**SECOND WORLD ALFALFA CONGRESS**

**NOVEMBER 11-14, 2018**

**CORDOBA, ARGENTINA**

**Organized by the National Institute for Agricultural Technology (INTA), Argentina**

**Co-sponsored by** US National Alfalfa & Forage Alliance (NAFA), China Grassland Association (CGA) and Commission Intersyndicale de Deshydrateurs Européens (CIDE)

**GENERAL OBJECTIVES**

* Promote updated international scientific exchange on alfalfa crop
* Discuss the main issues that affect alfalfa production worldwide
* Facilitate commercial exchange of alfalfa products among countries
* Contribute to improved understanding of alfalfa importance by the public at a global level
* Promote international cooperation for alfalfa research
* Become acquainted with the alfalfa production in Argentina

**CONGRESS STRUCTURE**

A three-day program, in which the first 2 days are devoted to scientific/technical presentations and the third to a field tour through alfalfa hay production farms and industrial plants (bales and pellets) located in Central Córdoba (about a 1-h drive from the congress venue). There will also be opportunities to hold private business meetings in reserved rooms within the convention center. All presentations will be in English with simultaneous translation to Spanish, French, Chinese and Italian. Since this will be a “green event”, printed material will be minimal, such as the general program and commercial information from the sponsors. Proceedings will be available in flash drivers and at the congress website. Detailed program information will also be available through cell phone applications. There will be two registration-fee scales: a) visitors (expected 350 people), ranging from US$ 500 (early-bird registration) to US$ 850 (on site); and b) residents (expected 400 people), ranging from U$S 290 (early-bird registration) to U$S 490 (on site). Registration fee includes entrance to sessions, proceedings, coffee breaks, lunch (3 days), banquet (one), translation and field tour. There will also be a special program for the attendees’ companions.

***GENERAL ORGANIZING COMMITTEE***

Chair: Daniel **Basigalup**

Members: Daniel **Putnam**, Ronald **Cornish**, Eric **Guillemot**, **Lu** Xinshi and Steve **Orloff**

***LOCAL ORGANIZING COMMITTEE*** *(INTA Manfredi)*

Daniel **Basigalup** (Chair), Ariel **Odorizzi,** Valeria **Arolfo** & María C. **Spada**

***SCIENTIFIC/TECHNICAL PROGRAM COMMITTEE***

Dan Putnam (US), Lu Xinshi (China), Christian Huyghe (France), Charlie Brummer (US), Paolo Annicchiarico (Italy) & Daniel Basigalup (Argentina)

***SESSION’S CHAIRS***

* **Session I**: **World Alfalfa Production and Demand**

 Chairs: Daniel **Basigalup** & **Lu** Xinshi

*Invited presentations (15 minutes each) on production/demand/trade/limitations from representatives of North America (US, Canada and Mexico), China/East Asia, Australia, Europe (France, Spain and Italy), Argentina and Middle East.*

* **Session II**: **Increasing Water Use Efficiency in Alfalfa Production**

 Chairs: Dan **Putnam** &

*Invited/Volunteer presentations (15 minutes each) on how to maximize alfalfa profitability under water-limiting conditions, to improve irrigation efficiency and to use saline/waste waters for irrigation.*

* **Session III**: **Abiotic stresses (drought, salinity and cold):**

 **Breeding and Field Management**

Chairs: Charlie **Brummer** and Paolo **Annicchiarico**

*Invited/Volunteer presentations (15 minutes each) by public and private sector representatives, focusing on current crop improvement research and recommended field management practices to enhance crop tolerance to stress.*

* **Session IV: Biotic stresses: insects, diseases and weeds**

 Chair: Steve **Orloff & …**

*Invited/Volunteer (15 minutes each) presentations on serious or newly detected problems throughout main producing countries*

* **Session V: GE Alfalfas**

Chairs: Federico **Trucco** & Mark **McCaslin**

*Part 1*: ***Genetic Innovations*** - *Two or three invited presentations (15 minutes each) on genetic innovations for the future of alfalfa.*

