

Austrian activities on the '*Candidatus Liberibacter solanacearum*' outbreak: host plant and vector monitoring around Innsbruck (Tyrol)

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First contact with the pathogen

Symptomatic carrot samples received in August 2014



- ☞ Samples from the Inn valley around Innsbruck
- ☞ Problem also in celery fields
- ☞ Awareness in Europe just started (first finding in carrots 2010 Finland, celery 2014 Spain). Vectors apparently different in North and South Europe
- ☞ Climatic situation in the Inn valley favourable for vegetables!
- ☞ Are solanaceous crops affected? What is the impact of the disease outbreak?

Conditions for cultivation of vegetables

- ☞ Warm „Föhn“ wind main direction N through the Wipp valley coming from S-Tyrol (IT)
- ☞ 60 different vegetables are cultivated on the alluvial deposits of the Inn
- ☞ One of the world highest vegetable production sites 630 m
- ☞ vegetables start to be planted mid of February



Impact on the Austrian carrot production?

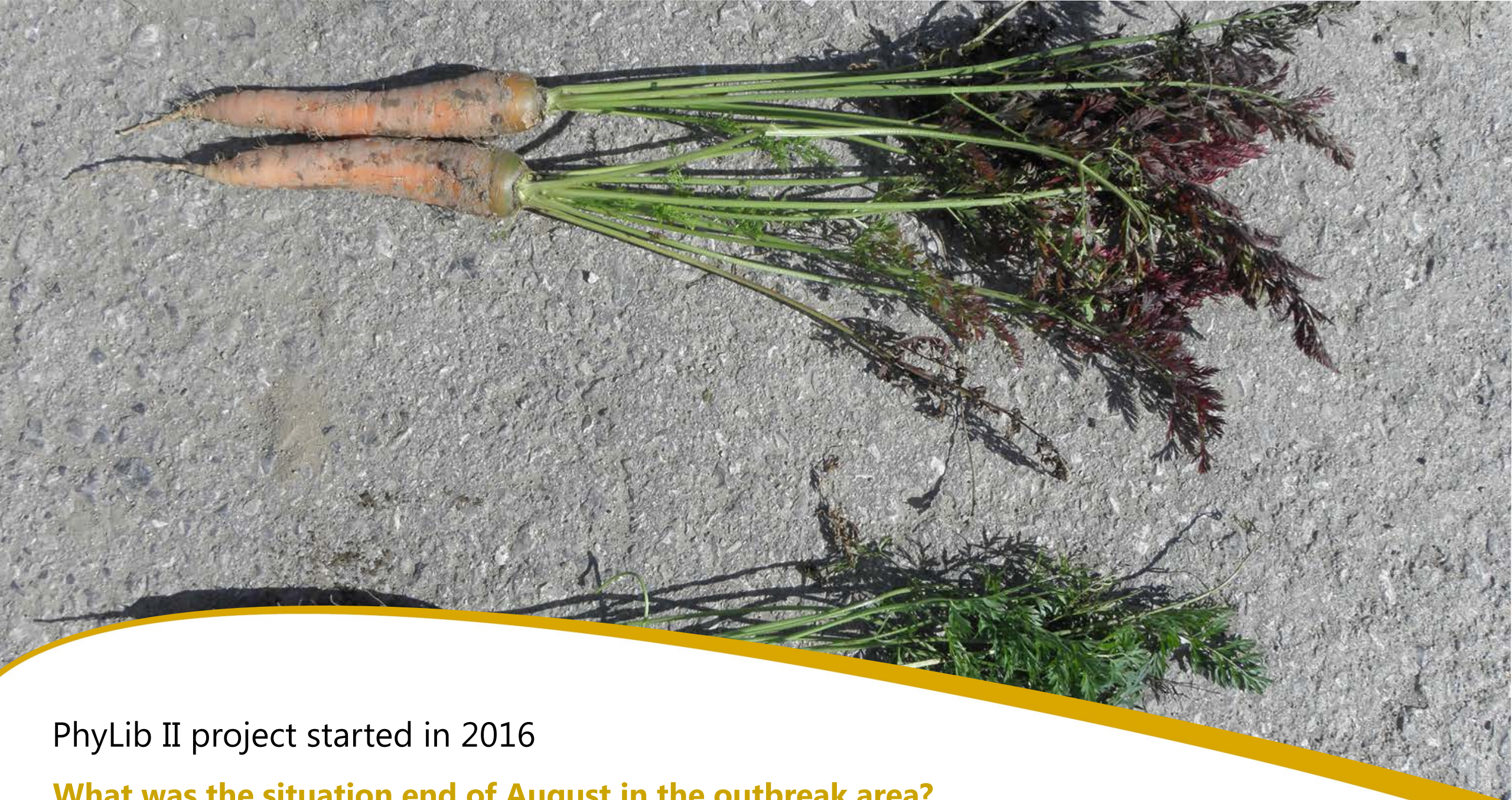
To date, rather low because Liberibacter reported only from one region

Yearly carrot production compared



**In the Inn Valley 3,9 % of the Austrian production
But important local vegetable supplier**

Compared to 90.000 T total carrot
and 700.000 T potato produced in AT



PhyLib II project started in 2016

What was the situation end of August in the outbreak area?









- ☞ leaves and root tips of carrots and celery were tested separately (all positive)
- ☞ All Solanaceae tested negative
- ☞ “carrot” haplotype C (according to 16S–23S rRNA intergenic spacer and the 23S rRNA)
- ☞ Vectors found: *Trioza apicalis* (End of July); all Clso +
- ☞ No vectors found on crops end of August

One cellery field from the surroundings of Vienna

Similar symptoms but Stolbur Phytoplasma (April 2017)



Plans for the future

2017 in the frame of the PhyLib II project



- ☞ test seeds before drilling
- ☞ test other umbeliferous crops like parsnip (*Pastinaca sativa*) and parsley (*Petroselinum crispum*)
- ☞ Proof of principle: find vectors on overwintering hosts (conifers growing on surrounding slopes)
- ☞ monitor CLso titer in the plants and vectors during vegetation with qPCR
- ☞ Search for other possible vectors: e.g. *Bactericera trigonica*? (present in E-Austria)

On-side detection and sampling

Using a specially trained and experienced dog



Thank you

Many thanks to Alfred Unmann from the Tirolean Chamber of Agriculture for the support in the field.





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