

SOIL CRUMBS

Soil Science Australia Special Edition

October 2017



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Developing the future – 5th Australian National Soil Judging Competition

The 5th Australian National Soil Judging Competition took place over three days in Toowoomba, Queensland from 26 to 28 September. Twelve teams from Australia and New Zealand's leading universities battled it out for top honours. The motto for the competition was 'Developing the future' and everyone who attended would agree that the next generation of soil scientists was able to develop their soils knowledge, description and classification skills and networking prowess.

Teams were confronted with some unseasonably hot conditions, with the thermometer on competition day reaching 38oC and a stiff hot north-westerly wind. Though the students and organising staff took all of this in their stride and marched on to ensure the event was a success.

Team Competition

First place

University of Sydney - 580.5 points

Second place

Team South Australia - University Adelaide - 531.5 points

Third place

University of New England - 531 points

Individual Competition

First place

Camilla Gardiner - Lincoln University - 232 points

Second place

Karin Azzam - The University of Sydney - 230 points

Equal third place–

Riquelle Miller - University of Sydney - 229 points

Josh Nelson - Lincoln University - 229 points

James Choong - University of Queensland - 229 points.

National Soil Judging - Team Champions



National Soil Judging - 1st Place Team- The University of Sydney (580.5 points). Left to right Stephen Cattle (Coach), John Bennett (SSA Federal President), Marie-France Courtois, Ricquelle Miller, Karin Azzam, Leon Akopian, James Deng and Dr John McVeigh (Member for Groom)



National Soil Judging – 2nd Place Team - Team South Australia- University of Adelaide (531.5 points). Left to right John Bennett (SSA Federal President), Bethany Sleep, Shan Huang, Esther Toth, Erinne Stirling, Cam Grant (Coach) and Dr John McVeigh (Member for Groom)



National Soil Judging – 3rd Place Team - University of New England Soil Sleuths (531 points). Left to right John Bennett (SSA Federal President), Lizzie Marshall, Imogen Semmler, Ivanah Oliver and Dr John McVeigh (Member for Groom)

National Soil Judging - Individual Champion



Individual competition 1st place- Camilla Gardiner (Lincoln University) 232 points



National Soil Judging - Individual 2nd place- Karin Azzam (The University of Sydney) 230 points



National Soil Judging - Individual 3rd place. James Choong (university of Queensland), Josh Nelson (Lincoln University) and Riquelle Miller (The University of Sydney) 229 points.



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Jenna, PhD (Environmental Chemistry and Ecotoxicology)

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Big thanks to all our sponsors.

Soil Science Australia is extremely grateful for the generous support and assistance provided by the 2017 National Soil Judging Competition Sponsors. Without their support this event could not happen and we look forward to working with them in the future in support of the Australian Soil Judging Competition.

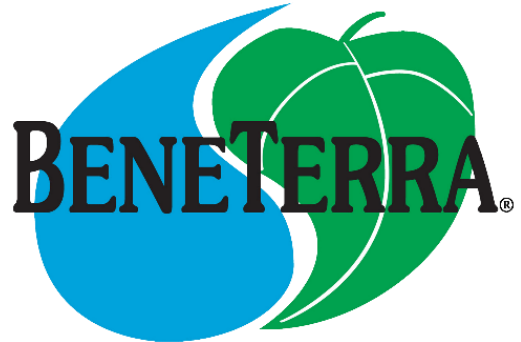
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Many thanks to Mr Sandy Speed from “Dalmeny” for allowing the teams to access his property for the competition day and to The University of Queensland- Gatton Campus, Kerwee Feedlot and the Department of Agriculture and Fisheries (Kingsthorpe and Gatton Research Stations) for allowing access to their properties during the practice days.

Sincere thanks to the supporting partners, Department of Science, Information Technology and Innovation, Department of Natural Resources and Mines, University of Queensland and University of Southern Queensland for providing staff assistance and facilities in support of the 2017 National Soil Judging Competition.

Wonderful volunteers!

A big thank you to everyone who volunteered their time during the competition as time keepers, markers, pit bosses and tour guides. The volunteers included Lauren O’Brien, Kelly Bryant, Kristie Williams, Bob Reid, Sunny Jacobs, Peter Berghoffer, Tim Nash, Tony King and Aaditi Dang. Thanks also to Steve Harper from Gatton Research Station for providing his horticultural insights into Queensland’s food bowl.