*Part 2:* ***¿GE or non.GE Alfalfas?*** *– Two invited (20 minutes each) presentations in favor and two invited (20 minutes each) presentations against the use of GE alfalfa. The objective is to promote a debate based on scientific information, discussing points like management of GMO and coexistence with conventional alfalfas, environmental impact, health issues, etc.*

* **Session VI**: **Breeding for alfalfa quality**

Chair: Don **Miller** & Mike **Peterson**

*Invited presentations (15 minutes each) on different approaches to improve forage quality (reduced lignin, multifoliolate leaves, delayed leaf senescence, lower bloat potential, condensed tannins, etc.)*

* **Session VII**: **Alfalfa Processing, New Uses and Export Market**

 Chair: Eric **Guillemot**

*Invited/Volunteer presentations (15 minutes each) on new uses of alfalfa, efficiency in dehydration processes, new harvesting and transporting equipment, packing, etc.*

* **Session VIII**: **Alfalfa-based Production Systems to Meet Economic and Environmental Challenges**

 Chair: Christian **Huyghe**

*Invited/Volunteer presentations (15 minutes each) on alfalfa-based production systems, environmental services provided by alfalfa, alfalfa and agroecology, reduction or mitigation of GHG production, etc.*

* **Poster Session**: *During days 1 and 2 of the meetings, there will be poster presentations on scientific and technological aspects of the alfalfa crop*

**FIELD TOUR**

Chair: Ariel **Odorizzi** // co-Chairs: Federico **Sánchez** & Gastón **Urrets-Zavalía**

*Visit to hay production fields and to industrial plants to produce large square bales and pellet in the area of Calchín (Córdoba), about 1-h drive from conference venue*

**PROPOSED PROGRAM**

* **November 11** (Sunday): accommodation and registration – Evening: a welcome cocktail for all committee members, sessions’ chairs, NAFA-CIDE-CGA-INTA representatives and authorities (about 60 people)
* **November 12** (Monday)

Morning**: Open Ceremony** and **Session I**

Afternoon: **Sessions II, III** and **IV**

* **November 13** (Tuesday)

Morning**: Sessions V and VI**

Afternoon: **Sessions VII** and **VIII**

Evening: **Banquet**

* **November 14** (Wednesday): Field Tour

**INTRODUCTORY INFORMATION**

With nearly 4 million ha, Argentina is at present one the largest alfalfa producers in the world. Approximately 80% of the total alfalfa area is cultivated under rain-fed conditions for dairy, beef and hay production in the Pampas Region, while the remaining 20% is devoted to hay and seed production under irrigation in the Northwestern, Western and Patagonia regions. During the 2014/15 growing season, about 1 million ha were cut for hay, an industry that is becoming increasingly important for both domestic and international markets. The country has large areas with very favorable environmental conditions for producing high alfalfa yields of very good quality. It has decades of experience and a great deal of knowledge on the crop, as well as very active breeding programs and quick access to updated technology. Overall, Argentina is likely the only country in the world that can easily increase the planting area of alfalfa in the near future for producing high quality alfalfa hay.

 Just in the Central-Eastern part of Córdoba Province, adjacent to the proposed location for the World Alfalfa Congress, there are about 40,000 ha devoted exclusively to the production of high quality alfalfa hay under rain-fed conditions. Average yields are 12-14 MT DM ha-1 year-1 (5.35 to 6.25 ton/A) under a 6-cut system. Several companies in the region produce and/or buy alfalfa for making large square bales (400 kg), re-compacted (800 kg) bales, and pellets. Bales are for both domestic use and for export, mostly to United Arab Emirates (UAE), Saudi Arabia (SA), and more recently China. Similarly, pellets are produced for the internal market as well as for export, primarily to Latin America. The incorporation of strategic, supplemental irrigation can be useful for increasing and stabilizing alfalfa yields in the rain-fed area. In addition, there is a company that is presently building a dehydration plant to stabilize quality. The proposed program for the World Alfalfa Congress includes a tour through this highly productive Córdoba area in order to enjoy the opportunity to take a direct look on the alfalfa hay production in Argentina and its great potential.

