Indiangrass

Sorghastrum nutans, (L.) Nash

Alternate Common Name

yellow Indiangrass

Scientific Synonyms

Andropogon nutans L., *Sorghastrum avenaceum* (Michx.) Nash

Functional Group

warm season grass

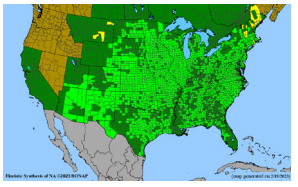
Family

grass family (Poaceae)

Description

- **Life cycle/growth form:** Perennial warm-season bunchgrass with short, scaly rhizomes.
- **Height:** 3-7 ft
- **Leaves and stem:** Leaf blades up to 12 in long, constricted at the base, then widening to about 3/8 in, and tapered to a point, whitish midrib prominent near the leaf base; ligule with prominent pointed leaflike projections on either side which are sometimes referred to as the 'mule-ears', 'boot straps', or 'gun-sight' character of Indiangrass; stem is erect, hairless, and hollow.
- **Fruit/seed head:** Seedhead is a dense, golden-brown, plume-like panicle up to 1 ft long. Entire spikelets fall off when mature, leaving a bare stalk.
- **Pollination:** wind

Habitat and Range



Dry-mesic to wet-mesic soil; full sun; prairies, grassy fens, scrubby barrens, savannas, roadsides, along railroads; Wetland Indicator Status is Facultative Upland (FACU) for the Midwest; deep, moist, well-drained soils preferred for seed production.

Conservation Status

Global- G5, secure; Maine, Rhode Island, and Utah- S1, critically imperiled; Wyoming- S2, imperiled; Vermont- S3, vulnerable (NatureServe)

General Comments

Indiangrass is a dominant component of the tallgrass prairie ecosystem. This species generally establishes readily from seed, if good seed bed preparation and good weed control are achieved (i.e. following a glyphosate-resistant crop, for example). Two to three years are needed to develop a productive stand by direct seeding.

Establishment for Seed Production (Appendix A)

Direct seeding:

Row spacing:	36 in	24 in	12 in	Solid Stand
PLS lbs/acre:	3.3	5.0	10	10-12

- **Seeding depth:** 1/4-1/2 in
- **Seeding method:** native seed drill
- **Seeding time:** late spring to early summer.
- **Weed control:** Prepare clean, very firm, weed free seedbed prior to seeding.

Greenhouse:

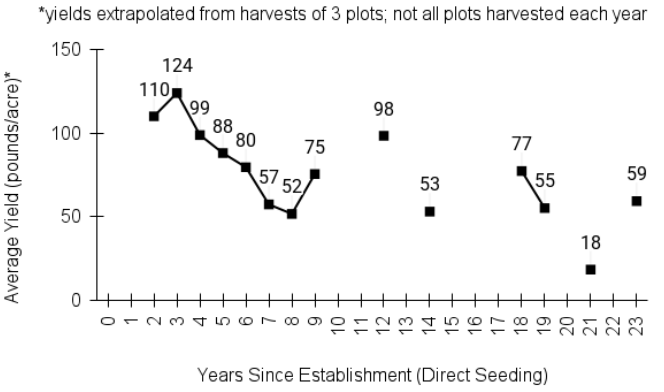
- **Seed pre-treatment:** No stratification necessary. Germination of grass seed usually improves with proper storage (cool, dry conditions) throughout the first year after harvest.
- **Sowing:** Sow seed in greenhouse two months before last frost free date at 1/4 in depth.
- **Transplanting:** Transplant after all danger of frost.

Stand Management

- **Weeds:** Mow stands high (6–12 in) first growing season to prevent weed canopy from shading seedlings. Established stands – Plateau (imazepic) for grass and broadleaf control, Atrazine for grass control. Always read and follow label instructions.
- **Pests:** None noted.
- **Diseases:** None noted.

Seed Production (Appendix B)

- **First harvest:** Flowering and seed set at end of second growing season from direct seeding, three years for stand to fill out.
- **Yield:** 50-130 bulk pounds/acre (yields extrapolated from harvest records of three plots, not all of which were harvested every year)
- **Stand life:** Peak harvests occur in the third year and after. If seed yields decline, stands can be chiselled to reinvigorate. Annual late spring fire helps control weeds and increase flowering and seed production. Fertilizer application may also improve seed yield. (Note: These recommendations are strictly for production fields, NOT REMNANT PRAIRIES). Productive stand life is 10-20 years.
- **Flowering date:** Mid-August to mid-September.
- **Seed maturity/Harvest date:** Late September to early October.
- **Seed retention:** Shattering occurs soon after maturity. Very susceptible to seed shattering from wind. A single, windy afternoon when seed is mature and dry can take most of the crop. Monitor fields frequently. As seedheads near maturity, the awns and hairs fluff out. When this begins to happen, check for shattering and observe the stage of development of the grains.
- **Harvest date range at TPC (2003-2022):** Sept 23 - Oct 21
- **Recommended harvest method:** Seed stripper or combine at medium to hard dough stage.



Seed Cleaning Process (Appendix C)

Air-dry material, remove awns with a debearder or brush machine, then air-screen. Protect eyes, airways, and skin from the irritating hairs released during harvest and cleaning processes.

Seed Characteristics (Appendix D)

- **Seeds per ounce:** 12,000 (IA NRCS)
- **1000 seed weight:** 2.03 g (Seed Information Database)
- **Description:** Seed unit is a fertile spikelet with a bent, twisted awn, about 1/2 in long, attached stalks (rachis and pedicel), hairy prior to debearding or brushing. Caryopsis smooth, brown, thickened, about 3-5 mm long.
- **Seed storage:** cool/dry (33-50° F, 30-50% RH)
- **Typical seed test:**
  PLS: 87%
  Purity: 92%
  Germination: 22%
  Dormant: 74%
  (averages obtained from 12 tests of purchased seed lots)

Released Germplasm

- **Source Identified material:** Natural Selections/Iowa Ecotype Project: Zone 1 (northern Iowa), Zone 2 (central Iowa), and Zone 3 (southern Iowa)
- **NRCS releases:** Coastal Germplasm, Newberry Germplasm, Northern Missouri Germplasm, Southlow Michigan Germplasm, Suther Germplasm, Western Missouri Germplasm
- **Selected germplasm:** Prairie View Indiana Germplasm (IN), Wynia Germplasm (AR, OK)
- **Informal:** Cheyenne (OK)
- **Cultivated varieties (cultivars):** Americus (AL, GA), Llano (NM), Lometa (TX), Osage (KS, OK), Rumsey (IL), Tomahawk (ND, SD); Horticultural varieties may also exist

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Species Updated: 12/11/2025

Notes