Special mention must go to Andrew Biggs’ amazing wife Kate who was a huge help during the competition. Kate arrived early to start the social BBQs, stayed late to pack up, assisted in the marathon seven hour marking session and even welcomed the organising committee into her home for two days. Thank you Kate!



Left: SSA member and volunteer extraordinaire Sunny Jacobs’ sunny disposition giving a leg up to Competition organiser Markey “Mark” Crawford. Sunny was pivotal in ensuring competitors, coaches and organising staff didn’t dehydrate on competition day. Right: Local soil legend Bob Reid adding his 2 cents worth to the Darling Downs practice day. His knowledge of the soils and landscapes in the area was invaluable to the students.

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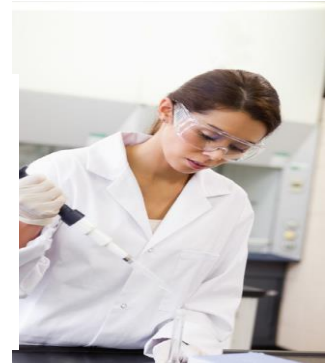
Australian Soil of their **Soil**

Judging Competition for 2017, as it did in 2015. ASPAC would also like to offer participants complementary student membership of ASPAC for 2018, which will give them the opportunity to link with experienced scientists as well as potential employers from across Australasia.

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- Uniform and reliable soil and plant analytical methods.
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- Offers an annual Study Travel Award to attend conferences to advance the understanding and application of soil and plant analysis.
- Publishes quarterly newsletters for members.
- Sponsors workshops and conferences to facilitate the sharing of knowledge and expertise.



ASPAC is a not for profit international organisation, funded by membership fees. Companies, individuals and students are invited to join. Follow the links from the website – www.aspac-australasia.com.

Participants of the workshop who want to take up the offer of complementary student membership for one year, can contact Dave Lyons (Chair of ASPAC) on (07) 54425387.

Behind the scenes

The organising committee approached approximately 50 organisations for sponsorship including government departments and research corporations, environmental and agricultural consultants specializing in soils, analytical laboratory companies, composting and fertiliser companies and mining companies. The committee was able to raise \$17,000 and was encouraged by the

interest in longer term sponsorship deals for the competition. We are hoping to announce the first long term sponsorship towards the end of the year in anticipation of the 2018 Soil Judging Competition in Canberra.

2017 was by the far the biggest competition for Soil Science Australia, with three days, 10 soil pits, 12 teams, 55 competitors and nine coaches. We approached 20 Australian universities to compete with 10 sending representatives. There were also several apologies from some universities with budgets and student/ staff schedules not lining up. Hopefully the competition will continue to grow bigger and better next year.

The 5th Australian National Soil Judging Competition also managed to attract media attention, receiving received a timeslot on ABC Radios- Queensland Country Hour and a story in the local Toowoomba paper "The Toowoomba Chronicle". Links to both stories below, with the Country Hour story starting at 39:50.

<http://www.abc.net.au/news/rural/programs/qld-country-hour/2017-09-29/rural-qld-podcast-290917/9001392>

<https://www.thechronicle.com.au/news/students-race-dig-dirt-competition/3227361/>

A dedicated group of individuals defied the odds with a marathon seven hour effort to ensure all the scoresheets were marked and results were finalised for the awards presentation. They ended up making the deadline with only 30 minutes to spare!



Left: Contemplating the meaning of life... Head Judge Andrew Biggs and Luke Finn contemplating the vagaries of soil pedology in one of the practice pits in Gatton on a stinking hot and humid Sunday afternoon. Right: A blurry image for the blurry eyes of the organising committee- Lauren O'Brien, Mark Crawford, Andrew Biggs, Luke Finn and Jim Payne (missed his own selfie). A late night preparing before the competition day. They all needed a shower...

The Organizing Committee

A huge amount of effort went in behind the scenes and this event would not have been possible without hard work and determination to see the event run to its full potential.



Big thanks to (clockwise) Luke Finn, Mark Crawford, Andrew Biggs, Stuart Irvine-Brown, John Bennett and Jim Payne.

