



# Tropical Forages

- Introduction**  
About Tropical Forages
- How to guide**  
Tips on using the forage selection tool
- Selection Tool**  
Launch the Lucid forage selection tool
- Fact Sheets**  
Access information on each species  
Search:

Features Available: 19

Select 'Desirability' options according to level of environmental concerns.

Desirability:  Intended forage use:  Latitude x Altitude:  Soil texture:  Soil fertility:  Soil pH:  Soil drainage:  Rainfall (mm, average annual):  Level of soil salinity:  Level of available soil NPK:  Family:  Like/crate:

Features Chosen: 1

Desirability:  131 forages with low or minimal environmental risk and/or utilization stock savings.

Forages Remaining: 131

- Amorpha fruticosa*
- Aeschynomene americana*
- Aeschynomene fabacea*
- Aeschynomene fraxinifera*
- Aeschynomene fraxinifera*

Forages Discarded: 41

- Acacia* spp.
- Aeschynomene fraxinifera*

41 forages discarded, 131 remaining

## Tropical Forages – an interactive selection tool 2020 report

Alliance



RESEARCH PROGRAM ON Livestock



Australian Government  
Australian Centre for International Agricultural Research



ILRI  
INTERNATIONAL LIVESTOCK RESEARCH INSTITUTE

giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH



Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung

# Tropical Forages – an interactive selection tool 2020 report

Stefan Burkart

José Luis Urrea-Benítez



**CRP:** Livestock

**Flagship:** FP3 – Feeds and Forages

**Cluster:** 3.1 – Diagnosis of feed constraints and opportunities and development of decision-support tools for prioritizing and targeting F&F interventions

**Activity:** P1682 – Activity 3.1.1: On-farm, large-scale and global feed assessments and prioritization approaches

**Deliverable:** D17224 – Report on maintenance and further development needs for the Tropical Forages Selection Tool

**Summary:**

In August 2020, the International Center for Tropical Agriculture (CIAT) and the International Livestock Research Institute (ILRI) released the second, revised edition of Tropical Forages: an interactive selection tool. Originally launched in 2005, the tool aims at promoting adoption of a large suite of grasses and legumes to be used as livestock feeds and for ecosystems services e.g. to help curb greenhouse gas emissions and reverse land degradation. Tropical Forages is available at [www.tropicalforages.info](http://www.tropicalforages.info). This report provides a brief overview on the tool, its development and release in 2020, user statistics, dissemination efforts and future maintenance and development needs.

**Acknowledgements:** This work was done as part of the CGIAR Research Program on Livestock. We thank all donors that globally support our work through their contributions to the CGIAR system. Both the original 2005 and the updating 2019 projects have been primarily funded by the Australian Centre for International Agricultural Research (ACIAR) with support from funds provided by the German Federal Ministry for Economic Cooperation and Development (BMZ); the UK Department for International Development (DFID) provided additional support funding for the original project. Tropical Forages is the result of the work of a small team of experienced tropical forage scientists building on a foundation of the same name created by a much larger group in a project terminating in 2005. CSIRO was the lead agency for that project, supported by the then QDPI, now DAF, in Queensland, Australia, as well as CIAT (now the Alliance of Bioversity International and CIAT) in Colombia and ILRI in Ethiopia. We would like to acknowledge the immense effort put in by that original project team, and the generosity of CSIRO in signing over the Intellectual Property Rights to CIAT so they could coordinate and maintain the new database, with the continued support of ILRI and the CGIAR Research Program on Livestock.

## **Tropical Forages – an interactive selection tool**

This report provides a brief overview of the 2020 achievements regarding the Tropical Forages interactive selection tool and highlights development and maintenance needs for 2021.

### **Part A: Description of the tool and its new features**

#### **New edition of Tropical Forages: an interactive selection tool released**

In August 2020, the International Center for Tropical Agriculture (CIAT) and the International Livestock Research Institute (ILRI) released the second, revised edition of *Tropical Forages: an interactive selection tool*. Originally launched in 2005, the tool aims at promoting adoption of a large suite of grasses and legumes to be used as livestock feeds and for ecosystems services e.g. to help curb greenhouse gas emissions and reverse land degradation. Tropical Forages, available at [www.tropicalforages.info](http://www.tropicalforages.info), has two major components. The first provides a concise but wide range of information on tropical forage species in factsheets, including morphology, distribution, agronomic management, nutritional value, or productive potential. These not only outline the benefits of these plants, but also threats they might pose if not appropriately selected or managed. The second is a selection tool, which allows users to find the kinds of forage plants that are likely to satisfy the needs of farmers in a particular context, i.e. plants that are adapted to the target environment and slot neatly into farming systems in the area. Between 2017 and 2020, a group of leading international tropical forages researchers and practitioners worked on updating the tool incorporating scientific advances and new knowledge on the one hand and at enhancing the tool with new technical features on the other hand. The new edition now counts with up-to-date information on 172 forages species (including new photos), accessible through downloadable and printable factsheets, and leads interested users to GENESYS and the ILRI and CIAT genebanks for access to basic seed. The revised selection tool now also includes desirability options according to the level of environmental concern of the included forages, ranging from no or minimal risk, over some risk, to some species whose forage benefit is outweighed by the environmental risk. This will help users in making the right selection. Selected forages are linked to the respective factsheets so that the user can access all relevant information as part of the selection process. Regarding technical features the website has a new design, incorporates automatic google translation and is fully compatible with any internet browser currently available. In order to reach more people in the global tropics including poor bandwidth, the selection tool can be downloaded for offline use and a mobile application was developed, which is accessible through both [Google Play](https://play.google.com/store/apps/details?id=com.ciat.tropicalforages) and Apple's [App Store](https://apps.apple.com/us/app/tropical-forages/id1444444444). Before its update, Tropical Forages had over 350,000 annual visits. The