**第二届世界苜蓿大会**

**2018年11月11－14日**

**阿根廷科尔多瓦**

**（中译稿）**

**组织单位：阿根廷农牧业技术研究所（INTA）**

**合办单位：**美国苜蓿和饲草联盟（NAFA）、中国畜牧业协会草业分会（CGA）、欧盟干草协会（CIDE）

**总体目标**

* 促进国际苜蓿最新科学成果交流
* 讨论影响全球苜蓿生产关键问题
* 推进国家间苜蓿产品的商业交流
* 提高全球公众对苜蓿重要性了解
* 加强苜蓿研究的国际合作
* 熟悉阿根廷的苜蓿生产

**会议框架**

本次会议为期三天，第一、二天为科学/技术报告，第三天为实地考察，重点参观位于科尔多瓦市中心（离主会场约1小时车程）的苜蓿干草种植基地和加工厂（草捆和颗粒加工厂）。参会代表可在会议中心预订会议室举行私人商务会谈。报告语言为英语，并同步翻译成西班牙语、法语、中文和意大利语。本次会议将打造成“绿色会议”，除赞助商活动宣传和商业广告外，印刷材料很少。论文集将刻录成光盘发放，参会代表也可从会议网站上下载。详细会议信息还可通过手机应用程序获取。会议报名费分为二种，a) 外国代表（预计350人）: 报名费为500美元（提前报名）和850美元（现场报名）；b) 本国代表（预计400人）: 报名费为290美元（提前报名）和490美元（现场报名）。报名费含入场费、论文集、茶歇、午餐（3顿）、晚宴（1顿）、翻译和实地考察。与会者家属还可自行选择特殊观光项目。

***世界苜蓿大会委员会***

主席：丹尼尔•**巴斯戈路普**

成员：丹尼尔•**帕特南姆**，罗纳德•**科尼什**，埃里克•**吉尔摩特**，**卢**欣石，史蒂夫•**奥尔洛夫**

***阿根廷组委会***（阿根廷农牧业技术研究所曼弗雷迪农业实验站）

丹尼尔•**巴斯戈路普**（主席），阿列尔•**欧德瑞兹**，瓦莱里娅•**阿道夫**，玛丽亚•**斯帕达**

***科学/技术委员会***

丹尼尔•帕特南姆（美国），卢欣石（中国），克里斯蒂安•惠更斯（法国），查理•布鲁梅尔（美国），保罗•安妮齐亚里柯（意大利），丹尼尔•巴斯戈路普（阿根廷）

***分论坛主持***

* **论坛一：世界苜蓿生产和需求**

主持人：丹尼尔•**巴斯戈路普**和**卢**欣石

*特邀报告（每个报告15分钟），以生产/需求/局限为题材：北美（美国、加拿大、墨西哥），中国/东亚，澳大利亚，欧洲（法国、西班牙和意大利），阿根廷和中东。*

* **论坛二：提高苜蓿生产用水效率**

主持人：丹尼尔•**帕特南姆**&….