National Soil Judging Competition - Participating Universities





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Southern Cross University

Southern Cross University has a small soils program with units that are mainly taken by students in the Environmental Science and the Forestry Science and Management degrees. We therefore felt very privileged to be offered the opportunity to participate in the National Soil Judging Competition in Toowoomba. The soils of the Darling Downs are iconic in Australian soil science, agriculture and literature and the potential to spend three intensive days amongst them was impossible to resist.

We gathered together a select group of participants: Lina Garcia Florez (PhD student from Colombia), Ha Thi Do (PhD student from Vietnam) and Joel Crowther (Masters student from Australia) and proceeded to hone our skills locally, drawing on the experience of well known pedologist David Morand. We gave ourselves the team tag of the 'Ferro-Souls' as a nod to our local environment.

The three days we spent in the field around Toowoomba were superb. A range of soil types from the Lockyer Valley and the Darling Downs displayed in a set of eleven beautifully presented, generously sized, recently prepared pits with expert interpretation from local soil professionals. What more could an interstate soil connoisseur ask for? Of course there was plenty of spirited discussion, as is appropriate, when considering the complex and remarkable entity that is soil.

Initial encouragement for SCU to join in the Soil Judging Competition was provided by the NSW Branch of Soil Science Australia who also provided generous financial support. Further generous support was provided by the Environmental Analysis Laboratories at SCU and the School of Environment, Science and Engineering at SCU provided a vehicle for the duration of the tour. We are grateful to all those sponsors in enabling us to access such a wonderful learning opportunity.

It is hard to choose a personal favourite part of the three days. Of course, Ferrosols hold a place dear to my heart, having lived around Lismore for 20 years and in NW Tasmania for a couple of decades, so the Ferrosol presented in the Ruthven pit was special. However, in terms of defining the essence of the Darling Downs, the Jondaryn Vertosol with the perfectly judged slice through a mukkurra was an absolute winner.

But the last word really has to go to the students who all worked hard and participated in great spirit. Lina summarised her experience thus:

'We had the opportunity to put into practice all our soil science knowledge and to enhance our skills in critically understanding the fascinating complexities of soils when studied in the field. It was also enriching to connect with other students and coaches from Australia and New Zealand universities that passionately follow soil science. We are very grateful of being able to share experiences and lots of fun activities with them!

The competition allowed us to challenge ourselves as a team, testing our knowledge of soil and learning, developing and practising new skills in interpretation of soil characteristics. We also recognise this event as an important "stepping stone" to the next step along our journey of becoming soil scientists. We really appreciated all the logistical support provided by the organisers and sponsors in the event planning and during the training trips and the competition day. Finally, we

would like to be a part of this experience again... so, looking forward to seeing everyone in the future!



Contemplating that tricky Competition Pit 1



Gatton Brown Chromsol



The Ferro-Souls, basking in the exposed glory of a makara.

Team South Australia

Team SA comprised four students from the University of Adelaide: PhD candidate Erinne Stirling, BScAgr 2nd year student Bethany Sleep, and two 3rd year BSc (Soil Sci) students Esther Toth and Shan Huang. They were trained for the competition by James Hall (SA Branch President) and Cam Grant, and received financial support from the SA Branch as well as Mike McLaughlin, Ron Smernik and Cam Grant.

After returning to Adelaide following the competition we 'de-briefed' over a soil cake (and a moon cake!) and decided the best things about the competition were:

- Opportunities to network with other soil scientists, to name a few: the welcome BBQ (even though we were exposed to the worst beer and the best mushrooms money can buy); the pairing of teams during practice days allowed us to form friendships with the UNE team (and others); the pub visits where decent beer could be had; the final night's dinner celebrations.
- Exposure to soils other than Calcarosols, Chromosols and Sodosols common in South Australia – we nearly lost our Coach to a deep, black cracking Vertosol when he announced his life was complete now that he had seen a whole field of self-mulching soil. He then nearly went apoplectic when we witnessed the textbook example of a Mukkara gilgai. Well done, organisers – you nearly finished Cam off!
- Afternoon tea and scones at the Jondaryan Woolshed, followed by a dash through the sprinklers...

Recognizing our turning point on the third day when we actually started working well together as a team – we learned new things about soils and about ourselves, and found we actually didn't need Cam anymore.... 🤔

A big vote of thanks to the organisers and to Soil Science Australia for making the whole thing happen – we look forward to seeing some of you again at the next competition.