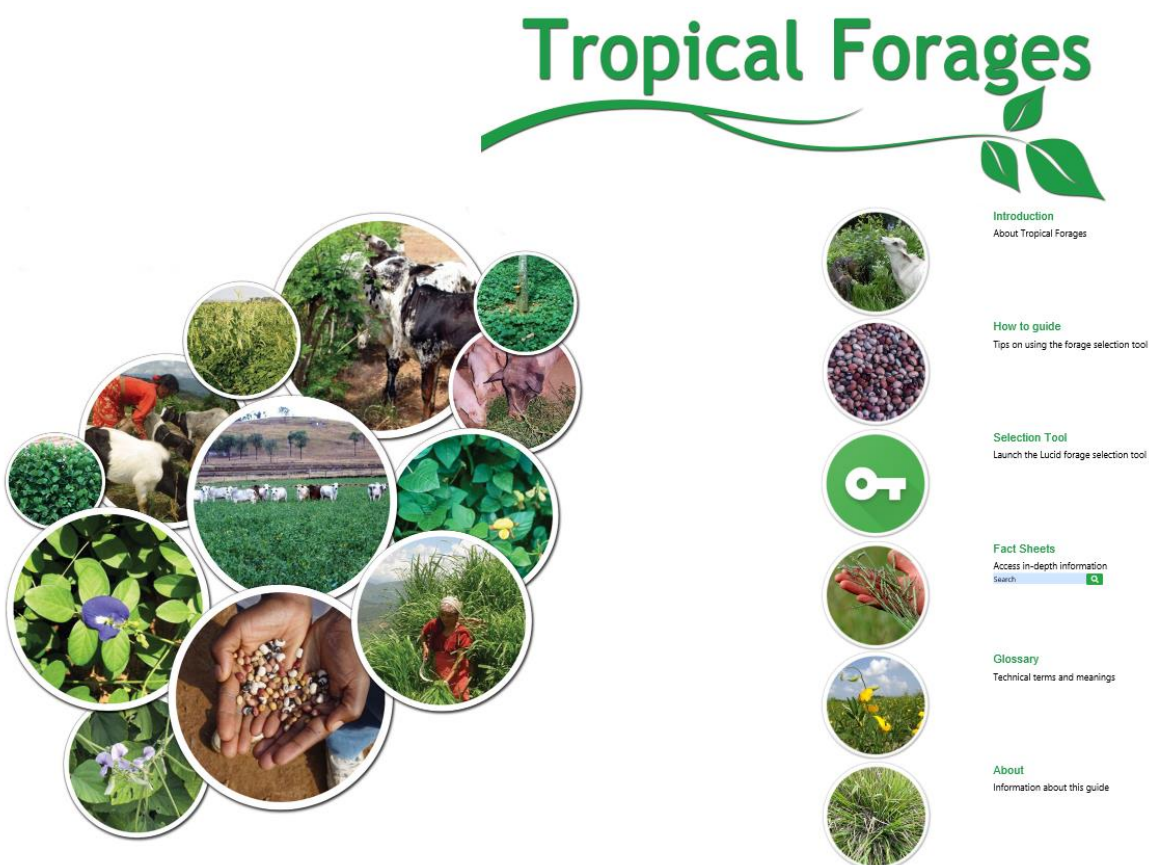
developers hope that, with the updated tool, more people, especially those living in rural areas, will be reached more easily and that this will be reflected in one million annual visits within the coming years.

**Reference and access to the tool:** Cook BG; Pengelly BC; Schultze-Kraft R; Taylor M; Burkart S; Cardoso Arango JA; González Guzmán JJ; Cox KG; Jones CS and Peters M. 2020. Tropical Forages: an interactive selection tool. 2nd and revised Edn. CIAT (International Center for Tropical Agriculture) and ILRI (International Livestock Research Institute). [www.tropicalforages.info](http://www.tropicalforages.info); [www.forrajestropicales.info](http://www.forrajestropicales.info). [Google Play](#) and [App Store](#). Digital ISBN 978958694234-8.

### Short overview on the tool

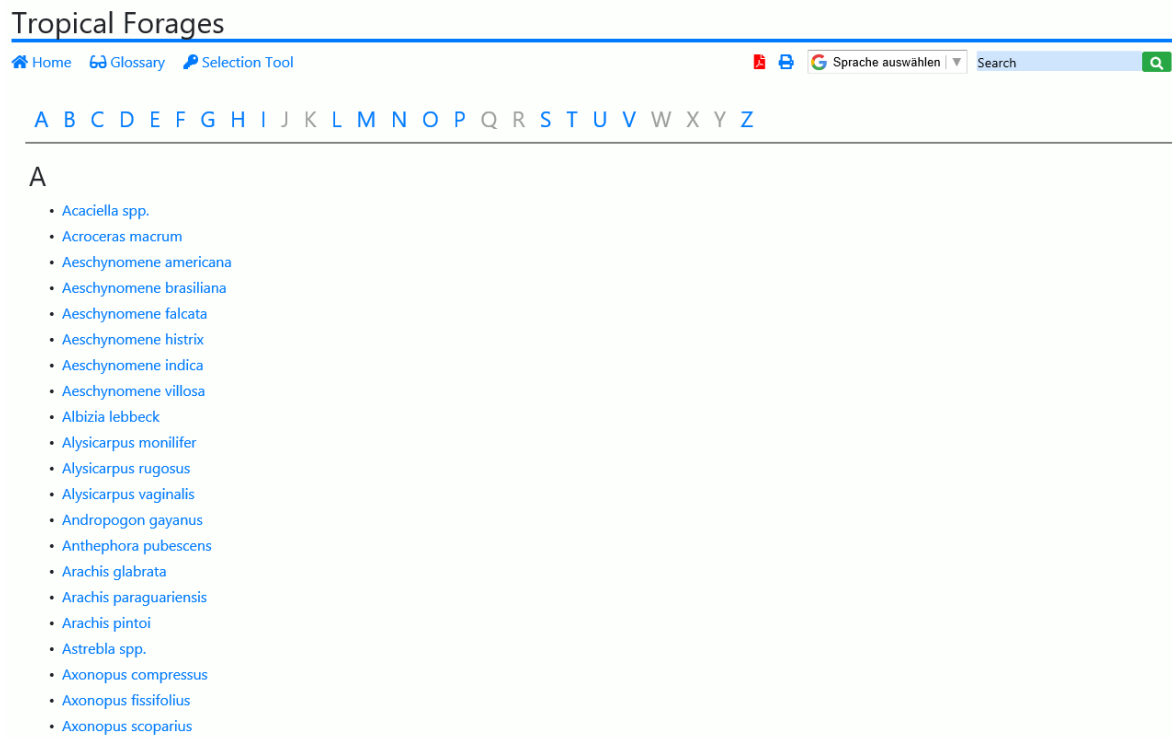
This section provides a short overview on the Tropical Forages tool.

