

ITRC 2022 PROGRAMME

SUNDAY 10 JULY

10:00-14:00	Pre-Conference ITS Board meeting	Hotel Scandic Falkoner
13:30-18:00	Registration	Marmor Hall
15:00-18:00	Industry Seminar	Auditorium: A2-81.01
15:00	Introduction and Keynote presentation by Syngenta: Tomorrow's Turf Today	Katie Dodson and Glenn Kirby
15:20	DLF Seeds and Science research: Meeting the future with sustainable turf solutions	Christian Sig Jensen
15:35	Capillary Hydroponics: Grow better Turfgrass with Hydroponics	Martin Sternberg
15:45	Husqvarna: Autonomous turf care solutions	Pär Forsman
16:00	Nufarm	Aaron Hathaway
16:10	Discussion	
16:25	COFFEE BREAK	
16:45	BAYER: We are Honoured to Be in the Turf Industry	Jose Milan
17:00	TourTurf: A New Approach to Poa annua Management	Tim Baldwin
17:10	The Toro Company: Sustainability Through Technology	Josh Friell
17:25	PBI-Gordon a leader in delivering green solutions for the turf & ornamental market	Jeffrey W. Marvin
17:35	Discussion and summing up	

19:00-21:00 Welcome Reception

Copenhagen Plant Science Center

MONDAY 11 JULY

07:00	Registrations desk opens. Poster set up.	Marmor Hall
	Opening ceremony	
08:30	Moderator: Bruno Hedlund	Auditorium: A2-81.01
08:30	Welcome and opening of the 14th International Turfgrass Research Conference	Maria Strandberg, ITS President
09:00	Keynote 1: The turfgrass challenge: Documenting the value of a crop that doesn't feed the world	Leah A. Brillman, Professor Turfgrass Breeder, DLF Pickseed NA, USA
09:30	Keynote 2: The Leicester city Journey to a data-driven approach' and 'Developing and securing the next generation of sports turf students'	Simon Gibson, Senior Sportsturf and Grounds Manager, Leicester City Football Club, UK
10:00	COFFEE & EXHIBITION	
	Opening session continues	
	Moderator: Bruno Hedlund	
10:30	Presentation of selected voluntary papers related to the UN goals for sustainable development (Agenda 2030)	Auditorium: A2-81.01
10:30	Seeking Green Grass: Strong Sustainability for Golf and Turfgrass	Robbie Fitzpatrick
10:50	Estimated energy use and greenhouse gas emissions associated with golf course turfgrass maintenance in the Northern USA	Michael Bekken
11:10	Reduced phosphorus fertilization on golf courses: A comparison of three fertilizer recommendations for putting greens	Anne F. Borchert
11:30	Numerical Simulation of Water and Nitrogen Transport in Three Turf Species	Kelly Kopp
12:00	LUNCH & EXHIBITION	Marmor Hall
	Plenary session: Historic development of turfgrass research and future opportunities	
	Moderator: Trygve S. Aamlid	Auditorium: A2-81.01
13:30	Dr. James B Beard: "The Father of Modern Turfgrass Science".	Gwen Stahnke
13:45	The history of the research, education, and practice of "cold-region turfgrass" in Japan	Yoichi Ohara
14:00	Golf Course 2030: implementing UN Sustainable Development Goals to identify industry and research for greater resiliency in golf course playability.	John Kemp
14:15	Quality standards for the golf course beyond the greens	Stewart Brown
14:30	Analysis of turfgrass research papers 2008-19: Implications and future opportunities for the International Turfgrass Society	Don Loch
14:45	COFFEE & EXHIBITION	Marmor Hall
	Interdisciplinary session: Environmental impacts: Turfgrass water, carbon and nutrient balances	
	Moderator: Micah Woods	Auditorium: A2-81.01
15:15	Setting the agenda: Invited keynote from industry	Fritz Lord, Compo Expert GmbH
15:30	Economic and sustainability benefits of the United States Golf Association's investment in water, fertilizer, and pesticide management research	Cole Thompson
15:45	Nitrogen rate, irrigation and rainfall impacts on groundwater nitrate levels in sandy coastal golf courses	Doug Soldat
16:00	Foliar biostimulant applications combined with low-mineral nitrogen fertilization equal the quality of high-input mineral fertilization programs on tall fescue turf	Diego G. de Barreda
16:15	One minute 'Welcome to my poster' presentations	
	Water use and resilience in the leisure sector	Tony Hanson