Team SA left to right: Erinne Stirling, Shan Huang, Cam Grant (coach), Esther Toth, and Bethany Sleep.

Lincoln University-

The practice days were long and hot, but comprehensive and helpful, especially when it came to coming to terms with a whole new classification system and defining textures with more than 35% clay. It's one thing to read a book and practice in a lab, or on New Zealand soils, but Australia is a whole different ball game. The competition day was challenging, but a great learning experience for all. Taking what we'd learnt over the last few months at home and the two great days of field trips and putting it into practice was very rewarding. The practice days made such a difference, having had hands on experience and the knowledge from your soil gurus is what got us through in the end! With one of our team, Camilla Gardiner getting first in the individuals and Josh Nelson coming third, we couldn't be more proud. A great experience all round.

Soil judging isn't yet as widely known as it should be, but we're on our way to making it the well-known sport. It's not only a challenging competition but a valuable skill and something to inspire enthusiasm in all. A shout out to all the people that made the competition possible, preparing such great practice pits and generously sharing your time, energy and knowledge. Also to the funders both here and across the ditch that made the whole thing a reality. New Zealand Sponsors were: FAR, Landcare Research, Ravensdown, NZ Soil Society of Soil Science, LRS, CSER and Lincoln University.



Back row left to right: Bedrockers Connor Edwards, Milan Bonkovich, Camilla Gardiner and Sefra Rayner. Front row 50 shades of Greywacke Irene Setiawan, Verina Telling, Alvand Azimi and Josh Nelson

New England Soil Sleuths

From the outside looking in, I (Ivanah Oliver) have seen the Australian Soil Judging competition grow into a fantastic event over the last five years. When it first started I was disappointed that I was unable to compete when I had undertaken my undergraduate studies. A couple of years ago I returned to university for my PhD and was intent not to miss out on the opportunity to participate.

The University of New England had a small but dedicated and enthusiastic team, aptly named the New England Soil Sleuths. The whole week in Toowoomba was a fantastic experience where we acquired new skills and knowledge about all things soils, landscapes, and the classification. A highlight from the training days was seeing that wonderful gilgai formation in the vertosol. The relationships built and deepen with colleagues and friends alike was one of the most valuable aspects of the whole week. It is these relationships that will help make up the cohort for the rest of our soil science careers. Throughout the whole event there was a great camaraderie between all the teams. As UNE were coach-less for the week, we are especially thankful for Cam Grant and Team South Australia for all the wisdom and guidance that you provided to us.

The New England Soil Sleuths would also like to thank the NSW branch of Soil Science Australia and the School of Environmental and Rural Science at UNE for the valuable financial support. Without it, we would not have been able to attend this enriching experience. With students already vying for positions on the teams next year, we are looking forward to competing again in 2018. Until then you will find us in the bottom of a soil pit practicing out field textures!



New England Soil Sleuths left to right: Liz Marshall, Ivanah Oliver and Imogen Semmler.

University of Sydney

The University of Sydney Team's week began rather tumultuously, with our flight to Brisbane cancelled (on the first morning of NSW school holidays), forcing us to find another way to Toowoomba. Fortunately, the resourcefulness gained through rigorous weekly training sessions under the guidance of super-coach Stephen proved to be invaluable, as we managed to get a flight to Ballina and book a hire car, eventually getting to our Airbnb late on Monday evening. The challenges didn't stop there, with most of us falling ill at various stages throughout the week. However, as the old proverb goes, "every flower must grow through dirt - or in this case - the infertile, sandstone-derived sodosols of the Lockyer Valley". This turned out to be true, as we had great practice days, getting to see a big range of unforgettable soils and landscape features, before taking out 1st place in the team judging! Congratulations must also go to Ricquelle who finished 3rd and Karin who finished 2nd in the individual competition. A special thanks to all the organisers and volunteers that made it such a great week, and to USQ for hosting all the teams. We would also like to thank the NSW Branch of Soil Science Australia and our university for providing financial support for our participation in the competition.



University of Sydney back row left to right: Ricquelle Miller, Stephen Cattle (coach), Marie-France Courtois, Leon Akopian. Front row Karin Azzam, James Deng.

