



grass roots

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GURU'S OF GRASSLAND SCIENCE



Prof. NEIL M. TAINTON

Almost immediately after retiring from the Department of Grassland Science at Maritzburg I was asked by Dr. Ali Bacher, then CEO of the United Cricket Board of South Africa, if I would initiate a research programme on cricket pitches in this country. Even at our major grounds the pitches had deteriorated during the period of sports isolation in South Africa, and were now unable to handle the sudden and dramatic increase in playing pressure to levels beyond anything that had ever been experienced previously. The consequences of this were embarrassing, to say the least, especially when matches by touring international teams had to be called off on the first morning of the game because the pitches were deemed to be too dangerous to bat on.

Faced with an almost total lack of any background research in South Africa, I immediately set up a small team to look into the direction such a programme should take. To provide the base information we felt we would need, our first task was to examine the performance of each of our eleven Provincial and TEST match pitches. Here we attempted to link the characteristics of bounce, pace off the pitch, consistency and ability to take spin or seam, with various characteristics of each of the pitches (profile bulk density, moisture profile, grass amount and condition, physical and chemical characteristics of the bulli clay, profile layering etc.). We also used subjective assessments by the Umpires and by Senior Professional players and, during this exercise, also undertook an analysis of the procedures used by the different groundsmen to prepare their pitches.

This programme gave us some extremely useful and sometimes surprising data. While it gave us a useful insight into some the technical aspects related to pitch performance, perhaps its most important immediate result was to pinpoint the complete lack of co-operation among the groundsmen at the different grounds. Most had not previously met and all were operating in their own small cocoons, with an almost total lack of cross-pollination. There was a clear reluctance by groundsmen to discuss their problems with their colleagues at other grounds in case, perhaps, they exposed their perceived ignorance or maybe they were just reluctant to share their 'secrets' with others. Some of the experienced groundsmen were doing a first class job, but even they would admit that there were lessons to be learnt, even from some of their less experienced colleagues. I suppose that as an agriculturalist, it came as no surprise to me that there was a considerable volume of information in fields such as soil chemistry, clay mineralogy, plant physiology, engineering (dealing with the basic principles of drainage and compaction) and straight agronomy, that was simply not being used.

Our first task, we felt, was to develop strong links between the groundsmen operating at the different grounds and to get them to open up to each other and discuss their problems frankly. Annual meetings were scheduled at which pitch matters were discussed, culminating in the formation, in 1999, of the South African Cricket Groundsmen's Association. Here we annually choose a number of technical and other topics on which we concentrate our discussions and so the process of learning continues year by year. The groundsmen now communicate freely with each other and so those who wish to, can learn from the experiences of others. Our second task was to develop a manual setting out what we know of the basics of pitch and outfield construction, maintenance and

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GURU'S OF GRASSLAND SCIENCE CONTD . . .

preparation for a match. This I did together with John Klug (a member of the committee from the start) and we presented our ideas in a series of seminars which we ran throughout the country. At the request of the groundsmen themselves, we eventually upgraded this manual and have recently had it published under the heading 'The cricket pitch and its outfield'.

Our research effort has, by and large, taken a back seat to the work we have been doing in disseminating the information that we have at hand, and in generally consulting at all levels of the game. This has included acting as 'trouble shooters' (including having to respond to the occasional 6 a.m call a Sunday morning from the Doc asking for reasons for the poor performance of a pitch at some far-off destination). In between times, we even get involved directly in pitch construction and feel we are getting quite good at it, but we do also undertake some research, particularly on fertility, drainage and compaction matters in these heavy clays with which we work.

Note from the editor

On behalf of the GSSA Council I would like to wish everybody a peaceful and Joyous Festive Season, and a very Happy New Year for 2003.

This is the third edition of the Grass Roots newsletter, and I trust that members are enjoying the new format. To keep the newsletter interesting and relevant we obviously need your input. Brief articles, or abstracts of articles on interesting topics are needed – where abstracts are printed the full text will be made available on the Web site – <http://www.gssa.co.za> the full newsletter is also available on the site in pdf format, so it can be easily down loaded and sent to friends, colleagues etc. News of happenings and forthcoming events can be sent through to the regional representatives (addresses in this issue) or directly to me at – peddieg@dunrs.kzntl.gov.za . Please keep the information flowing.

In this edition with have the first of series we are calling "Guru's of Grassland Science" – interviews or articles about past presidents and other notable members of the society. We kick off this series with Prof N M Tainton, following on the successful launch of the books *Veld management in South Africa* and *Pasture management in South Africa* Prof Tainton has taken on a new and very different task – read all about it in this issue.