	Effective rainfall estimates for St. Augustinegrass lawns under varying irrigation programs	Charles Fountanier
	Nitrogen forms in runoff export from St. Augustinegrass	Charles Fountanier
	Effect of topdressing of compost, compost tea, and various fertilizers on soil and lawn characteristics	Nicholas Bero
	Cool-season lawn performance as influenced by 'Microclover' inclusion and supplemental nitrogen	Michael Fidanza
	Risks for surface runoff and leaching of fungicides after application in late fall to control winter-active diseases on sand-based putting greens	Trygve S.Aamlid
	Variable impacts on growth of deficit irrigation on Cynodon dactylon (L.) Pers. × Cynodon transvaalensis Burt Davy and Poa pratensis L	Kelly Kopp
	Exploring fine fescues as an option for low-input golf greens in the north-central USA	Dominic Petrella
	A field scale facility to evaluate the effect of soil organic matter content of sod-established St. Augustinegrass lawns on nitrate-nitrogen leaching	Michael Fidanza
	Discussion with presenters	

15:15	Thematic session: Turfgrass rootzones, irrigation water quality and soil surfactants Moderator: Wolfgang Prämasing	Auditorium: A2-70.03
15:15	Benefits of a soil surfactant on putting greens under dry and wet conditions	Trygve S. Aamlid
15:30	An investigation into the principles mode of action of surfactants and how a novel formulation can improve turfgrass quality by increasing dominance of <i>Agrostis</i> spp. in golf greens	Tim Baldwin
15:45	Identification of Wetting Agents for Water Conservation on Deficit-Irrigated Hybrid Bermudagrass Fairways	Marco Schiavon
16:00	Soil surfactant use on on athletic field infield surfaces	Adam Thoms
16:15	Physical properties of sports turf rootzone justify using organic stabilizers	Deying Li
	Discussion with presenters	
15:15	Thematic session: Turfgrass physiology Moderator: Michelle DaCosta	Auditorium: A2-70.04
15:15	Effects of elevated carbon dioxide on drought tolerance and post-drought recovery involving rhizome growth in Kentucky bluegrass	Bingru Huang
15:30	Effect of combined shade and drought stress on bermudagrass turf	Charles Fontanier
15:45	The use of rapid light curves to predict photosynthetic changes in turfgrasses exposed to low-light conditions.	David Jespersen
16:00	Antioxidant enzyme responses of Kentucky bluegrass to simulated athletic traffic stress	Adam Thoms
16:15	Plant growth regulator affects on winter hardiness of annual bluegrass putting green turf	John Inguagiato
16:30	One minute 'Welcome to my poster' presentations	
	Effects of polyethylene glycol on root and shoot production in zoysiagrasses	Kevin Kenworthy
	The use of artificial lighting on sports turf	Etienne Abelard
	Humic acid-based plant biostimulants impact on root viability and drought tolerance of creeping bentgrass	Wendell Hutchens
	The use of 5-aminolevulinic acid to reduce heat stress related damages in tall fescue	David Jespersen
	Sod production characteristics: How strong is your bermudagrass?	Chrissie Segars
	Effect of acute shade on the canopy morphology and evapotranspiration rates of three turfgrasses	Charles Fontanier
	Comparison of nitrogen assimilation components among <i>Agrostis</i> species and cultivars	Michelle DaCosta
	Discussion with presenters	
17:00	Poster Session with refreshments	Marmor Hall
19:00-20:00	ITS Symposium in memory of Dr. James Beard	Auditorium: A2-81.01
TUESDAY 12 JULY		
09:00	Turfgrass practitioner seminar including 'Eat your golf course' dinner (see separate programme in the app)	Auditorium: A2-70.02
08:30	Interdisciplinary session: Turfgrass ecosystem services and biodiversity Moderator: Ulike Pitha	Auditorium: A2-81.01
08:30	Setting the agenda: Invited keynote from industry	Edwin Roald, Golf Course Architect, Iceland
08:45	Presence of pollinator-friendly habitat on pollinator communities in managed turfgrass systems	Terri Billeisen
09:00	Persistence and flowering performance of early-season flowering bulbs in warm- and cool-season turfgrasses in a subtropical climate	David Jespersen
