



## Foreword

Enrico Biancardi · Robert T. Lewellen

Published online: 21 January 2011

Unlike most authors, who are initially reluctant to accept the publishers proposal (as it is quite always written in prefaces, introductions, forewords etc.), we were very honored with the request made by Dr. Rao some months ago. The charge was roughly speaking as follows: “Would you organize a special issue of Sugar Tech dealing with the more important aspects of sugar beet cultivation?”. Because the Journal is mainly dedicated to sugar cane, the aim of this special number was to bring nearer, or at least try to bring neared, people dealing with two crops that are extremely diverse but yield exactly the same product. The task was accepted notwithstanding the evident difficulties of putting together articles from at least 15 authors from around the world. Of course, in order to edit this special issue, the participation of the most knowledgeable sugar beet researchers was needed. The European and American specialists invited agreed without exception to write an article regarding their specific competences. In our opinion, it would be difficult to choose better or have a wider representation. Therefore, we hope to offer to the readers an updated overview of the current status and future perspectives of the sugar beet crop, as it was requested.

It is well known that the route of sugar beet, from seed until the refined sugar, has a precise division represented by the gates of the factory. People involved with sugar beet culture usually do not know what is going on after delivering the beets. The same happens among sugar beet researchers who do not know their colleagues involved in

sciences regarding processing, and conversely the processors often do not have any contacts with the agriculturists. Two distinctly separate worlds exist: one before and one after the gates of the beet factories. Surely, a similar situation occurs in the sugar cane environment. The differentiation between beet and cane people is even more separated, not only owing to the completely different crops and cultivated areas, but also due to the commercial competition, which initiated soon after the invention of sugar beet, around 210 years ago. The senior editor of these presentations has seen a sugar cane crop only once in his life, in Andalusia, Spain. It is well known that only in a few subtropical countries, such as Morocco, Egypt, and India, do beet and cane crops grow side by side and share a sugar factory.

The future of agriculture, both in industrialized countries and in developing ones, is becoming more and more difficult and complex. Traditions and behaviors surviving from the past could become detrimental in the next years. For example, historical competition between cane and beet should favor the diffusion of alternative and synthetic sweeteners. Expansion and acceptance of non-sucrose compounds after being developed by powerful chemical industries have found low resistance in the competing agricultural enterprises based on the same product, but which is much more fragmented and weak. In this possible occurrence, a sort of joint-venture representing the interests of cane- and beet- growers and processors could lead to a better protection of the common interests of both cultivations.

Other future mutual concerns and cane regard the shift toward more sustainable cropping systems, the controversial introduction of GM varieties, the development of bio-fuels, the hypothesized climatic changes, etc. And finally, it is uncertain what will happen in the next decade in the international sugar trade, where the European domestic

---

E. Biancardi (✉)  
Corso del Popolo 419, 45100 Rovigo, Italy  
e-mail: enrico.biancardi@alice.it

R. T. Lewellen  
USDA-ARS, 1636 East Alisal Street,  
Salinas, CA 93905, USA

protection measures will be completely removed and free trade mandates and agreements are implemented. Because the past up to the present may help guide future choices,

the authors in the following articles have tried to make interpretations to some pertinent concerns and questions.