**Figure 1:** The new homepage of Tropical Forages



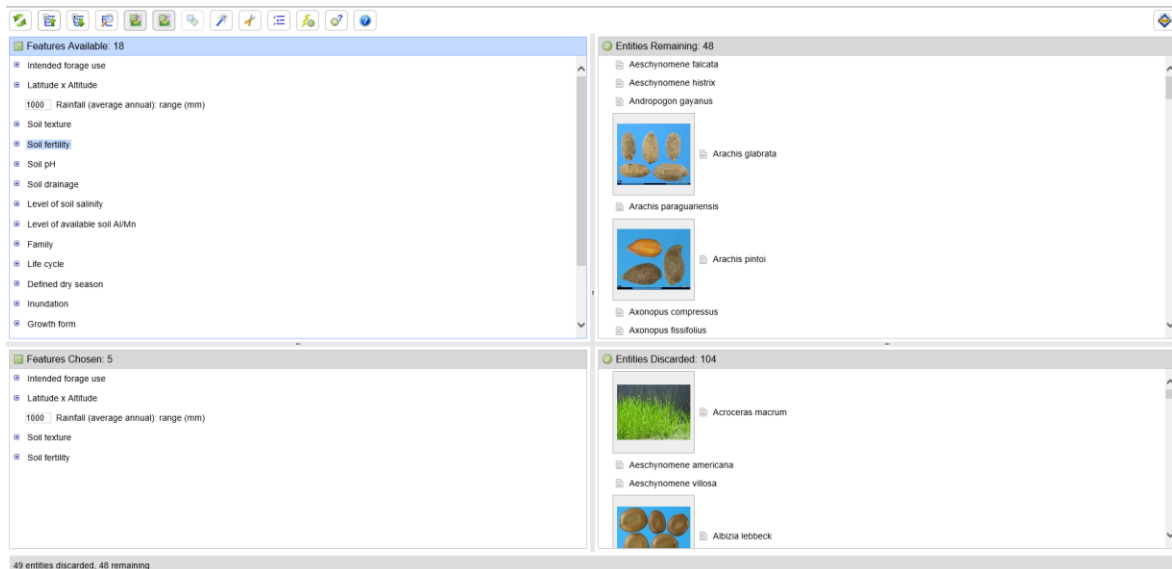
This screenshot gives a general idea on the tool's homepage design. Quick access is given to a short Introduction page, a How to guide page, the Selection Tool, the Fact Sheets, the Glossary and an About page.

**Figure 2:** The Factsheet page of Tropical Forages



The factsheet main page provides an alphabetical overview on all forage factsheets included in the tool. In the navigation line, shortcuts are provided to get to the homepage, the glossary and the selection tool. The pdf download and print buttons, the automatic translator and the search function are also available.

**Figure 3:** The Selection Tool of Tropical Forages



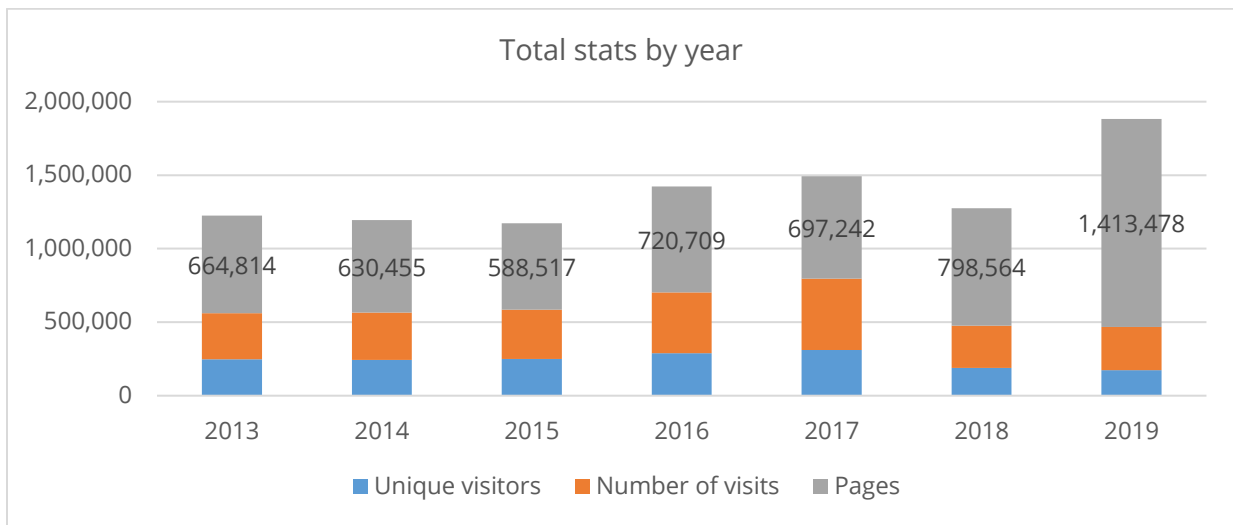
This image shows the selection tool with the available selection features (upper left box), the chosen features (lower left box), the remaining entities or chosen forages (upper right box) and the discarded forages (lower right box). The navigation list contains buttons for example for the “shortcut” or “why discarded” features described in chapter 7.

**Part B: User statistics for Tropical Forages 2013-2020**

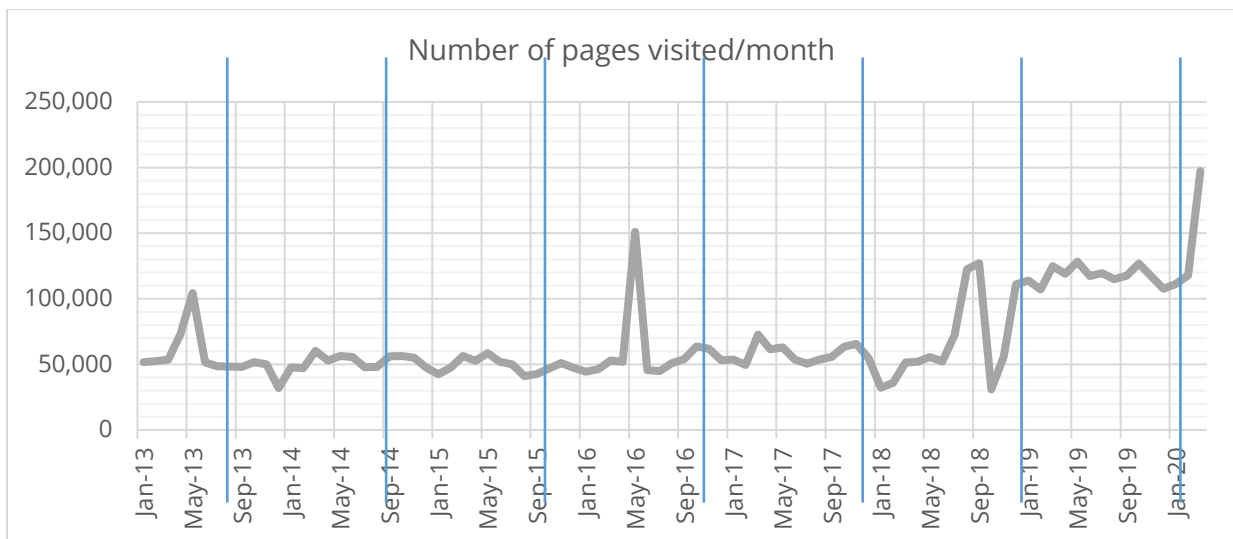
**User statistics prior to the release of the new version (2013-2020)**

Figures 4 and 5 show the user statistics for Tropical Forages prior to the release of its new version in 2020.

