The following data was collected in a survey of participants attending the Turfgrass Stakeholder Summit II. Participants were asked to identify the top issues facing Turfgrass. The survey data was grouped into categories of issues that emerged.

Labor

- Labor availability
- Labor and future workforce
- Labor (x2)
- Qualified workers (ie graduate students)
- Job losses in private turfgrass industry sector
- Understanding labor challenges and their impact on technology implementation

Water/Salinity

- Water management (x2)
- Water Conservation
- Water use
- Drought (x3)
- Drought tolerance
- Managing water demand associated with turfgrass
- Barriers to adoption of advanced water management technology
- Water
- Nutrient impairment (water quality)
- Water access
- Irrigation (water quantity)
- Water availability
- Water (not enough/too much/poor quality) and how to optimize agronomics with water issues
- The Need for Drought Tolerant Grasses
- Overwatering
- Irrigation water availability/quality
- Salinity

- Salty Irrigation
- Salt tolerance

Reducing Inputs
- Need for reduced input turf grasses
- Lowering inputs (fertilizer, water)
- Input reduction
- Need for low-input varieties
- Low Maintenance Sustainability
- Lack of regionally adapted cultivars suitable for minimal input turf

Funding
- COVID Economic Impacts
- Reduced funding for research at public universities
- Funding to support a talented workforce
- Funding for research (x5)
- Resource constraints
- Funding for high quality research

Breeding/Development
- Winter greenness
- Resistance to biotic and abiotic stresses
- Increase winter hardiness
- Turfgrass Adaptation
- Heat tolerance
- Durable persistent native cover
- Lack of distinctness among available commercial cultivars

Pesticides/Herbicides
- Anti-pesticide ordinances
- Pesticide resistance
- Breeding for pest (diseases and insects) resistant cultivars
- Sustainable pest management
- Increase pest resistance
- Loss of pest control products
- Weed resistance
- Herbicide Resistance
- The need for effective biocontrol options
- Pesticide & environmental toxicity runoff

Public or Consumer Education/Value of Turfgrass and Benefits
- Access to information average person , Many buying 25-30 year old varieties
- Educating consumers about turfgrass management
- Education on value of greenspaces

- Concerted education to educate average turf managers and new workers
- Consumer acceptance
- Public perceptions of turfgrasses as a poor use of resources
- Lack of cohesive messaging
- Public perception on water/irrigation
- Turf tear-out programs
- Greenspace equity and access
- Anti-nutrient ordinances
- Imprecise benefit of research based interventions
- Balance between using turf and using shrubs, etc.
- Removal of natural turfgrass from the landscape and sports fields

Adoption of Best Practices/New Technologies

- Limited use or adoption of new technologies in turfgrass industry: drone/sensory technology, turfgrass DNA sequencing technology and big data analytics
- Adoption of new approaches
- Identification and understanding of equipment/technology features that add value for end users
- Encouraging adoption of BMP & IPM protocols
- Lack of adherence to university recommendations
- Shrinking of research-extension-teaching efforts at public universities
- Translating turfgrass management to broad scales

BMP/IPM

- BMPs for chemical use reduction related to natural areas
- IPM Benefits of native plantings
- Regulatory costs
- Pollinator Habitat
- Lack of diagnostic services
- BMPs (mowing/fertility/weed control) for new cultivars to reach optimum performance
- Soil health

Sustainability/Conservation

- Sustainability (x2)
- Natural resource conservation
- Quantifying ecosystem services benefits
- Environmental challenges

Climate Change

- Climate change is affecting ability of grasses to tolerate extremes in temps
- Climate change will affect turfgrass production and management

Shade (x2)

Sod/Seed Production

- Seed production (x2)
- Getting improved cultivars into market from production issues to demand
- Poor margins

Disease/Pests/Invasive Species

- Disease
- Disease Pressure
- Disease & Nematode Control
- Insect pests
- Goose grass is becoming a huge problem

Student Recruitment

- Lack of students
- Fewer students aware of/ interested in Turfgrass Science
- Student recruiting

Miscellaneous

- Useful collaboration among a broad geographic range
- no central information repository
- Matching up utility needs with customer desires for landscapes
- Turfgrass production and management that meets industry, consumer, and environmental needs
- High Traffic Low Maintenance
- Balancing expectations and resource use