09:15	The golf course as an outdoor classroom – a proof of concept project	Maria Strandberg
09:30	One minute 'Welcome to my poster' presentations	
	Evaluation of flower visiting insect specimen sampling methodology in turfgrass habitat	Isodora G.P. de Souza
	Future of Urban Landscapes: A Florida Perspective	Michael Dukes
	Carbon Par: Estimating carbon status of land used by Icelandic golf courses and measuring carbon storage of turfgrass on golf fairways and mown roughs	Edwin Roald
	A cross-disciplinary forum promoting efficient biodiversity conservation in "new" grasslands in Sweden	Maria Strandberg
	Discussion with presenters in panel	
08:30	Thematic session: Technology integration in turfgrass management Moderator: Josh Friell	Auditorium: A2-70.04
08:30	An Improved User Interface to Identify Sustainable Turfgrasses within National Turfgrass Evaluation Program Data & NTEP-DB 1.0: A relational database for the national turfgrass evaluation program	Eric Watkins (Combined presentation of two papers)
08:45	Investigating targeted spring dead spot management via aerial mapping and precision-guided fungicide applications	Jordan Booth
09:00	Novel action thresholds of a logistic regression model to forecast dollar spot on bentgrasses	James Hemphling
09:15	Impact of stitched hybrid systems in hybrid bermudagrass athletic fields	Kyley Dickson
09:30	Use of plastic geocellular modules as a replacement gravel layer for natural turf rootzones	Christian Spring
09:45	One minute 'Welcome to my poster' presentations	
	An evaluation of mat hybrid turfgrass systems under simulated traffic	Adam Thoms
	The development of practices for the testing and maintenance of synthetic turf fields in the National Football League (NFL)	Andy McNitt
	Survival of <i>Staphylococcus aureus</i> applied to <i>Poa pratensis</i> , L. and synthetic turf	Andy McNitt
	A hydroponic system for natural turf that can take extreme wear as an alternative to artificial grass surfaces	Martin Sternberg
	ROBOGOLF: Robotic mowers for better turf quality on golf course fairways and semi-roughs Preliminary results from 2020 and 21	Karin Juul Hesselsøe
	A new era for golf course maintenance - from conventional to robotic mowers	Atle R. Hansen
	Comparing Ground-based and Aerial Data at Field Scale During Dry Down on Golf Course Fairways	Chase Straw
10:00	COFFEE BREAK & EXHIBITION	
10:30	Thematic session: Turfgrass establishment & maintenance I Moderators: Marco Volterrani	Auditorium: A2-81.01
10:30	Comparison of mechanical removal of perennial ryegrass overseeding out of bermudagrass to chemical transitions	Kyley Dickson
10:45	Species, Cultivar and Seeding Rate Effects on Non-Irrigated, Pesticide-Free Athletic Fields Playing Surface Quality	Jason Henderson
11:00	Effects of mowing height and <i>Cynodon</i> spp. cultivar on traffic tolerance	Kyley Dickson
11:15	Effects of plant biostimulants on seedling root and shoot growth of three cool-season turfgrass species in a controlled environment	Alejandra Acuna
11:30	One minute 'Welcome to my poster' presentations	
	<i>Poa trivialis</i> or <i>Lolium perenne</i> as nurse crops for faster establishment of <i>Agrostis stolonifera</i> putting greens in northern climates	Karin J. Hesselsøe
	Weed pressure and turfgrass establishment in response to mulching media	Gerald Henry

	Fall establishment of Zoysiagrass (<i>Z. japonica</i>) on roadsides in the US transition zone	Grady Miller
	Practical reestablishment of golf greens following winter damages – A field study	Carl Johan Lönnberg
	Clippings return decreases mineral nitrogen requirements for bermuda-grass (<i>Cynodon</i> spp.) lawns in Mediterranean Europe	Marco Schiavon
	Glycerin-based nitrogen applications for turfgrass growth	Adam Thoms
	Evaluating the use of the Branched-Chain Amino Acids in Combination with Urea on Creeping Bentgrass at Establishment	Adam Thoms
	Thematic session: Turfgrass genetics, breeding and species/variety testing I	