**Figure 4:** User stats of SoFT/Tropical Forages, 2013-19



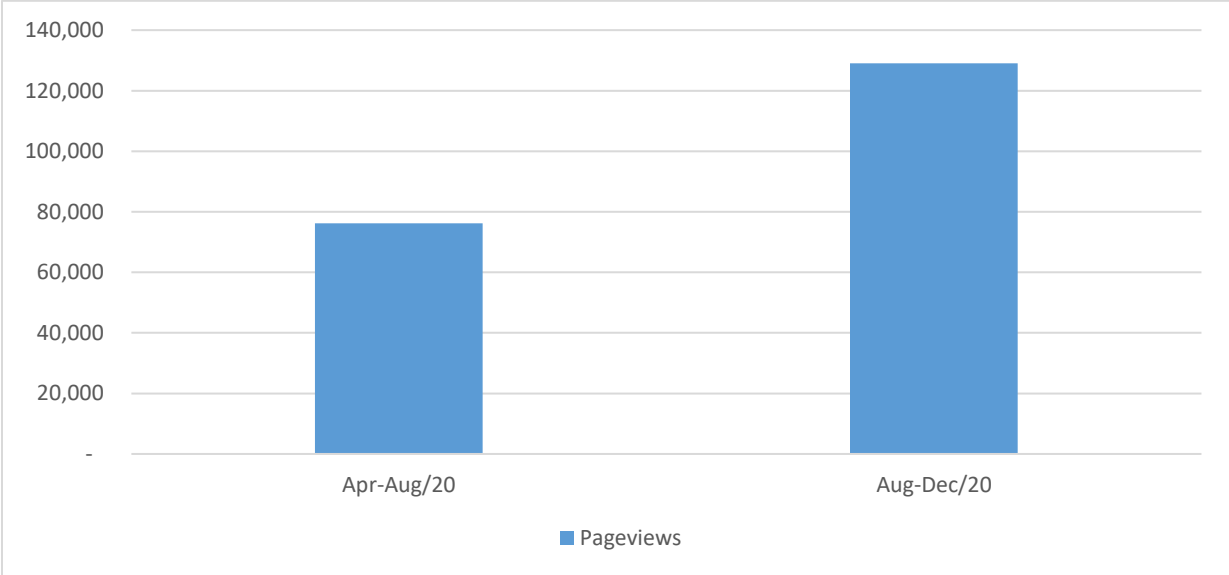
**Figure 5:** Number of pages visited/month of SoFT/Tropical Forages, 2013-19



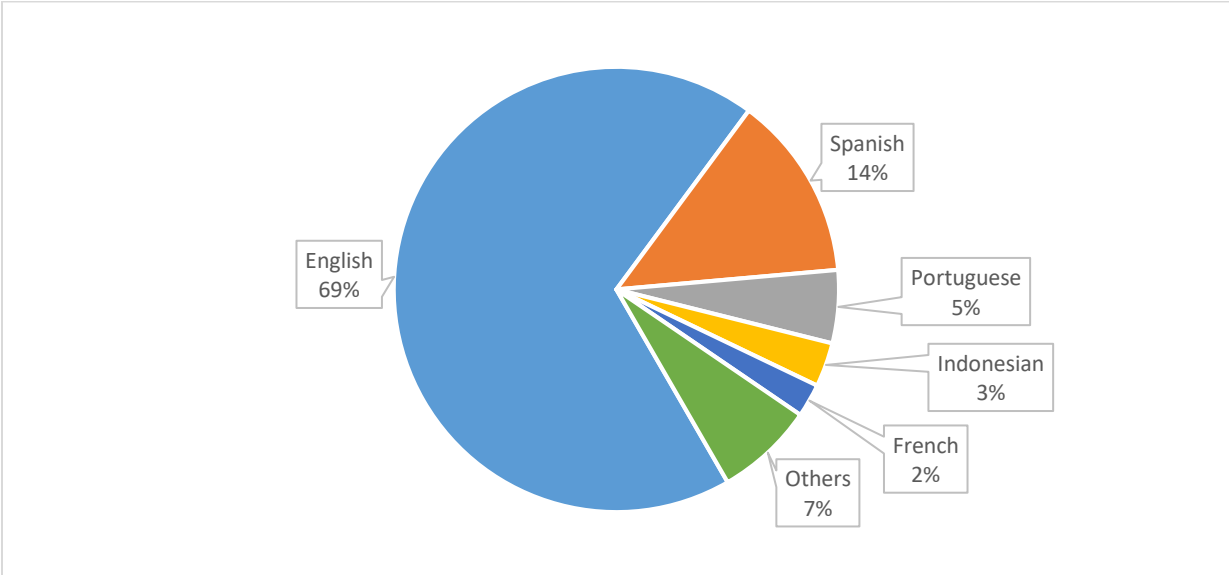
**User statistics after the release of the new version (2020)**

Figures 6 to 8 show the user statistics for the new version.

**Figure 6:** User stats for the same period (Apr-Aug / Aug-Dec 2020).

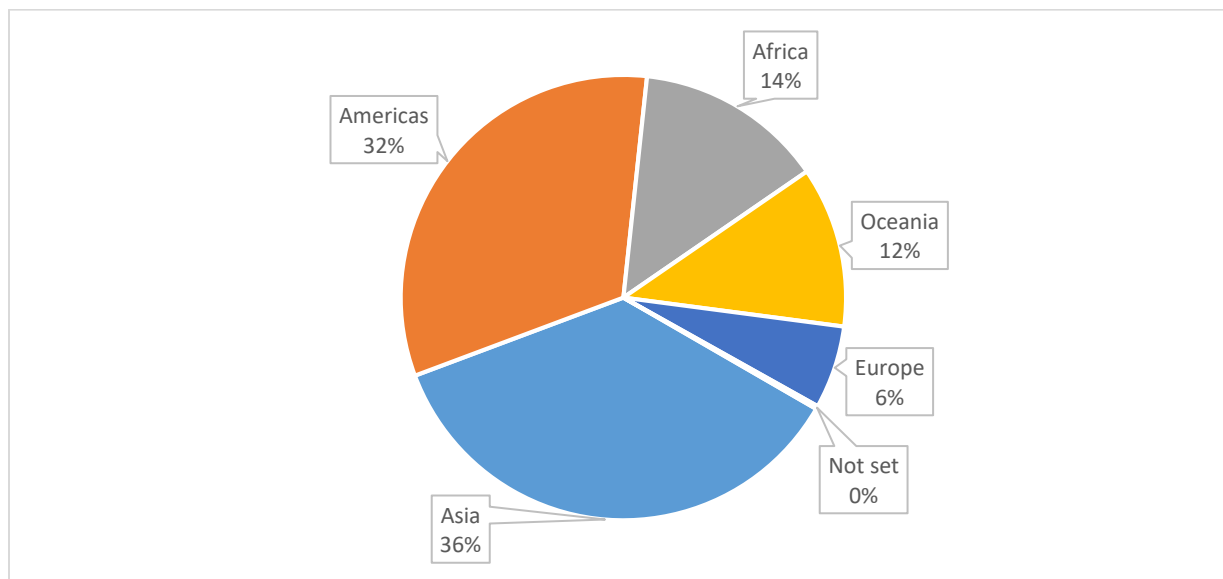


**Figure 7:** Main languages of the users (Aug-Dec/2020).





**Figure 8:** Location of the users by continent (Aug-Dec/2020)



## **Part C: Further development and maintenance needs**

### **Short outlook on the future**

Updating and maintaining a tool like Tropical Forages is a challenging task and involves time and costs. The project team is well aware of that and already thought about possible strategies. CIAT and ILRI will seek funding for providing continuous technical support and updates of the website and mobile application, since this has to be done roughly once a year. Regarding updates on the content of the tool, we feel confident to have an up-to-date product that will last again around 10 years before a major update will be necessary. Such major update however, will only be possible with another project of this dimension. The involved CIAT and ILRI researchers whenever required will do any smaller content updates.