*特邀/自荐报告（每个报告15分钟），以如何在限水条件下最大化苜蓿利润率、提高灌溉效率、使用盐水/废水进行灌溉为题材。*

* **论坛三：非生物胁迫 (干旱、高盐、低温)**

**育种和田间管理**

主持人：查理•**布鲁梅尔**，保罗•**安妮齐亚里柯**

*特邀/自荐报告（每个报告15分钟），发言代表为国有和私营机构代表，着重介绍当前作物改良研究和推荐田间管理技术，以增强作物的耐受性。*

* **论坛四：生物胁迫 ：虫害、病害及杂草**

主持人：史蒂夫•**奥尔洛夫&…**

*特邀/自荐报告（每个报告15分钟），以严重影响苜蓿主要生产国或新发现的病虫害为题材。*

* **论坛五：转基因苜蓿**

主持人：费德里科•**特鲁科**马克•**麦卡斯林**

*第一场：****基因创新****——两到三个特邀报告（每个报告15分钟）以未来苜蓿基因创新为题材。*

*第二场：****转基因苜蓿或非转基因苜蓿？****——四个特邀报告，二个正方（支持转基因苜蓿），二个反方（反对转基因苜蓿），每个报告20分钟。*

*目的：以科学信息为基础，促进学术辩论，讨论与传统苜蓿共存下的转基因生物管理、转基因生物环境影响、转基因生物健康问题等话题。*

* **论坛六：优质苜蓿育种**

主持人：唐•**米勒** 迈克•**彼得森**

*特邀报告（每个报告15分钟），改善饲草质量方法（减少木质素，提高多叶株频率，延迟叶片衰老，降低腹胀可能性，浓缩单宁含量等）*

* **论坛七：苜蓿加工、新用途和出口市场**

    主持人：埃里克•**吉尔摩特**

*特邀/自荐报告（每个报告15分钟），以苜蓿新用途、脱水效率、新型收获和运输设备，包装等为题材。*

* **论坛八：建立苜蓿生产体系，以应对经济和环境挑战**

*主持人：克里斯蒂安•****惠更斯***

*特邀/自荐报告（每个报告15分钟），以苜蓿生产体系、苜蓿和农业生态环境服务、减少温室气体生产等为题材。*

* **海报展***：会议的第1天和第2天，安排有关于苜蓿科技方面的海报展示。*

**实地考察**

负责人：阿列尔•**欧德瑞兹**// 协同负责：费德里科•**桑切斯** ＆ 加斯东•**尤瑞特扎瓦丽雅**

*参观卡尔金（科尔多瓦）地区干草生产种植基地，大型方捆、小颗粒加工厂。参观地点距离主会场约1小时车程。*

**初步日程**

* **11月11日**（星期日）：入住和注册 – 晚上：各委员会成员、论坛主持人、阿根廷农牧业技术研究所（INTA）－欧盟干草协会（CIDE）－中国畜牧业协会草业分会（CGA）－美国苜蓿和饲草联盟（NAFA）代表以及政府官员鸡尾酒欢迎晚宴（约60人）
* **11月12日**（星期一）

上午：**开幕式**，**论坛一**

下午：**论坛二**、**三**、**四**

* 11月13日（星期二）

上午：**论坛五、六**

下午：**论坛七、八**

晚上：**晚宴**

* **11月14日**（星期三）：实地考察

**阿根廷苜蓿概况**

目前，阿根廷是世界上主要苜蓿生产国之一，苜蓿种植面积将近400万公顷。其中80％的地依靠天然降雨，可供潘帕斯高原地区的奶牛、牛肉和干草生产，其余20％的地位于阿根廷西北、西部和巴塔哥尼亚地区，依靠灌溉，是干草和种子生产区。干草生产对阿根廷国内和国际市场变得越来越重要。2014/15生长季，阿根廷共收割一百万公顷左右鲜草，用以生产干草。阿根廷面积广阔、环境优越，生产的苜蓿品质好、产量高。阿根廷拥有数十年的种植经验和丰富的作物知识，以及活跃的育种研发团队和快速获取前沿技术的能力。总之，在不久的将来，阿根廷是世界上能够迅速增加苜蓿种植面积，用于生产优质苜蓿干草唯一的国家。

在科尔多瓦省中东部地区，毗邻世界苜蓿大会拟订会址，有约4万公顷的土地，依靠天然降水生产优质苜蓿干草。每年刈割六茬，干物质可达到12-14 t/每公顷（5.35-6.25 t/ 英亩）。该地区有多家苜蓿生产和/或收购加工公司，生产大型方捆（重达400公斤，二次加压后为800公斤）和苜蓿颗粒。草捆既用于国内消费，也用于出口，出口国家主要有阿联酋（UAE）、沙特阿拉伯（SA）和新近增加的中国。苜蓿草颗粒同样供应国内外市场，主要出口到拉丁美洲。为有效提高和稳定降雨区的苜蓿产量，该地区还实施了补充灌溉战略。另外，本地区已有公司正在建造脱水设备厂，以保证苜蓿质量的稳定。组委会拟定该考察方案，是希望参观代表通过实地参观，了解科尔多瓦地区高产苜蓿种植基地，并进一步认识阿根廷苜蓿干草生产状况及其巨大的潜力。