10:30	Moderators: Leah Brilman / Don Loch	Auditorium: A2-70.04
10:30	Divot recovery of cool-season turfgrass species and mixtures in low maintenance fairways	Lindsey Hoffman
10:45	Seed mixtures of red fescue and colonial, creeping, or velvet bentgrass for pesticide-free management of Nordic golf greens	Karin Juul Hesselsøe
11:00	Review of cool-season turfgrasses for salt-affected roadsides in cold climates	Eric Watkins
11:15	One minute 'Welcome to my poster' presentations	
	Predictive ability of perennial ryegrass spaced-plant nurseries for turfgrass and seed production swards in Minnesota	Eric Watkins
	SCANTURF - Evaluation of turfgrass varieties for lawns and sports grounds in Scandinavia	Lars Havstad
	Domestication of native grasses in New Zealand	Alan Stewart
	Winter survival of experimental bermudagrasses in the upper transition zone of the U.S.	Nathan Walker
	Mixing warm-season turfgrass cultivars to reduce weed pressure and increase lawn quality	Kevin Kenworthy
	Low-input golf course putting green performance of fine-textured inter- and intra-specific zoysiagrass (<i>Zoysia</i> spp.)	Christie Segars
12:00	LUNCH & EXHIBITION	
	Thematic session: Turfgrass establishment & maintenance II	
13:30	Moderators: Marco Volterrani	Auditorium: A2-81.01
13:30	Evaluating Biological Thatch Control on Golf Greens	Bert McCarty
13:45	A Review of a Novel Enzyme System for the Management of Thatch and Soil Water Repellency in Turfgrass	Sudeep Sidhu
14:00	Identification of earthworm species in sand-topdressed hybrid bermudagrass golf tees	Paige Boyle
14:15	Using local weather stations to generate growing degree-day data to predict the flowering pattern of an annual bluegrass fairway in Michigan	Aaron Hathaway
14:30	Plant growth regulator and low-dose herbicide programs for annual bluegrass seedhead suppression in fairway and athletic-height turfurf	John Peppers
14:45	One minute 'Welcome to my poster' presentations	
	Influence of mowing height of cut and frequency for golf tournament preparation on putting green ball roll distance and turfgrass quality	John Kaminski
	Influence of brush type and brushing frequency on putting green ball roll distance and turfgrass quality	John Kaminski
	Velvet bentgrass putting green quality, water retention, and infiltration as affected by topdressing sand size and rate	Ruing Wang
	Comparing conventional aerification practices with the core recycler	Gerald Henry
	Evaluating biological thatch control on <i>Zoysia matrella</i> (L.) Merr. golf greens	Bert McCarty
	Irrigation frequencies and reference evapotranspiration replacement affecting annual bluegrass encroachment in perennial ryegrass in western Oregon	Alec Kowalewski
	Maximizing seedhead suppression of <i>Poa annua</i> L. in Michigan by using growing degree-days to predict optimum application timing for mefluidide, ethephon, or ethephon plus trinexapac-ethyl	Aaron Hathaway
	Thematic session: Turfgrass genetics, breeding and species/variety testing II	
13:30	Moderators: Leah Brilman / Don Loch	Auditorium: A2-70.03
13:30	A novel method of generating RNAi library for high throughput gene function analysis in creeping bentgrass	Shui-zhang Fei
13:45	Genetic diversity and species-specific DNA markers of <i>Cynodon</i>	Marta Pudzianowska
14:00	Octoploid zoysiagrass: Origin, stability, characteristics, and breeding behavior	Ken Quesenberry
14:15	Genetic identity and diversity among experimental selections and cultivars of vegetatively propagated turf bermudagrass as assessed with SSR markers	Nathan Walker
	Student presentations / competition I	
13:30	Moderator: Paul Koch	Auditorium: A2-70.04
13:30	Effects of perennial ryegrass competition on bermudagrass and hybrid bermudagrass cover, biomass, and total nonstructural carbohydrate accumulation	John Peppers
13:45	Evaluation of South-African common bermudagrass germplasm for shade tolerance	Esdras Carbajal
14:00	Minimal irrigation requirements of Kentucky bluegrass and tall fescue blends in the northern transition zone	Jada Powlen