### **Necessary updates in 2021**

Through the e-mail address ([Alliance-TropicalForages@cgiar.org](mailto:Alliance-TropicalForages@cgiar.org)) we receive feedback about the content and eventual issues of the tool. we are compiling the list of improvements detected and schedule updates with the provider (Identica Australia) to apply them. This also must be done in the mobile apps (Android and iOS).

The domain registration expires on April 16, 2025 and therefore must be renewed before; the SSL certificate was purchased in 2020 for 4 years. the Alliance's IT department provides general support for general technical issues regarding hacking attempts, server crash, backups, update of libraries/services, etc.

## Part D: Efforts for dissemination of Tropical Forages

Urrea, J.L., Peters, M., Burkart, S. (2020). ICTs in Agriculture: State of the Art Tools for Broader Access to Tropical Forage Knowledge. In: Tropentag 2020: Food and nutrition security and its resilience to global crises. <https://www.tropentag.de/2020/abstracts/posters/101.pdf>

### ICTS IN AGRICULTURE: STATE OF THE ART TOOLS FOR BROADER ACCESS TO TROPICAL FORAGE KNOWLEDGE

José Luis Urrea-Benítez<sup>1</sup>, Michael Peters<sup>2</sup>, Stefan Burkart<sup>1</sup>.

<sup>1</sup>International Center for Tropical Agriculture (CIAT), Tropical Forages Program, Cali, Colombia; <sup>2</sup>CIAT, Tropical Forages Program, Nairobi, Kenya. CONTACT: [JUrrea@ciat.or.cr](mailto:JUrrea@ciat.or.cr)

#### Context






- » Access to scientific knowledge has greatly increased with the development of information & communication technologies (ICT) and internet connectivity.
- » Bottlenecks exist, e.g. quality issues, affordability (e.g. restricted access to publications or download payments), or an increasing number of “predatory” publishers.
- » To provide high-quality tropical forage knowledge to a wide group of stakeholders, CSIRO, QDPIF, CIAT & ILRI developed two important information tools:

- 1) *Tropical Grasslands-Forrajés Tropicales* (TGFT), a journal that contains >30 years of scientific publications (Figure 1);
- 2) *Tropical Forages*, an interactive tool for selecting optimal forage species for local conditions (Figure 2).

#### Usage and impact

**Tropical Grasslands-Forrajés Tropicales**

- » Sustained growth since inception (2014), reaching more than 228,000 visits in 2019 alone. Main metrics (2019):

-  JCR Impact Factor: 0.7
-  Scopus CiteScore: 1.4
-  SCIMago Journal Rank: 0.37
-  i10-index: 43
-  RoMEO Green Journal (Gold Open Access status).

- » TGFT has published 297 papers (including 119 contributions to the *International Grassland Congress 2013* and 60 contributions to the *International Leucaena Conference 2018*).

#### Characteristics

**Tropical Grasslands-Forrajés Tropicales**

- » International online journal, open access (no subscription or publication fees), bilingual (English and Spanish), peer reviewed and guided by a 23-member Editorial Board.
- » Publishes papers reviewed by the world's leading tropical forage scientists and is indexed in the most recognized databases and journal directories.
- » Access to all papers published in the former journals *Tropical Grasslands* (1967–2010) and *Pasturas Tropicales* (1979–2007). TGFT also follows the publication series of the *Genetic Resources Communications* (1980–2000).

**Tropical Forages Selection Tool**

- » Detailed information on 172 forage species with potential for use in animal production - characterized by leading tropical forages researchers.
- » Information includes e.g. morphology, distribution, application, edaphoclimatic conditions, agronomic management, nutritional value, productive potential, promising accessions.
- » A set of 19 variables allows users to filter through the species to refine a shortlist for their specific local conditions.
- » Priceless information source for researchers, extension services or farmers seeking to improve animal productivity and sustainability.

#### Access

TGFT: [www.tropicalgrasslands.info](http://www.tropicalgrasslands.info)  
Tropicalforages: [www.tropicalforages.info](http://www.tropicalforages.info)




Figure 1. Screenshot of TGFT Online Journal.

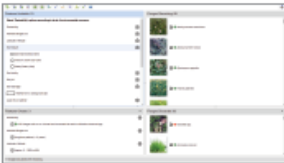


Figure 2. Screenshot of Tropical Forages.

#### Outlook

- » TGFT's goal is to become a global benchmark in forage research, supporting the publication of results from the global tropics by following rigorous scientific standards.
- » By constantly improving its metrics and reputation, the journal aims to lead to a global information exchange platform and to facilitate tropical forages networking with subsequent benefits for R&D.
- » *Tropical Forages* had a comprehensive update and was relaunched in 2020: Redesign, revision and addition of factsheets, update of the photo library and recalibration of the selection tool.
- » A key feature of the new edition is an update of the underlying technology platform to enable its distribution on mobile devices and the web without additional software.

**Acknowledgements**

The web-based research expansion of the CGIAR Research Program on Livestock and is supported by contributions to the CGIAR Trust Fund. CGIAR is a global research partnership for a food secure future. Its science is carried out by 15 Research Centers in close collaboration with hundreds of partners across the globe.


Tropical Grasslands-Forrajés Tropicales is currently published in association with the Chinese Academy of Tropical Agricultural Sciences (CATAS). Their contributions allow publication without any article or transaction processing charges (APC).

Both the 2006 and 2019 projects of Tropical Forages have been primarily funded by the Australian Centre for International Agricultural Research (ACIAR) with support from funds provided by the German Federal Ministry for Economic Cooperation and Development (BMZ) and the UK Department for International Development (DFID) provided additional support funding for the original project.

