For the first time under the aegis of the ISHS, the International Symposium on Carrot and other *Apiaceae* was held from 17-19 September 2014 in Angers (France). The symposium was organised by Agrocampus Ouest-IRHS (higher education and research organisation), Ctifl (interprofessional institute for applied research on fresh fruit and vegetables), and Carottes de France (French Carrot growers’ association), with the support of numerous sponsors in the private and public sectors.

The 540 participants, from 41 countries, came to share their expertise and know-how on a wide range of topics, including economics, growing techniques, genetics and breeding, biology and crop protection, seed technology, and product quality of carrot and other *Apiaceae* species.

More than 40 talks and 24 posters were presented. The partners and sponsors of the event displayed their products and services in 15 stands. This animated the hallways and allowed direct and fruitful discussions between participants.

There were two days of plenary, technical and scientific sessions. The themes of the plenary sessions were practices and stakes in the *Apiaceae* sectors, as well as product quality and value enhancement. Among the many papers, some of the more notable were:
- evolution of production in Europe and Japan;
- applying Life Cycle Analysis to carrot production;
- the diversity of consumers’ expectations, and their perception of carrot and carrot varieties (organoleptic characteristics);
- the diversity of the composition of the various *Apiaceae* (parsley, Arracacha roots);
- latest trends in breeding.

The genetic aspect represented an important part of the symposium. Breeding advancements made in Poland, the USA, Russia, Germany, Portugal, Tunisia, the UK and France were highlighted. The presentations called attention to the progress made in this field and especially:
- advances in the genome sequencing of carrot and new genotyping tools;
- studies on the control of anthocyanin and carotenoid pigment accumulation showing the genetic determinism and the regulating mechanisms of those compounds of interest;
- selection tools validated for carrot, such as the creation of lines using haploidy or markers to detect cultivated/wild cross-pollination;
- the special attention given to wild relatives of the species (better knowledge of kinships and new sources for resistance);
- the importance and stakes of prebreeding.

Several presentations addressed the appearance or resurgence of pests and diseases such as umbel browning and stem necrosis, which are detrimental to crops grown for seed, or the internal necrosis of carrot observed in the United Kingdom. More traditional pests and diseases also held a prominent place, for instance *Alternaria* on carrot and parsley. Innovative practices were noted to improve control of
pests and diseases, while limiting chemical crop protection. Regarding pests, attention focussed on the carrot fly *Psila rosae* – the main pest affecting this crop – with research results showing the influence of landscape structures on fly populations. As for growing techniques, fertilization was at the centre of several presentations on supervised phosphate supply and nitrates. On the third day, theme visits were organised in the morning (seed companies and production farms, laboratories specialising in research on plant health and product quality, experimentation in aromatic plant crops, etc.). In the afternoon, participants visited trials at the GEVES (Groupe d’Étude et de contrôle des Variétés Et des Semences) site in Brion. Several trials concerned plant material: diversity of the cultivated Apiaceae types, importance of the genetic diversity of wild and cultivated carrot; platform of commercial varieties of various carrot types. One trial showed how observations on resistance or susceptibility to *Alternaria dauci* are carried out in the framework of the official registration of carrot varieties. Other exhibits and demonstrations presented ways to optimise growing practices: supervised management of nitrogen supply using the PILazo® method, use of alternating break crops to reduce soil diseases and nematode populations, tillage, and harvesting machines. Two particularly appreciated workshops allowed participants to test sensory analysis techniques or to better identify various symptoms of pests and diseases. In one of the plenary sessions, Yves Desjardins, Board member of the ISHS, was given the opportunity to present the activities of the ISHS, in particular its policy of optimising the exploitation of knowledge. On behalf of the ISHS and the participants, he congratulated the organisers and presented them with the ISHS medal; the recipients were: Mathilde Briard (Agrocampus Ouest, Angers, France), Henri Pluvinage (Ctifl), and Vincent Schieber (Carottes de France). Furthermore, the meeting officialised the creation of the Working Group Carrot and Other Apiaceae within the Section Vegetables, Roots, Tubers, Edible Bulbs, Brassica, Asparagus. The Symposium was an occasion for intense discussions between researchers, experimenters and growers. The next edition of this key event for the Carrot and other Apiaceae community will take place in 2018. For more information: http://www.symposium-carrot-apiaceae2014.fr

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