Please pass any comment about the newsletter on to me so that we can continually improve the publication for you. Thanks.

Graham Peddie

Finally, two years ago I was appointed, together with Hilbert Smit, Curator of the SuperSport and Willowmoore Park grounds, to the ICC CWC 2003 Bacher committee looking into the upgrading of the 15 world cup grounds (including those at Bulawayo, Harare and Nairobi), as well as the 12 grounds located in Development areas that will be used for world cup warm-up matches.

So, what started as a part-time hobby, has turned into a full time one, and certainly an interesting one in which I now seem to spend more time in the air than on the ground. The proof of the pudding will, of course, be when the world cup comes along. And so, come 9th February 2003, I shall be squeezing both thumbs very hard.

(What has happened to the Wanders' wicket Prof? – Ed)

Attention all debit order members:

Under the new law we are no longer able to operate our debit order facility. All debit orders were therefore cancelled after payments were made in November 2001. We apologize for any inconvenience caused and urge members to pay by internet banking or direct banking. Our banking details are:

Grassland Society of southern Africa
Nedbank cheque account
Branch: Cascades 134325
Acc. No. 1343011299

Terry Everson, Treasurer

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Professional Advice on all aspects of Livestock Production.



LAUNCH OF FODDER LEGUME HANDBOOK

SANSOR proudly launched a handbook entitled "Fodder Legumes in the Summer Rainfall Areas of Southern Africa" during their Forage Divisional Committee Meeting held at Moolmanshoek in the Free State Province recently.

This colourful 100-page bilingual handbook contains condensed information on the origin, adaptability, description, management and production potential of each crop, with color photographs of the 35 species covered, as well as information on the process of inoculation and pelleting. The range of species covers well known crops like lucerne (*Medicago sativa*), as well as exotic and probably less known crops like Butterfly pea (*Clitoria ternatea*).

Legumes, as forage crops, are largely neglected by both the seed trade, as well as farmers in Southern Africa, especially in the summer rainfall areas. It was reasoned that the main contributing factor for this was insufficient information was available in this particular case. To rectify this shortfall, the SANSOR Forage Committee commissioned Dr. Chris Dannhauser, in collaboration with the seed trade, to compile a handbook in this regard, a task that he accomplished with great enthusiasm and zest. He was ably assisted by Bryan Mappedoram with translation in particular. The result was a truly representative and informative publication on fodder legumes adapted to the summer rainfall areas.

The handbook can be acquired at R50-00, excluding V.A.T., from the following seed companies exclusively: Advance Seed, Agricol Seed, Capstone Seed, Hygrotech Seed, McDonald Seeds, Pannar Seed and Starke Ayres. A limited number is also available at the SANSOR offices.



Pine Pienaar, Technical Manager of SANSOR, receives a copy of the Handbook from Dr Chris Dannhauser.

gssa.co.za

The society website is constantly undergoing revision and improvement. Members are encouraged to visit the site and update their details on line. In particular, please submit your expertise profiles.

Instructions:

Once you have loaded the website, please logon as follows:

Userlogon: "gssaadmin"

Password: "grass"

Once you have logged on, click on your membership category and look for your name, then view "more details" – this will show all the details that we have about you. If there are any details that are incorrect or that are not there (especially telephone, fax and e-mail), please submit your changes online or e-mail your changes to admin@gssa.co.za

New administrator required for GSSA

The GSSA requires the services of a new administrator.

The GSSA council would like to apologize to all members for any inconvenience caused by a change in administrator due to unforeseen circumstances. The council appeals to all members for patience while the matter is being attended to.

Persons wishing to tender for the contract of administrator of the GSSA can either contact the GSSA President, Prof Klaus Kellner, for a copy of the administrators for the terms of reference.

Tel. 018 – 299 2510, Fax. 018 – 299 2503

E-mail: plbkk@puknet.puk.ac.za

OR

Siegrun Kassier: Tel: 033 355 9187, Fax: 033 355 9423

E-mail: npsk@natal1.agric.za

TO BE APPOINTED BEFORE END JANUARY 2003

Closing date: 10 January 2003

MPUMALANGA PASTURE TOUR

- A GREAT SUCCESS -

The Pasture tour, which was recently held (November 2002) in Mpumalanga, was a great success. Planted pastures and livestock were viewed and discussed on a number of farms. The tour was organized by Anneke Engelbrecht of the Mpumalanga Department of Agriculture, Conservation and Environment, with support from the Grassland Society of Southern Africa (GSSA). Various farmers, researchers, consultants, as well as representatives of different agricultural companies from Gauteng, KwaZulu-Natal, the North West and Northern Provinces participated in the tour.