Team Western Australia

The WA Branch organised a rookie team of four students from three universities; Jie Deng (UWA), Fariba Mokhtari (Murdoch), Tarrah Pennychuik (Curtin) and Ci Sun (UWA) under the watchful eye of coach, Henry Smolinski (DPIR). The students were amazing and worked really hard in the few weeks leading up to the competition to hone their soil skills with Henry. They all had limited knowledge of soils before the competition, particularly anything that wasn't primarily sand, hence being placed fifth was amazing and a credit to coach Henry.

Members of the team wrote: "The 2017 Soil Judging Competition gave us lots of knowledge about soil science that we can't learn in the classroom. The competition was a great way to learn more about soils in a really fun countryside. At the match, our team separated into two groups, one focussing on the texture, coarse fragments, segregations and structure which needed time to determine while the other quickly finished the site characteristics, included landform, slope class and parent material. It is a good way to meet students from other universities and states. For example, we can share the sandy soil in WA with the students from the east coast and New Zealand. Although conditions were hard in the field, all competitors worked with enthusiasm. Thanks to our coaches Henry and Deborah, thanks to the WA branch of Soil Science Australia, to the Queensland organisers and the other student teams.



Team Western Australia left to right: Jie Deng, Henry Smolinski (coach), Tarrah Pennychuick, Fariba Mokhtari and Ci Sun.

University of Queensland

Prior to the competition day, we spent two days in practice pits at Gatton and the Darling Downs, getting exposure to a variety of Queensland soil types and complexities. Over these days, we were guided by (our) Coach Ryosuke Fujinuma, and the Soil Science Australia experts, for the best way to identify, classify, and determine soil properties. Assessing the individual soil characteristics takes time, so we learnt to divide the different tasks to each member, with one person assisting and coordinating. Each decision on a soil characteristic is important, as all the data is used collectively to key out and identify the soil order and ideal land use. Misidentification of important soil properties could result in a black Vertosol outcome, when you are clearly in a red Ferrosol pit (unlikely, unless you're colour blind, but you get the idea).

On the competition day, we no longer had the assistance of coaches, and relied on our own judgments and group decisions. Some resources were shared with other teams, and all data had to be gathered and assimilated quickly. This meant good intra-team communication, polite inter-team interactions, and rapid best-assessment decisions. Ultimately, we learned that assessing soil profiles is "not an exact science".

The Soil Judging competition was not only an excellent learning experience, but also a great opportunity to meet soil-minded people, from undergrad students to the experts in the Australian soil science field. There was a mix of backgrounds (agricultural, environmental, etc.), and geographic residences, with participants from as far west as Western Australia, and as far east as New Zealand. The competition attracted a great group of people to spend three days with, in the freezing winds and boiling hot sun.

Thanks to Soil Science Australia for organising.



Soil Geeks- University of Queensland. Left to right Jason Choong (undergrad), Sarah Forsyth (Masters), Chloe Lai (PhD) Cristina Martinez (Coach), Chelsea Stroppiana (PhD) and Ryo Fujinuma (Coach)

University of Southern Queensland

It was our great honour to attend the 5th Australian National Soil Judging Competition which was held on September 25th to 29th in Toowoomba Queensland. Our team consisted Stirling Robertson (USQ), Aram Ali (USQ), Yingcan Zhu (USQ) and Hasintha Wijesekara (UON). As a local team, University of Southern Queensland (Ped-antics), the pressure was on us. We were quite excited to be part of the competition but quite nervous to be competing against teams from universities within Australia and Lincoln University from New Zealand. It was a tough competition with people bringing their A-game and we are proud to have fought in this match and come out without any bruises.

The landscapes surrounding Lockyer valley and eastern Darling Downs crossed with a variety of soils, such as red Ferrosols, Dermosols, Calcarosols, and cracking Vertosols, which were unique to many attending on the day and made for a whole new experience. We were privileged enough to see the unique feature of a linear gilgai and how it looks within soil profile. This was a first for many of us.