14:15	Aboveground and belowground traits of turf-type bahiagrass (<i>Paspalum notatum</i> Flüggé) genotypes under simulated drought	Pablo Boeri
14:30	Aerial and ground-based assessments of preemergence herbicide effects on St. Augustinegrass grow-in	Amy Wilber
15:00	COFFEE & EXHIBITION	
	Thematic session: Turfgrass establishment & maintenance III	
15:30	Moderators: Marco Volterrani	Auditorium: A2-81.01
15:30	Traffic form and season of wear affect responses of fine fescues	Hui (Eric) Chen
15:45	Influence of foot traffic, irrigation, nitrogen fertilization, and weather factors on tissue N content in creeping bentgrass 'Focus'	Doug Soldat
16:00	Effects of growing degree day based trinexapac-ethyl application on ultradwarf hybrid bermudagrass putting green quality and ball roll	James Kerns
16:15	Impact of putting green management on visible wear damage caused by foot traffic	Thom Nicholai
16:30	One minute 'Welcome to my poster' presentations	
	Assessing fine fescue mixtures and plant growth regulator applications to determine their effect on traffic tolerance and divot recovery	Maggie Reiter
	Evaluation of Late Season Nitrogen Source Application on Autumn Color and Winter Injury of 'Riviera' Bermudagrass in the Upper Transition Zone of the U.S.	Nathan Walker
	Plant parasitic nematodes, substrates or grass species as reasons for poor reestablishment of a sand-based putting green after winter kill	Trygve S. Aamlid

15:30	Thematic session: Turfgrass genetics, breeding and species/variety testing III Moderators: Leah Brilman / Don Loch	Auditorium: A2-70.03
15:30	Use of endophytic fungi in turf grasses; difficulties in delivering to the market	Alan Stewart
15:45	Variation in southern chinch bug (<i>Blissus insularis</i>) survival and damage on <i>St. Augustinegrass</i> germplasm	Esdras Carbajal
16:00	Evaluation and genetic analysis of red thread (<i>Laetisaria fuciformis</i>) disease prevalence in tall fescue (<i>Festuca arundinacea</i>)	Yuanshuo 'Henry' Qu
16:15	One minute 'Welcome to my poster' presentations	
	Identification of sources of resistance to gray leaf spot in <i>Stenotaphrum</i> germplasm	Esdras Carbajal
	Global DNA methylation predicts epigenetic reprogramming and transgenerational plasticity in <i>Poa annua</i> L	John Kaminski
	Multispecies genotype × environment interaction for turfgrass quality in five turfgrass breeding programs in the southeastern United States	Kevin Kenworthy
	Multienvironment evaluation of <i>St. Augustinegrass</i> breeding lines for turf performance via a mixed-models approach	Kevin Kenworthy
	Identification of QTL associated with cold acclimation and freezing tolerance in <i>Zoysia japonica</i>	Esdras Carbajal
	Characterizing the growth and winter survival of commercially available and experimental genotypes of <i>St. Augustinegrass</i>	Kevin Kenworthy
	Effects of <i>St. Augustinegrass</i> Genotype and Irrigation Frequency on Turfgrass Quality in a Subtropical Environment	Kevin Kenworthy
	Gene expression differences for drought stress response in three cool-season turfgrasses	Paul Johnson
	Discussion with presenters	
15:30	Student presentations / competition II Moderator: Paul Koch	Auditorium: A2-70.04
15:30	Resolving issues related to target-site resistance detection in <i>Poa annua</i> alpha-tubulin	Claudia Ann Rutland
15:45	Evaluation of nitrogen fertility and plant growth regulator impacts on annual bluegrass weevil (<i>Listronotus maculicollis</i>) oviposition and larval survivorship	Audrey Simard
16:00	The creeping bentgrass microbiome: Traditional culturing and sequencing results compared with metagenomic techniques	Edward McNab
17:00-19:00	Poster Session with refreshments	Marmor Hall
WEDNESDAY 13 JULY		
08:30	Technical Tours all day See descriptions of the tours in the app. All tours will end at DLF Seeds and Science research station for BBQ dinner	
THURSDAY 14 JULY		
08:30	Interdisciplinary plenary session: Integrated Pest Management Moderator: Bruce Clarke	Auditorium: A2-81.01