**References**

Schulze-Beth R, Winkler G, Clares R, Lumb J, Pears M, Vela C (eds). 2013. *Greening the way: the generation of tropical forage research: A new journal for the 21st Century*. In: Michalek DL, Miller GD, Badgley WD, Roodenrys EM, Gix. *Reinventing grasslands to sustain our communities: Proceedings of the 22nd International Grassland Congress*, Sydney, Australia, 16–19 September 2013. Australia: New South Wales Department of Primary Industries, p. 1982–1983. <http://www.csiro.au/2013/09/>

Cook RG, Penningly EC, Schulze-Beth R, Taylor M, Burkart S, Cardoso Arango JF, Gonzalez Quisen J, Cox AD, Jones CE and Peters M. 2020. Tropical Forages: an interactive selection tool. 3rd and revised edn. CIAT (International Center for Tropical Agriculture) and ILRI (International Livestock Research Institute). [www.tropicalforages.info](http://www.tropicalforages.info). Digital ISBN 9789282642414.



Poster presented at: **TROPENTAG 2020**

Urrea, J.L., Peters, M., Burkart, S. (2020). Tropical Forages: A powerful tool for selecting forages for diverse agroecological conditions. CGIAR Research Program on Livestock Annual Meeting. doi: [10.13140/RG.2.2.15989.19680](https://doi.org/10.13140/RG.2.2.15989.19680)



The tool provides information of >170 forage species, including grasses and legumes. Photo: N. Palmer/CIAT

### Context

- The development of ICTs strongly increased access to scientific knowledge. However, this also comes along with e.g. quality issues, affordability and accessibility.
- To provide stakeholders with high-quality tropical forage knowledge, various research institutes developed [tropicalforages.info](https://tropicalforages.info), a tool for selecting forage species for local conditions.
- The tool, available online, is a valuable information source for e.g. researchers, extension services or farmers seeking to improve animal productivity and sustainability

### Our innovative approach

- The tool provides information on >170 forage species with potential for use in animal production, identified and characterized by leading tropical forages researchers.
- A set of 17 variables allows users filtering through the species and refining a shortlist for their specific local conditions. Seed samples can be requested from the linked CGIAR genebanks.

### Outcomes

- It is among the most widely used (~250-480k annual visits) and cited (450 citations) tropical forages databases.
- >1,400,000 pages visited in 2019 (almost doubling compared to 2018).

### Future steps

- A major update will be relaunched in mid-2020, with content updates and notable technical improvements, such as a revamped interface responsive to multiple devices, a mobile application and automatic translation.
- Wide dissemination amongst different stakeholders to help decision making at farm and policy level.

### Partners

CSIRO, QDAF, CIAT, ILRI, with funds from ACIAR, BMZ/GIZ, and DFID



Urrea, J.L., Sotelo, M. (2020). Las TIC en la agricultura: herramientas de vanguardia para un acceso más amplio al conocimiento. In: Conversatorios sobre Ganadería Sostenible. Modulo 4: Extensión Agropecuaria (ExA 101). [facebook.com/watch/live/?v=301244767878050&t=4512](https://www.facebook.com/watch/live/?v=301244767878050&t=4512)

Varon Molina, A.P. (2020). Tropical Forages - A State-of-the-art Tool for Broader Access to Forage Knowledge across the Global Tropics. [cgiaar.sharepoint.com/sites/Bioversity\\_CIAT\\_Alliance/SitePages/A-State-of-the-art-Tool-for-Broader-Access-to-Forage-Knowledge-across-the-Global-Tropics.aspx](https://cgiaar.sharepoint.com/sites/Bioversity_CIAT_Alliance/SitePages/A-State-of-the-art-Tool-for-Broader-Access-to-Forage-Knowledge-across-the-Global-Tropics.aspx)



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# Tropical Forages

## A State-of-the-art Tool for Broader Access to Forage Knowledge across the Global Tropics

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Senior Analyst

The second edition of *Tropical Forages: an interactive selection tool* was officially launched on mid-August, with the purpose of promoting the adoption of a wide set of grass and leguminous species to be used as animal feed and provide ecosystem services, such as helping reduce greenhouse gas emissions and reversing land degradation in the tropics and sub-tropics.

The update of a tool originally launched in 2005 has brought along not just a detailed revision of the content, but also significant technical improvements, such as a new design, automated translation to 60 languages, and full compatibility with the most modern browsers. The reception of this new version has been outstanding, increasing the number of visits by 73% compared to the previous quarter. Having analyzed in detail the statistics delivered by Google Analytics, it is realized that users access the tool mainly through search engines (64.5%), followed by direct access writing the web address (32.7%), and the rest of users find it through references or social networks (2.8%).

At the geographical level, the statistics show that most users are in Asia (34.62%) and the Americas (33.88%). In second place, we find Africa (13.47%) and Oceania (12.41%). It should be stressed that the top 10 countries using the tool are mainly in the tropics and sub-tropics, such as India, the Philippines, Colombia, Indonesia, Brazil, South Africa, Australia, Kenya, and Mexico.

Consistent with the current trends, it is noteworthy that almost half of tool users access it through mobile devices (45.2%), this is because the tool interface adapts easily to any type of screen. Users with limited access to the internet have the possibility to access a mobile App for [Android](#) and [iOS](#), so they are able to use an offline version in their mobile devices.

The tool has also been presented at different events: in the first of them, within the framework of the 'Agricultural Extension' Module of the Conversations on Sustainable Livestock Production, where a [real-time demonstration](#) showed how to use the tool. Similarly, during the 2020 TropenTag Annual Conference, as one of the [state-of-the-art tools for a broader access to knowledge in agriculture](#).

*Tropical Forages: an interactive selection tool* is a joint effort among the Tropical Forages Program at the Alliance Bioversity-CIAT, ILRI, CSIRO Australia, with funding from ACIAR and co-financing from the German Federal Ministry for Economic Cooperation and Development (BMZ, its German initials).

A mediados del pasado mes de agosto se lanzó oficialmente la segunda edición de la herramienta *Tropical Forages: an interactive selection tool*, con el objetivo de promover la adopción de un amplio conjunto de gramíneas y leguminosas para su uso en la alimentación animal y proveer servicios ecosistémicos, como ayudar a reducir las emisiones de gases de efecto invernadero y revertir la degradación de la tierra en los trópicos y subtrópicos.

Esta actualización de la herramienta originalmente lanzada en el 2005, trajo consigo no solo una detallada revisión del contenido, sino también notables mejoras técnicas como un nuevo diseño, traducción automática a más de 60 idiomas y completa compatibilidad con los navegadores de internet más modernos. La acogida de esta nueva versión ha sido sobresaliente, aumentando el número de visitas en un 73%, comparado con el trimestre anterior. Analizando en detalle por las estadísticas ofrecidas por *Google Analytics*, se destaca que la gran mayoría de usuarios accede a la herramienta a través de motores de búsqueda (64.5%), seguido del acceso directo escribiendo la dirección web (32.7%) y el resto de usuarios llega a través de referencias o redes sociales (2.8%).

A nivel geográfico, las estadísticas muestran que la mayoría de usuarios provienen de Asia (34.62%) y del continente americano (33.88%). En segundo renglón se encuentran África (13.47%) y Oceanía (12.41%). Es de destacar que los 10 países que más utilizan la herramienta en su mayoría son de los trópicos y subtrópicos, tales como India, Filipinas, Colombia, Indonesia, Brasil, Suráfrica, Australia, Kenia y México.

