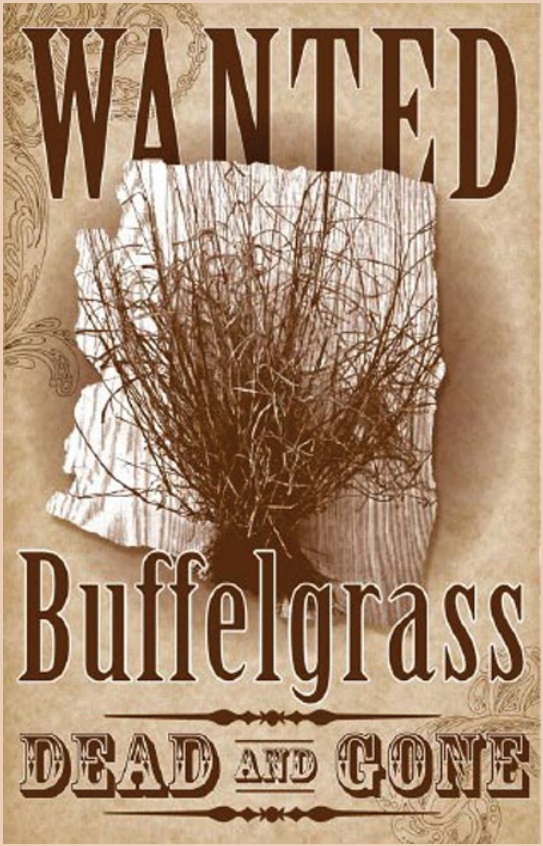
Buffelgrass and Fountain Grass Identification Pocket Guide



THE THREAT

- Buffelgrass (BG) and fountain grass (FG) are non-native grasses that pose serious hazards to human health and the survival of native plants and animals.
  - BG was introduced as supplemental forage for livestock.
  - FG was introduced as an ornamental plant.
- Buffelgrass reduces plant and animal diversity and increases wildfire risk.
  - BG outcompetes native plants for vital water and nutrients. As a newcomer to this plant community, it has no natural predators to reduce its growth. Its only known local use is by domestic livestock.
  - BG burns at extreme temperatures upwards of 1400°F, with flame heights greater than 20 ft.
- Buffelgrass fires threaten residential areas, destroy infrastructure, disrupt air and ground transportation, and compromise public and firefighter safety.



Photo: East Valley Tribune, 2005

- Buffelgrass fragments native ecosystems, displaces native plants and animals, and transforms the Sonoran Desert ecosystem to a non-native desert grassland.
  - BG spreads exponentially by filling in, under, and around native plants. This eliminates natural voids in a desert that would otherwise not be fire-prone.
  - This highly flammable African grass creates fire risks in urban, suburban, and natural desert areas.
  - BG can burn an area the size of a football field in fewer than three minutes.

The dense growth supports hot fires that kill saguaros and other signature plants of the Sonoran Desert.

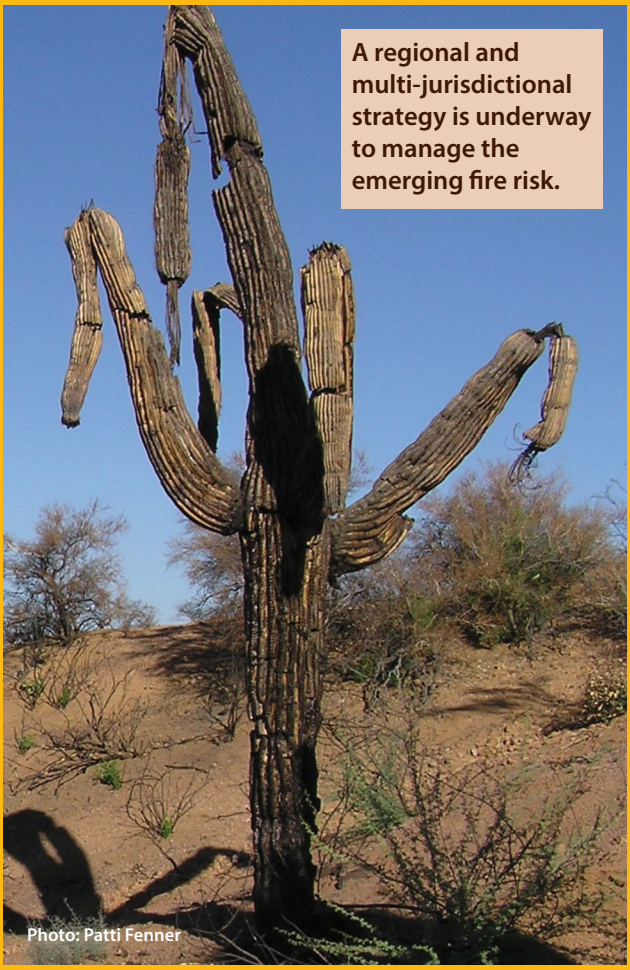


Photo: J.E. Bowers and S.P. McLaughlin



If undetected, buffelgrass will quickly transform the landscape.

Photo: Aaryn Olsson


A regional and multi-jurisdictional strategy is underway to manage the emerging fire risk.
Photo: Patti Fenner



Dormant Buffelgrass
Browns rapidly after rains cease, golden/straw colored, clumpy/messy appearance

Actively Growing Buffelgrass
Greens up rapidly after rain events, clumpy/messy appearance



Buffelgrass Identification



Buffelgrass has bottlebrush-shaped flower stalks with a reddish-purple hue when immature, or a sandy brown color when mature.