Ryegrass, tall fescue, cocksfoot, clovers, kikuyu, Eragrostis and forage cereal pasture systems, as well as their role in rearing livestock, were amongst the pastures viewed, debated and discussed at length.

While those on tour were very impressed with many of the pastures, Mr Willem Breytenbach, a fertilizer company representative, and several others on tour, felt that a major shortcoming on the majority of the farms visited is that soils from the lands used for the production of planted pastures are not analyzed regularly to determine optimum levels of fertilization.

Another interesting topic discussed was the need for farmers to familiarize themselves with the different cultivars of various pasture species in order to maximize production for their particular production systems.

The tall fescue pastures that were viewed were very disappointing. However, on closer inspection of recently planted tall fescue pastures, it was noted that they were severely infested with annual ryegrass plants. It was thus concluded that the tall fescue seed utilized to establish these pastures was in all probability severely contaminated with annual ryegrass seed. Given these poor results and the cost of this contaminated tall fescue seed it was felt that it would be preferable for farmers to purchase pure tall fescue seed to ensure the successful establishment of their tall fescue pastures.

Some of the farmers visited on tour in Mpumalanga expressed deep concern for the spread of *Echium plantagineum* – also referred to as “Patterson’s curse”, “Purple echium”, “Blue Echium” and “Franklin weed”. *Echium* seed is often spread from farm-to-farm by birds but mostly through “over the fence” seed sales, from farm to farm, of uncertified grass seed.



**At Lieb Niemand’s farm
– In a clover / fescue mixture**

Vlnr: – Gustav Trumpelman (Lydenburg Statevet),
Dave Goodenough (ARC) Cedara,
Louis Pretorius (Landbouweekblad),
Jan Meyer (ARC Roodeplaat),
Rudi van den Berg (Farm vision – Ermelo)
Dieter Jordaan (NW DACE)
Christo Visagie (Nooitgedacht –DACE),
Willem Labuschagne (Agricol)
Willem Breytenbach (Kynoch)

**Tussen Ohrigstad en Lydenburg
- Kikuyu kampies**

Vlnr: Lieb Niemand (boer),
Joanne Mann (Cedara) ,
Iona Stewart (Cedara),
Willem Labuschagne (Agricol),
Trevor Dugmore (Cedara)
Dave Goodenough (Cedara)





**OP Japie Celliers se plaas
– tussen Ermelo & Amsterdam – Lusern**

Vlur: – Erika van Zyl (KZN DA – Dundee), Doretter Muller (Nooitgedacht – MDACE), Boer 1,2,3 Johannes Kloppers (NWKA) Rudi van den Berg (Farmvision Ermelo)



**At Japie Celliers farm
- Typical Ermelo weather!**

Leon de Beer (Extension services MDACE) Kevin Kirkman (Univ. Natal) in a Sericea lespedeza pasture (arm mans lusern)

Measuring Pastures: Disc meters

*Richard Reynolds
reynoldsr@osca1.kzntl.gov.za*

Although as students, many researchers will have heard about or used a disc meter, a growing number of farmers are using this tool as a critical tool in their pasture management programs.

For those unfamiliar with the tool, it comprises of an aluminium disc attached to a measured pole, in a way that allows unrestricted movement up and down. When the pole is grounded the disc falls or remains on the pasture canopy to measure the height of the pasture.

At present two disc meters are in active use. The one traditionally associated with pastures research is the Falling Plate. Here the disc falls from a set height to rest on the pasture canopy, from which the pasture height is read on the pole. A great deal of important research has been conducted with this meter on both pasture and veld from the late 1970's to current day grazing trials.

Recently, a new disc meter has become available which allows the disc to rise from the base of the central pole, leaving the disc on the pasture canopy as the pole is grounded. The Rising Plate has been adopted by commercial dairy farmers because of its ease of use and extensive use in foreign countries (principally New Zealand and Australia).

Current evaluations of both disc meters at Cedara have shown the rising plate to be consistently less accurate



that the traditional falling plate. The extensive use of the rising plate by commercial pasture users has prompted a detailed investigation into the key characteristics of the rising plate to ensure that farmers are able to record the best possible results from this tool. It has been established that the disc mass is not the sole determining factor in disc meter accuracy, with current trials focusing on a combination of disc area and mass.

As the program develops, updates will be made available in this publication.