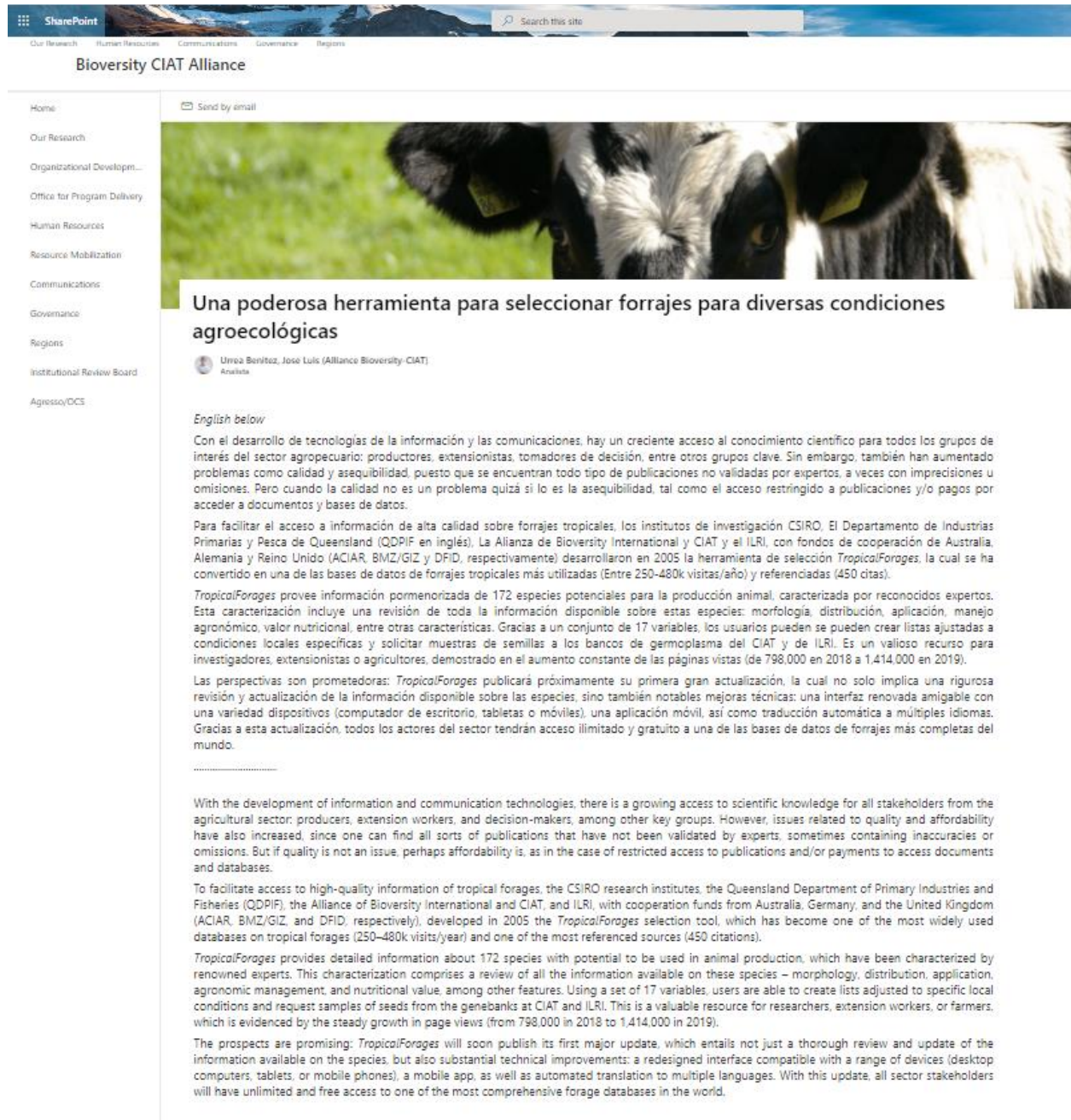
Consecuente con las tendencias actuales, se destaca también que casi la mitad de los usuarios de la herramienta acceden a ella a través de dispositivos móviles (45.2%), esto es gracias a que la interfaz de la herramienta se adapta con facilidad a todo tipo de pantallas. Los usuarios que tengan limitado acceso a internet tienen a su disposición una aplicación móvil para los sistemas [Android](#) y [iOS](#), de modo que puedan contar con una versión sin conexión en su dispositivo móvil.

La herramienta ha sido presentada también en diferentes eventos; el primero de ellos en el marco del Módulo 'Extensión Agropecuaria' de los Conversatorios sobre Ganadería Sostenible, donde además se hizo una [demostración en tiempo real](#) de cómo utilizar la herramienta. Igualmente, durante la conferencia anual TropenTag 2020, como una de las [herramientas de vanguardia para un acceso más amplio al conocimiento en la agricultura](#).

*Tropical Forages: an interactive selection tool* es un esfuerzo conjunto entre el Programa de Forrajes Tropicales de la Alianza Bioversity-CIAT, ILRI, CSIRO Australia y la financiación de ACIAR y cofinanciamiento del Ministerio Federal de Cooperación Económica y Desarrollo de Alemania (BMZ).



Urrea, J.L. (2020). Una poderosa herramienta para seleccionar forrajes para diversas condiciones agroecológicas. [ciar.sharepoint.com/sites/Bioversity\\_CIAT\\_Alliance/SitePages/Una-poderosa-herramienta-para-seleccionar-forrajes-para-diversas-condiciones-agroecol%C3%B3gicas.aspx](https://ciar.sharepoint.com/sites/Bioversity_CIAT_Alliance/SitePages/Una-poderosa-herramienta-para-seleccionar-forrajes-para-diversas-condiciones-agroecol%C3%B3gicas.aspx)




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## Una poderosa herramienta para seleccionar forrajes para diversas condiciones agroecológicas

Urrea Benitez, Jose Luis (Alliance Bioversity CIAT)  
Analista

English below

Con el desarrollo de tecnologías de la información y las comunicaciones, hay un creciente acceso al conocimiento científico para todos los grupos de interés del sector agropecuario: productores, extensionistas, tomadores de decisión, entre otros grupos clave. Sin embargo, también han aumentado problemas como calidad y asequibilidad, puesto que se encuentran todo tipo de publicaciones no validadas por expertos, a veces con imprecisiones u omisiones. Pero cuando la calidad no es un problema quizá sí lo es la asequibilidad, tal como el acceso restringido a publicaciones y/o pagos por acceder a documentos y bases de datos.