08:30	Setting the agenda: Invited introduction from industry	Niels Dokkuma, Netherlands Golf Federation
08:45	Integrated pest management effects on weed populations managed without herbicides in the Pacific Northwest	Emily Braithwaite
09:00	A new device for selective, mechanical weed control in turfgrasses	Jason Henderson
09:15	Empirical and theoretical assessment of mechanical and injection cultivation methods to manage white grubs in turfgrass	Ben McGraw
09:30	Non-conventional fungicides to control dollar spot disease	Tom Hsiang
09:45	Utilizing organic amendments for general suppression of dollar spot on creeping bentgrass turf	Joe Roberts
10:00	Discussion with presenters in panel	
10:30	COFFEE & EXHIBITION	
11:00	Thematic session: Turfgrass weed management I Moderators: Scott McElroy / Diego Gomez de Barreda	Auditorium: A2-81.01
11:00	Long-term influence of nitrogen, plant growth regulators, and iron sulfate on annual bluegrass populations and turfgrass quality on a golf green	Kaiyuan Tang
11:15	Characterization of mutations conferring inherent resistance to acetyl coenzyme A carboxylase-inhibiting herbicides in turfgrass and grassy weeds	Trent Tate
11:30	<i>Lolium arundinaceum</i> leaf and root developmental temperatures influence its allelopathic potency on <i>Poa annua</i>	Daewon Koo
11:45	One minute 'Welcome to my poster' presentations	
	Response of creeping bentgrass (<i>Agrostis stolonifera</i>) and weed species to plant growth regulators	Gerald Henry
	Nitrogen fertility rates affecting weed population dynamics in a perennial ryegrass stand in western Oregon	Alec Kowalewski
	Influence of grass species and mowing practices on weed cover and quality in infrequently mowed grass stands	Peter Landschoot
	Field assessment of flazasulfuron and trifloxysulfuron sodium drift	Shawn Askew
	Selective perennial ryegrass control in creeping bentgrass with flazasulfuron	Shawn Askew
11:00	Thematic session: Turfgrass Disease and Insect Pest Management I Moderator: Ruth Mann	Auditorium: A2-70.04
11:00	Etiology and management of <i>Pythium</i> root rot in golf course putting greens	James Kerns
11:15	Strategies for increasing ferrous sulfate efficacy against dollar spot of creeping bentgrass	Wendell Hutchens
11:30	Suppression of <i>Microdochium</i> patch using rotations of mineral oil, sulfur, and phosphorous acid	Clint Mattox
11:45	One minute 'Welcome to my poster' presentations	
	Comparing rates of mineral oil, sulfur, and phosphorous acid on <i>Microdochium</i> patch suppression and turfgrass quality	Clint Mattox
	In vitro screening of turfgrass species and cultivars for resistance to dollar spot	Tatsiana Espevig
	Pacific shoot-gall disease control in annual bluegrass putting greens using a new formulation of abamectin	Pawel Orlinski
	Effects of fungicides on creeping bentgrass health and rooting characteristics under abiotic stress	Pawel Petelewicz
	Use of fans and their effects on the turf microenvironment and disease development	Charles Peacock
	Identification, frequency of occurrence, and inoculum density of select ectotrophic root-infecting fungi within ultradwarf hybrid bermudagrass greens in Mississippi	Maria Tomaso-Peterson
12:00	LUNCH & EXHIBITION	

13:00	Thematic session: Turfgrass weed management II Moderators: Scott McElroy / Diego Gomez de Barreda	Auditorium: A2-81.01
13:00	Turfgrass response to flazasulfuron and trifloxysulfuron sodium deposited by runoff water	Shawn Askew
13:15	Effect of spray droplet size on pronamide control of <i>Poa annua</i>	Martin Ignes
13:30	Perennial ryegrass phytotoxicity increases with mesotrione rate and growth-promoting environmental conditions	Shawn Askew
13:45	Postemergence <i>Polygonum aviculare</i> control in <i>Cynodon dactylon</i> turf	Whitnee Askew
14:00	One minute 'Welcome to my poster' presentations	
	Efficacy of Natural Herbicides on Dandelion (<i>Taraxacum officinale</i> Weber x Wiggers) and White Clover (<i>Trifolium repens</i> L.) Populations	John Kaminski