Buffelgrass has a rough rachis: the part of the stem where the flowers and seeds are attached.

Photos: Neal Kittelson



Buffelgrass has a hairy ligule: small stiff hairs where the leaf meets the stem.

Photos: Neal Kittelson

Please take care to carefully identify weed species and not accidentally remove desired native species. Following are three of the most common native grasses confused with non-native buffelgrass.



Bristlegrass
Setaria species
NATIVE

Tanglehead
Heteropogon contortus
NATIVE



Arizona Cottontop
Digitaria californica
NATIVE

Buffelgrass
Cenchrus ciliaris
NON-NATIVE

Not all grasses are bad. There are many varieties of beneficial grasses that belong in the Sonoran Desert.

Fountain Grass



Photo: Doug Siegel

Fountain grass (*Cenchrus setaceus*) **is another non-native invasive grass that competes with native plants for vital nutrients, alters habitats, and creates a fire hazard.**

This grass was introduced as an ornamental plant that escaped and is now devastating natural areas.

Like its relative buffelgrass, fountain grass has become a very serious threat to the Sonoran Desert.

- **Growth: sparsely branching, tufted perennial grass 0.2-1 m high.**
- **Stems: densely clumped growth form and erect stems.**
- **Leaves: mostly basal, up to 40 mm long x 3 mm wide, not rigid or ending in sharp points. Edges of leaves have minute teeth, which catch when brushed backwards.**
- **Inflorescence: feathery (bristly), spike-like inflorescences; the bristles long and detaching with the spikelets. Cylindrical, 100-250 mm long or more, usually purple or rose-colored, bristles about 20 mm long.**
- **Fruit: small, dry seeds adorned with long showy bristles.**

Description by Nina Chambers and Trica Oshant Hawkins.



Fountain Grass also has bottlebrush-shaped flower stalks with a reddish-purple hue when immature or a sandy brown color when mature.

Manual Removal


Photo: Doug Siegel

Equipment

- Digging bar
- Pick-axe
- Rock hammer
- Sturdy shovel
- Large garbage bags (to minimize seed dispersal)

Advantages

- Immediately removes fire risk
- Minimal equipment and skill needed
- Can be done any time

Disadvantages

- Time-consuming
- Labor-intensive
- Impractical for large areas


Photo: Lindy Brigham



Photo: Doug Siegel

For easily accessible areas, bagging is a good idea to reduce the fire threat. In back country locations, one successful strategy is the thatch roof technique (place plants side by side with roots downhill, with the next row of plants uphill from the first, weighing them down with rocks). This allows the plants to decompose on site and reduces seed spread.



Photo: Rachel Loubeau

Herbicide Treatment



Equipment

- Backpack sprayers, vehicle-mounted and pull-behind sprayers, tanker sprayers and helicopters

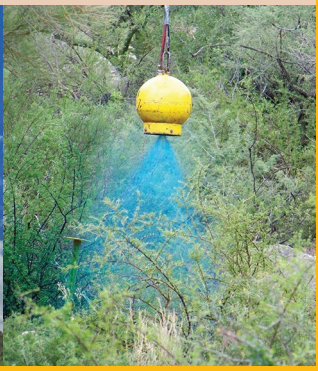
Advantages

- Successfully kills buffelgrass
- Over-the-counter herbicides can be used effectively
- Good for large areas

Disadvantages

- Does not immediately remove fire risk
- Weather-dependent; buffelgrass MUST be green
- Water supply needed





Photos: Doug Siegel

Help Your Neighbors

Start by setting a good example by removing invasive grasses from your yard. Then encourage your neighbors and friends to do the same.

Events, volunteering and research opportunities, visit: www.buffelgrass.org

Please contact your local, state, and Federal representatives to let them know that treating invasives on public lands is an important concern.

Pima County Code regulates buffelgrass through a progressive enforcement process in unincorporated areas of Pima County.

- **First, the property owner will be notified of the presence of buffelgrass on their property by being issued a Notice of Opportunity to Correct. The property owner will be required to submit a plan for approval by the county to address the problem.**
- **If the property owner does not submit a plan or fails to follow an approved plan, the county may remove the buffelgrass from the property and place a lien on the property to recover all county costs.**

The City of Tucson and other regional communities are currently developing standard operating procedures and enforcement options.

Weed identification: if possible, press the plant specimen between two sheets of paper or place in a paper bag and take to the University of Arizona Herbarium. Contact herbarium@ag.arizona.edu or (520) 621-7243.

Individual treatment advice: consult the University of Arizona Master Gardener's program. Walk-ins accepted at Cooperative Extension Office, 4210 N. Campbell Ave, Mon-Fri from 9 AM to 4 PM. Call (520) 626-5161 or forward questions with photos to pcmgplantclinic@gmail.com.

Treatment of large scale infestations: contact a University Extension Weed Specialist for advice See https://extension.arizona.edu/pima for more information.

Presentations: available through Arizona-Sonora Desert Museum, Pima County Environmental Education, and Tucson Clean and Beautiful (depending upon availability). To arrange a presentation, contact the Desert Museum at buffelgrass@desertmuseum.org or (520) 883-3014.

Neighborhoods, HOAs, and concerned groups – contact the following for project assistance:

For roadways, washes, and parks in Tucson and other areas, call (520) 791-3109 or email buffelgrass@tucsoncleanandbeautiful.org

For buffelgrass and other cleanup projects on roadways in unincorporated Pima County, contact Pima County Adopt-a-Roadway at (520) 724-6410 or email Isabel.Noel@pima.gov

Your local land managers working to protect your lands!















































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