Not only was the soil judging competition an excellent learning opportunity, but it also was a great chance to meet other soil scientists. This was a very different opportunity to learn and network. We would like to thank each of the organisers for their effort in organising this successful event. This wouldn't have been possible without your hard work. We would also like to thank Dr John McLean Bennett for his coaching. With that we also acknowledge the amazing helpers/trainers that were present throughout the training to teach us. The USQ team wouldn't have made it without you guys. We are looking forward to the sixth National Soil Judging Competition to be held in Canberra 2018 and hopefully bringing home a trophy.



Ped antics- University of Southern Queensland. Left to right Hasintha Wijesekara (UoN), Aram Ali, Yingcan Zhu, Stirling Robertson and John Bennett (Coach).

It all ended with a dinner

Frivolity aplenty occurred at the awards dinner, with teams and members of the organising committee letting their hair down. The night was spent reminiscing about the soil pits and landscape of the previous three days over a few quiet beverages. The dinner was fantastic networking opportunity for future soil scientists from both Australia and New Zealand to meet experienced soil science professionals. The question on most students lips was “How do I get my foot in the door as a soil scientist?” and many discussions were had about what career opportunities lay out there in the world of soil science. It was refreshing to see so many passionate young people excited about soils.

We were fortunate enough to be joined by Dr John McVeigh MP (Member for Groom, Queensland) for the awards ceremony. Having such a significant public figure attend this awards ceremony shows just how far this competition has come in just a few short years. Other notable attendees included sponsorship representatives; Kathryn Galea (Federal Department of Agriculture and Water Resources) and Tony Stapleton (Beneterra).

The awards dinner was also an opportunity for the competition organisers to poke fun at some of the funnier moments; and interesting personalities that attended the competition. A range of awards as voted by the organising committee were given out to the worthy recipients.

| Award | Recipient |
|--|--|
| <u>The loose unit award</u> Awarded for the most larrikin behavior. | Josh Nelson and Alvand Azimi (Lincoln) |
| <u>I love a sunburnt country award</u> Awarded for the best sunburn of the competition. | Josh Nelson (Lincoln) |
| <u>The Everything is Awesome award</u> Awarded to the most optimistic and energetic person in the competition. | Cameron Grant (Team SA). |
| <u>Best Dressed in the field award</u> | Erinne Sterling (Team SA) Khaki African Safari suit |
| <u>The Spanish Inquisition award</u> Awarded to the coaches who gave the organising committee the hardest time (in a good way). | Judith Van Dijk (Lincoln) and Henry Smolinski (Team WA) |
| <u>Tough as nail award</u> Awarded to the students who you would never hear a complaint from. | Chloe Lai (University of Queensland) and Marie France Courtois (The University of Sydney). |
| <u>Best Social Media post</u> Awarded to the best social media post/ caption of the competition. It was a cracker!!! | Stuart Irvine-Brown, though the subject of the photo Joel Crowther was offered the prize. |
| <u>Best photo award</u> Awarded to the best photo at #SoilJudgingAu and #ArtInSoil | Lincoln University |
| <u>The Plastic Shovel Award</u> The Plastic Shovel award was awarded to the local Queensland team that performed poorest on “home soil”. | Ped Antics- The University of Southern Queensland |



Top left: All teams getting full marks in the networking and socialising competition at the Awards Dinner. Bottom left: “Everything is awesome” award winner Cam Grant claiming his limited edition Sodosol stubby cooler. Right: Ped-Antics representative Stirling Robertson claiming the “Plastic Shovel” award for his team from the organising committee Luke Finn, John Bennett and Jim Payne.



Left: The Spanish Inquisition Award winner Judith Van Dijck putting head judge Andrew Biggs (middle) back into his hole. Right: Judith claiming her limited edition Ferrosol stubby cooler; the soil which inspired this spectacular confrontation!!



Top left: Tony Stapleton -Chief Operating Officer from BeneTerra our amazing Gold Sponsor mingling with students from USQ and Team SA. Bottom left: 1st, 2nd and 3rd placed teams in the team competition; University of Sydney, Team South Australian and University of New England. Right: Kathryn Galea from Department of Agriculture and Water Resources (Naming Sponsor) speaking about the importance of promoting the future of soil science in Australia.



Left: Public speaking natural: Ivanah Oliver (UNE) giving an impromptu thank you speech on behalf of the students and coaches. Right: The who's who of Queensland Soil Science. Current QLD president Silvana Santomartino speaking with Immediate QLD Past President Mark Crawford.