	Monitoring fall CO ₂ efflux of dallisgrass and bermudagrass: Implications for non-selective weed control	Gerald Henry
	Assessing a programmatic approach for the control of quinclorac-resistant smooth crabgrass (<i>Digitaria ischaemum</i>) in established bermudagrass turf	Atikah Putri
	Effect of hollow-tine cultivation on crabgrass infestation in cool-season turf	Bruce Clarke
	Effects of soil compaction and moisture on the growth of <i>Juncus tenuis</i>	Jay McCurdy
13:00	Thematic session: Turfgrass Disease and Insect Pest Management II Moderator: Ruth Mann	Auditorium: A2-70.04
13:00	In Vitro Sensitivity of <i>Clariireedia</i> , <i>Fusarium</i> and <i>Microdochium</i> Isolated from Grasses to Commonly Used Fungicides	Marina Usoltseva
13:15	Evaluating biological and oil-based fungicides for dollar spot suppression on turfgrass	Paul Koch
13:30	Management of leaf and sheath spot (mini ring) on hybrid bermudagrass in Hawaii	Zhiqiang Cheng
13:45	Reproductive phenology and feeding patterns of <i>Listronotus maculicollis</i> during spring emergence: Implications for spring management	Garrett Price
14:00	One minute 'Welcome to my poster' presentations	
	Impact of nitrogen source, fall fertilizers, and preventive fungicides on spring dead spot caused by <i>Ophiosphaerella korrae</i> and <i>O. herpotricha</i>	James Kerns
	Phylogenetic evaluation of <i>Cochliobolus</i> spp. collected from turfgrass	Nathan Walker
	Influence of calcium and nitrogen fertilizer on creeping bentgrass infected with dollar spot under cool temperatures	Deying Li
	Effects of nitrogen, phosphorus and potassium rates on <i>Microdochium</i> patch	Alec Kowalewski
	Nitrogen source impacts <i>Rhizoctonia</i> leaf and sheath spot severity in ultradwarf bermudagrass	James Kerns
	Field evaluations and in vitro sensitivity of <i>Microdochium nivale</i> to succinate dehydrogenase (SDHI) fungicides	Kurt Hockemeyer
	Red bermudagrass mite severely reduces growth in hybrid bermudagrass	Don Loch
	Diversity, composition, and freedom to choose drive effects of <i>St. Augu-stinegrass</i> cultivar blends on an herbivorous insect	Kevin Kenworthy
	Detection of cyanotoxins in irrigation water and potential impact on putting green health	Lee Miller
	<i>Pyricularia oryzae</i> incites gray leaf spot disease on hard fescue (<i>Festuca brevipila</i>)	Bruce Clarke
	Resistance to the demethylation-inhibiting fungicide propiconazole in Canadian populations of <i>Microdochium nivale</i>	Tom Hsiang
15:00	Poster Session with refreshments	Marmor Hall
15:30-17:00	ITS Quadrennial meeting, including student presentation awards	Auditorium: A2-70.02
19:00-24:00	Conference dinner	Axelborg Salen
FRIDAY 15 JULY		
08:30	Symposium: Winter Stresses of Turfgrass (I) Moderator: Eric Watkins	Auditorium: A2-70.03
08:30	WinterTurf: A new approach to studying turfgrass winter stresses	Eric Watkins
08:55	Covering greens to reduce winter stress damage	Trygve Aamlid
09:20	Development of disease prediction models for snow moulds	Paul Koch
09:45	Discussion	
08:30	Symposium: Turfgrass Management in the Transition Zone (I)	Auditorium: A2-70.04
08:30	General Introduction	Alessandro De Luca & Massimo Mocioni, Simone Magni & Marco Volterrani
09:00	Actions in Europe	Diego Gomez de Barreda & Stefano Macolino
09:30	Actions in Asia	Kyosuke Yamamoto & Kehua Wang
10:00-10:30	COFFEE BREAK	
10:30	Symposium: Winter Stresses of Turfgrass (II) Moderator: Eric Watkins	Auditorium: A2-70.03
10:30	Winter deacclimation dynamics in a changing climate	Michelle DaCosta
10:55	Winter stresses of grasses in the Arctic	Sigridur Dalmannsdottir
11:20	Discussion	
10:30	Symposium: Turfgrass Management in the Transition Zone (II)	Auditorium: A2-70.04
10:30	Actions in USA	Jim Kerns
11:00	Actions in Australia	Chris Lambrides
11:30	Final discussion and summary	
12:00-12:30	Conclusion of ITRC 2022	Auditorium: A2-70.04
12:30-14:00	Farewell lunch, dismantling of posters	Marmor Hall
13:30-16:00	ITS Post conference board meeting	Hotel Scandic Falkoner