(Comment on the use of disc meters is invited from all with experience in the use of the disc meter, particularly the guys in the Eastern Cape where it seems a number of farmers are making use of disc meters. – Ed)

Grassland Research in Kwa-Zulu Natal

Richard Reynolds
reynoldsr@osca1.kzntl.gov.za

As one of the principal players in the discipline of Grassland research in South Africa, the KwaZulu Natal Department of Agriculture possesses an active and dynamic research program to compliment its broad range of clients. With research stations in five major regions across the province, the potential exists to tailor research programs to provide innovative, sustainable and successful solutions to specific local problems.

In the far north of the province, the department is served by the Makhathini Research Station (approximately 25km from Josini) on the Makhathini Flats. At present the station hosts a cover crop demonstration as well as Grazing Sorghum and Lucerne evaluation trials. In the future, the program will include a detailed evaluation of many commercially available tropical pasture cultivars.

Two hundred kilometres south (near Empangeni) lies the Owen Sitole Research Station. In addition to research the farm hosts the Owen Sitole College of Agriculture (sister college to Cedara). The Grassland Science research program at the station is dedicated to tropical pasture and legume research. A broad range of local and imported tropical pasture species are being evaluated, including Napier Fodder, *Brachiaria* spp and *Panicum maximum*. In addition Lucerne and several different grazing sorghum cultivars are to be evaluated. Future plans also include an evaluation of "cut and feed" vs pasture dairy programs and the evaluation of several different cover crop species for cane producers.

In the north western part of the province lies the Dundee Research Station. With an active Animal and Grassland Science research program the opportunity has been opened for several interesting sets of collaborative trials, including a small scale dairy trial. As with the previous station, cultivar evaluation is an important function with Grazing Sorghum, Lucerne and Napier fodder amongst the many species included in small plot trials. In addition, an interesting grazing trial is being run evaluating different veld managements systems (commercial and communal) with a combination of sheep and cattle.



Further south near Pietermaritzburg lies the most well known of the stations - Cedara. As the flagship station an extensive research program covering both tropical and temperate pastures exists, including Lucerne, Grazing sorghum, Chicory and Tropical Pasture cultivars. The station also hosts a number of production system trials including intensive goat production from pastures and fattening Nguni weaners from ryegrass. Further research effort is also being conducted on the effects of fertiliser on ryegrass. Finally an effort to optimise and evaluate the efficiency of the Rising plate disc meter on temperate pastures is centred here.

Finally, in southern KwaZulu-Natal lies the Kokstad Research Station. With a proud history of research this station hosts both major Lucerne and Grazing Sorghum cultivar evaluations. In addition several important veld trials have been established examining stocking rates, stocking ratios (cattle:sheep) and soil erosion. An interesting addition to the program is the investigation of Proteas as a value added crop.

Although by no means an exhaustive list of the research effort, it is clear that the discipline is active and thriving. In addition to servicing the research needs of the province, the research stations provide an important base from which specialised farmer support can be coordinated.

Supported by experienced, progressive leaders and young dynamic researchers it is safe to say that the future of the discipline in the province is rosy.

In future issues a more detailed review of the research at each of the stations will be provided, together with their visions for the future.

KZN News

Prestige Grazing Day - Beef Production from Sourveld
Wed 5 February 2003
Stratherne Farm – Dundee District, KZN
(From Dundee travel on Helpmekaar/Greytown road for approx. 20km – follow boards)

Provisional Programme

09:30 Registration & Tea
10:00 Welcome - Klaus Kelner (President GSSA)
10:10 On Beef Production – Alistair Patterson (SASAS / Stock Owners co-op)

10:40 A vet to speak on aspects of animal health in semi-intensive beef production
11:00 Veld Management – Kevin Kirkman
11:30 The 5-cell veld management strategy – as applied on Stratherne – Clive Buntting
12:00 Tour of the farm
13:00 Lunch
Registration cost R50-00, includes tea, lunch and book with full text of the talks.
RSVP by Mon 3 Feb 2003 : clive@dundeekznco.za (082 372 1100) or peddieg@dunrs.kzntl.gov.za (083 691 6630)

VIIth International Rangeland Congress

Registration

Members of the GSSA should have received the 2nd Announcement and registration form in the mail. Please use this form to register for the congress, as it has been specially adapted for South African delegates. Fax or mail the completed form to SB Conferences at Fax: (031) 3129441 or Private Bag X37, Greyville 4023. . If you have not received a form, please contact the Congress Organizer, Sue Dungan (031) 3032480.