Para facilitar el acceso a información de alta calidad sobre forrajes tropicales, los institutos de investigación CSIRO, El Departamento de Industrias Primarias y Pesca de Queensland (QDPIF en inglés), La Alianza de Bioversity International y CIAT y el ILRI, con fondos de cooperación de Australia, Alemania y Reino Unido (ACIAR, BMZ/GIZ y DFID, respectivamente) desarrollaron en 2005 la herramienta de selección *TropicalForages*, la cual se ha convertido en una de las bases de datos de forrajes tropicales más utilizadas (Entre 250-480k visitas/año) y referenciadas (450 citas).

*TropicalForages* provee información pormenorizada de 172 especies potenciales para la producción animal, caracterizada por reconocidos expertos. Esta caracterización incluye una revisión de toda la información disponible sobre estas especies: morfología, distribución, aplicación, manejo agronómico, valor nutricional, entre otras características. Gracias a un conjunto de 17 variables, los usuarios pueden se pueden crear listas ajustadas a condiciones locales específicas y solicitar muestras de semillas a los bancos de germoplasma del CIAT y de ILRI. Es un valioso recurso para investigadores, extensionistas o agricultores, demostrado en el aumento constante de las páginas vistas (de 798.000 en 2018 a 1.414.000 en 2019).

Las perspectivas son prometedoras: *TropicalForages* publicará próximamente su primera gran actualización, la cual no solo implica una rigurosa revisión y actualización de la información disponible sobre las especies, sino también notables mejoras técnicas: una interfaz renovada amigable con una variedad dispositivos (computador de escritorio, tabletas o móviles), una aplicación móvil, así como traducción automática a múltiples idiomas. Gracias a esta actualización, todos los actores del sector tendrán acceso ilimitado y gratuito a una de las bases de datos de forrajes más completas del mundo.

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With the development of information and communication technologies, there is a growing access to scientific knowledge for all stakeholders from the agricultural sector: producers, extension workers, and decision-makers, among other key groups. However, issues related to quality and affordability have also increased, since one can find all sorts of publications that have not been validated by experts, sometimes containing inaccuracies or omissions. But if quality is not an issue, perhaps affordability is, as in the case of restricted access to publications and/or payments to access documents and databases.

To facilitate access to high-quality information of tropical forages, the CSIRO research institutes, the Queensland Department of Primary Industries and Fisheries (QDPIF), the Alliance of Bioversity International and CIAT, and ILRI, with cooperation funds from Australia, Germany, and the United Kingdom (ACIAR, BMZ/GIZ, and DFID, respectively), developed in 2005 the *TropicalForages* selection tool, which has become one of the most widely used databases on tropical forages (250–480k visits/year) and one of the most referenced sources (450 citations).

*TropicalForages* provides detailed information about 172 species with potential to be used in animal production, which have been characterized by renowned experts. This characterization comprises a review of all the information available on these species – morphology, distribution, application, agronomic management, and nutritional value, among other features. Using a set of 17 variables, users are able to create lists adjusted to specific local conditions and request samples of seeds from the genebanks at CIAT and ILRI. This is a valuable resource for researchers, extension workers, or farmers, which is evidenced by the steady growth in page views (from 798,000 in 2018 to 1,414,000 in 2019).

The prospects are promising: *TropicalForages* will soon publish its first major update, which entails not just a thorough review and update of the information available on the species, but also substantial technical improvements: a redesigned interface compatible with a range of devices (desktop computers, tablets, or mobile phones), a mobile app, as well as automated translation to multiple languages. With this update, all sector stakeholders will have unlimited and free access to one of the most comprehensive forage databases in the world.

EchoCommunity (2020). Tropical Forages: An Interactive Selection Tool. <http://edn.link/tropicalforages>

The screenshot shows the EchoCommunity website interface. At the top left is the EchoCommunity logo. To the right are links for 'Contact Us' and 'Member Options'. A search bar contains the word 'Resources' and a search icon. Below the search bar is a navigation menu with categories: 'Plants & Seeds', 'By Publication', 'By Topic', 'By Language', 'By Region', 'Education and Events', and 'Research'. On the right side, there is a language selector set to 'English (en) | Change Language'.

## Tropical Forages: An Interactive Selection Tool

<http://www.tropicalforages.info/>

The Tropical Forages website is a collaborative effort between CSIRO Sustainable Ecosystems, Department of Primary Industries & Fisheries (Qld), Centro Internacional de Agricultura Tropical (CIAT) and the International Livestock Research Institute (ILRI).

The website is designed to enable agricultural researchers and extension workers to better select appropriate forage species for local conditions in the tropics and subtropics. The website's features include:

- A feature to help identify forage species suitable for different climates, soils, production systems and management via a selection tool built on LUCID™.
- Factsheets providing comprehensive information for almost 200 forage species with details of adaptation, uses and management of forage species, cultivars and elite accessions.
- Images of the plants and their use
- A search engine for a comprehensive database of scientific references with abstracts.

**Permanent Links**  
<http://edn.link/tropica>

**Tags**

- Tropical Forages
- Sustainable Ecosys...
- Appropriate Forage...
- Scientific References
- Selection Tool

**Regions**

- Asia

**Collections**

- Feed Options for Ruminants
- ECHO East Africa - Important Links
- Tropical Forage
- Green Manures and Cover Crops - GMCC
- Conservation Agriculture

**Conversations going on right now:**

- B** Looking for a source for **Desmodium in Malawi** (10) Brown\_Mtekela\_Mkanda
- Foliar Application of Fermented Plant Juice (FPJ)** (1) Michelle\_Boutell1
- E** **Sacha Inchi Nut Product** (4) ENGR\_PACIENTE\_DANDAN
- B** **Volunteer for USAID Farmer-to-Farmer Program (Global, Year-Round)** (2) Brown\_Mtekela\_Mkanda

ECHOcommunity Conversations

**SIGN IN**

Username

Burkart, S. (2019). Tropical Forages Database. In: Maass, B. and Pengelly, B.C. 2019. Forages for the Future. Issue 9 – August 2019, p.3 [tropicalgrasslands.info/index.php/tgft/pages/view/Newsletter9](http://tropicalgrasslands.info/index.php/tgft/pages/view/Newsletter9)

Pineda, S. (2019). The new version of Tropical Forages selection tool is almost done! Blog post by CIAT, February 21 2019. <https://blog.ciat.cgiar.org/the-new-version-of-tropical-forages-selection-tool-is-almost-done/>

Pengelly, B.C. and Cook, B.G. (2018). Updating the international database for tropical forage adaptation and use. In: Maass, B. and Pengelly, B.C. 2018. Forages for the Future. Issue 7 – June 2018, p.6 <http://tropicalgrasslands.info/index.php/tgft/pages/view/Newsletter7>





Alianza



Bioversity International y el Centro Internacional de Agricultura Tropical (CIAT) son parte de CGIAR, un consorcio mundial de investigación para un futuro sin hambre.  
Bioversity International es el nombre operativo del Instituto Internacional de Recursos Fitogenéticos (IPGRI)

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