Social Media Competition

As a sideline to the main event we ran a social media competition to add a bit of artistic flair to the event. The coaches and competitors took to this with gusto and were able to capture some great moments. The competition was hotly contested and entries came thick and fast, particularly the uploads to the Facebook group (Australian Soil Judging Competition). To capture the true spirit of social media we had two competitions a best social media post and a funniest caption competition. Our overall winner was Sephrah Rayner (earthwordsblog.com – Lincoln University) and our funniest caption was a prize shared by the witty poster Stuart Irvine-Brown (organizing committee) and his muse Joel Crowther (Southern Cross University). To see the full frivolity of the event check out the hashtags #SoilJudgingAu and #ArtInSoil on Instagram and Twitter or the Facebook group Australian Soil Judging Competition.

A big thank you to all our posters your efforts made a much appreciated contribution to the promotion of the event. I'm sure the soil science community can't wait to see what comes out of the next competition.



21 likes

earthwordsblog Day 2 practice. Pit 1. Red Ferrosol.
Beautiful colours and sexy clays. Getting our texture on.



When assessing sodicity you don't usually worry about the cracks... THINK AGAIN! Is it actually the Ferral-Souls USC? #SoilJudgingAu #ArtInSoil #Sodosol #dispersion #slaking #backsnracks #butyourbackintoit



Left: Best social media post - Sephrah Rayner (earthwordsblog.com – Lincoln University) Right: Best caption award jointly awarded to Joel Crowther (Southern Cross University) as the unsuspecting and good humoured inspiration and Stuart Irvine Brown (organizing committee) as the keen snapper.



Some memorable moments and beautiful images that came through on the social media accounts.

To see the full carnage of the event check out the hashtags #SoilJudgingAu and #ArtInSoil on Instagram and Twitter or the Facebook group Australian Soil Judging Competition.

The pits



Left: Classic soil derived on Gatton Sandstone, midslope Yellow Chromosol. Orange surface horizon is an anthropogenic addition, overlying preserved A1 and bleached A2e. Right: Oakey Creek alluvial soil, intergrade between Black Vertosols and Red Chromosols. Classified as a massive Black Vertosol. Note the apparent bleached A2e that did not qualify as a bleached A2e (10YR6/1 dry colour for those playing at home)...



Left: What a cracker!!! Classic Darling Downs deep self-mulching Black Vertosol derived from basalt colluvium. The soil that Cam Grant professed that he would happily be buried in... Right: Black Vertosol derived from Walloon Sandstones. Note the interesting phenomenon of Mukkara gilgai (linear gilgai). Grey material is the mound profile with black depressions on either side.



Left: Sorting the wheat from the chaff. The Individual competition pit caused endless discussion/ debate amongst coaches/ judges/ students. Who would have guessed Black Chromosol??? Right: Celebratory special edition soil cake from Team South Australia. We can clearly see a deep A1 horizon with carbonates right to the surface, overlying a thin, solid B1K horizon (made of white chocolate) and a B2K horizon (made of cheese cake).

Thank you to everyone who made the 5th Australian Soil Judging Competition a resounding success!

The **Cotton Research and Development Corporation (CRDC)** has been delivering outcomes in cotton research, development and extension (RD&E) on behalf of Australia's cotton growers and the Australian Government for 27 years.

CRDC's role is to invest in RD&E on behalf of cotton growers and the government, with the outcomes boosting the productivity and profitability of our industry. RD&E, and its resulting innovations, are a key driving force behind the Australian cotton industry's continued success.

In 2017-18, CRDC will invest \$22.4 million in RD&E, including approximately 200 research and development projects in collaboration with 76 research partners, across five key program areas: farmers, industry, customers, people and performance. Approximately 30 per cent of this investment is in the area of soil and water RD&E.

We are proud to support the National Soil Judging Competition.



Australian Government
Cotton Research and Development Corporation



Environmental & Social Consultants

Umwelt Environmental & Social Consultants is a proud supporter of the ongoing training and promotion for the responsible management of soil resources.

We understand the importance of earth sciences, the significance of high quality soil assessment and management for sustainable environmental management practices.

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SOIL SCIENCE AUSTRALIA



AUSTRALIAN SOIL JUDGING COMPETITION

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- Create better resources through recycling
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