Poster Abstracts

We will publish the submitted abstracts in Vol 20(2) of the African Journal of Range and Forage Science. Please continue to submit abstracts for poster papers, as we will only print this number of the journal in April next year. Abstracts for posters will be welcome until March. Those who wish to have their full manuscripts published in the proceedings should have already submitted them to the congress organizers.

Hospitality

The organizing committee of the VIIth IRC would like to invite all those GSSA members who attend the congress to take responsibility for hospitality of the overseas guests. Many visitors are expected, and we wish to make them especially welcome. I am looking for a volunteer to coordinate a special hospitality programme, which will make sure that international delegates are made to feel welcome by linking them to specific GSSA . Please contact me if you are interested.

GSSA Stand at VIIth IRC

The GSSA would also like to identify volunteers who are willing to assist with various society activities (e.g. sitting at the GSSA desk, assisting at the AGM) during the congress.

*Looking forward to seeing you in Durban.
Tony Palmer (t.palmer@ru.ac.za)*

MEMBERSHIP CATEGORY DEFINITIONS AND FEES:

Ordinary Member:

Annual subscription fee: R 225.00

Persons who are or were engaged in research, teaching, extension or administration in grassland science or in commerce involving grassland production, or who are concerned with the practical production or the practical application of grassland production, provided that an applicant holds at least a Bachelor's degree in an Agricultural or Biological science of a University recognised by the Council. A member can also be admitted to this status by the Council on the grounds of knowledge of, or contribution to the advancement of grassland science or production provided that the applicant is supported by a properly motivated recommendation from at least two Full Members of the Society.

Associate Member:

Annual subscription fee: R 200.00

Persons interested in Grassland practice. No qualification is required.

Professional Member:

Annual subscription fee: R 250.00

Members can make application to the Professional Affairs Committee to be accepted onto the professional register. These members pay a premium and are governed by the procedure of the functioning of the professional register of the Grassland Society of Southern Africa. Such members will be entitled to use the letters M.G.S.S.A. (Member of the Grassland Society of Southern Africa) in their signature, letters and correspondence.

Retired members:

Annual subscription fee: R 130.00

(65 years of age upwards) can apply for so-called "retired membership" which entitles the member to a reduced subscription fee.

Member Institutions:

Annual subscription fee: R 500.00

Suitable institutions or organisations accepted by the Council as Member Institutions. Two nominated representatives from each Member Institution shall be authorised to enjoy the privileges of Full Members.

Farmer Study Groups or Grassland Groups:

Annual subscription fee: R 225.00

Are admitted as Ordinary Members on the grounds of an interest in the advancement of a branch of grassland science or production provided the application is supported by a motivated recommendation from at least two full members of the society.

Family Members:

Annual subscription fee: R 340.00

Couples join as individual members, but only one copy of correspondence is sent out.

Honorary Member:

Awarded by the society to a person it wishes to honour.

Students

Bona fide students are encouraged to join as Associate Members. Students can make an application to Council for reduced membership fees. The student has to provide proof of being a full time bona fide student.

NOTE:

Honorary members, Ordinary members and Member Institutions are referred to as Full

ONS RESULTATE

spreek vanself

Lusern  Kultivars

Die volledige pakket. Dormansie-klasse vir hooi, asook beweiding

WEIDINGSTIPE
(SEMI-DORMANT: KLAS5)

PAN 4546 - Goeie alternatief vir SA Standaard

- Geskik vir gebiede met koue winters, asook die winterreënstreek.
 - Kan strawwe beweiding verdra.
- NOTA: Tref die nodige opblaas voorsorgmaatreëls wanneer lusern beweï word.

WEIDINGS-EN HOOI TIPE
(INTERMEDIÉRDORMANT: KLAS 7)

PAN 4764 - Uitstekende Hooiopbrengste

- Dubbeldoel kultivar, goed aangepas vir al die produksiestreke met koue winter.

HOOI TIPES
(NIE-DORMANT: KLAS 8)

PAN 4860, PAN 4821 EN EUREKA (NUUT)

- Wyd aangepas. Uitstaande stabiele hooiopbrengste.

(STERKNIE-DORMANT: KLAS 9)

PAN 4961 EN PAN 4965 - Spesialis Hooi Produseerders

- PAN 4961 presteer besonder goed in streke met matige winters in die warm droë areas (bv. Noord Kaap).
- PAN 4956 is baie goed aangepas vir al die warm produksiegebiede.



Breek Die Grense Van Prestasie

VIR INLIGTING KONTAK:

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