

Opportunities for Potato Late Blight DSS's in Argentina

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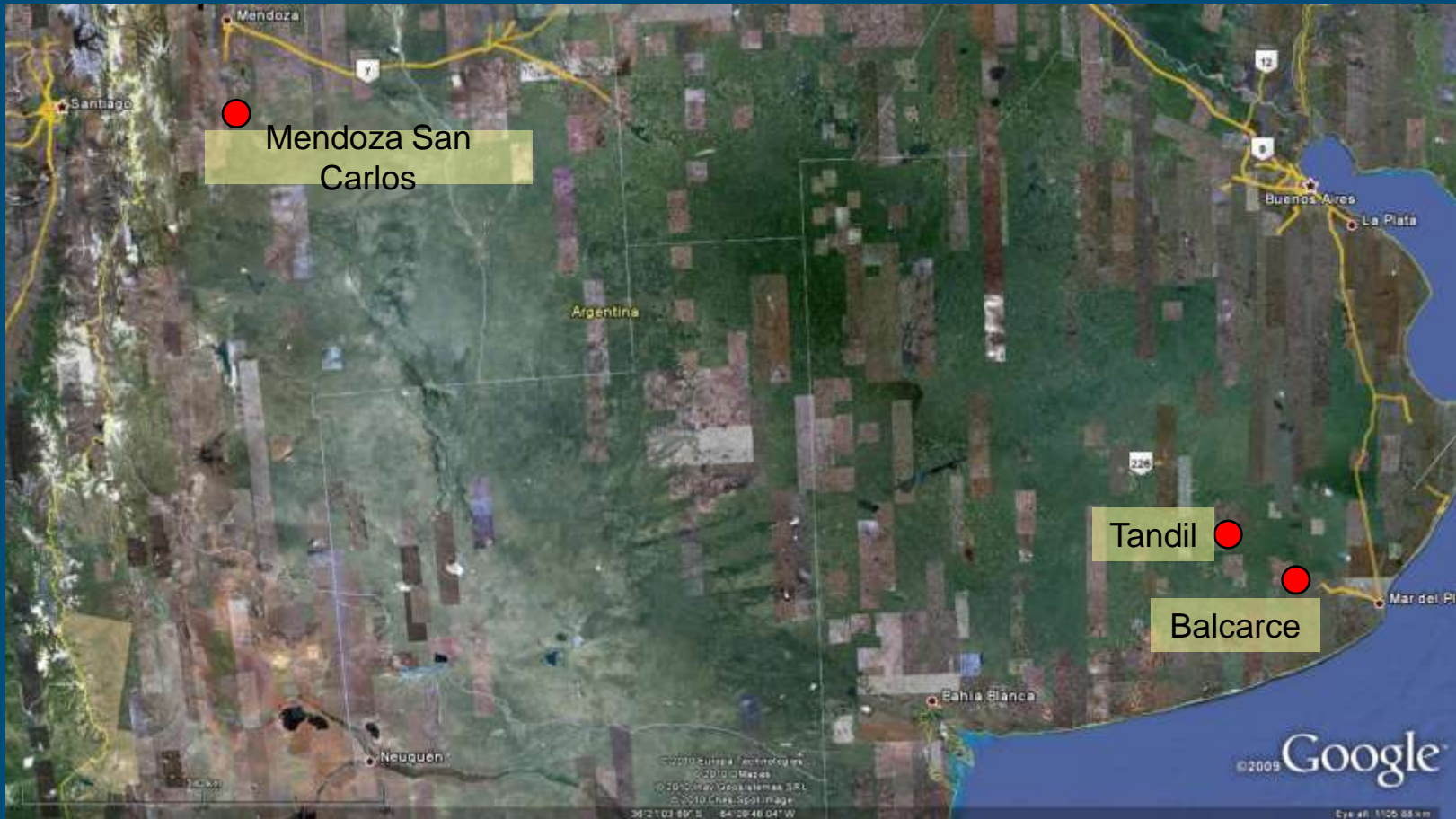


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Potatoes in Argentina

■ Argentina:

- 4300 km sub-tropics – sub antarctic
- 77.000 ha potato (NL: 157.000 ha)
- Total production: 1.8 mln tons → 23 t/ha (NL 51 t/ha)
- 1/3 production is processed, 70% exported
- Per capita consumption per year:
 - Arg: 40 kg potatoes (10% processed)
 - NL: 87 kg potatoes (50% processed)
- Production on a medium to low technical level with much labour involved, especially for the fresh market (<25% fully mechanized)
- Bulk storage almost non existent, ware potatoes stored on fields

Potatoes in Argentina

■ Production areas:

- Buenos aires (Processing/Fresh) (26000 ha; November - March/May)
- Cordoba (Fresh/Processing) (36000 ha; August – November)
- Mendoza (Fresh...) (7500 ha; November - March)
- Tucumán (Fresh) (6000 ha June – October)



Potatoes in Argentina

■ Varieties:

- Fresh market: Spunta

■ Processing:

- Russet Burbank
- Ranger Russet
- Innovator
- Shepody
- Santana
- Asterix
- ..

■ Processing Industry:

- McCain (French Fries, 1995)
- Fram Frites (French Fries (1996)
- PepsiCo (Frit-o-Lay Crisps, 1996)
- Los 5 Hispanics (Crips)

Fram Frites Mendoza (San Carlos)

■ Potato Farm: San Fili

- Founded 2007
- 350 ha potato (→ 2000 ha)
- 7 irrigated pivots of 50 ha
- Processing potatoes
- Attainable yield: ≥ 80 t/ha of high quality Potatoes
- 500 - 1000m elevation

Potatoes grown in irrigated pivots



San Fili Farm



San Fili farm



San Fili Farm



San Fili Farm



Irrigation at San Fili

- Approximately 10 mm/day
- Fertilizer is applied with irrigation water



Crop protection at San Fili

■ Main problems:

- Thrips
- Virus
- Seed potato quality
 - Mixtures
 - Produced as ware potatoes
 - Cut before planting
- Soil moisture content

■ Weekly sprays according to “MasterPlan” against:

- Thrips
- *P. infestans*
- *A. solani*

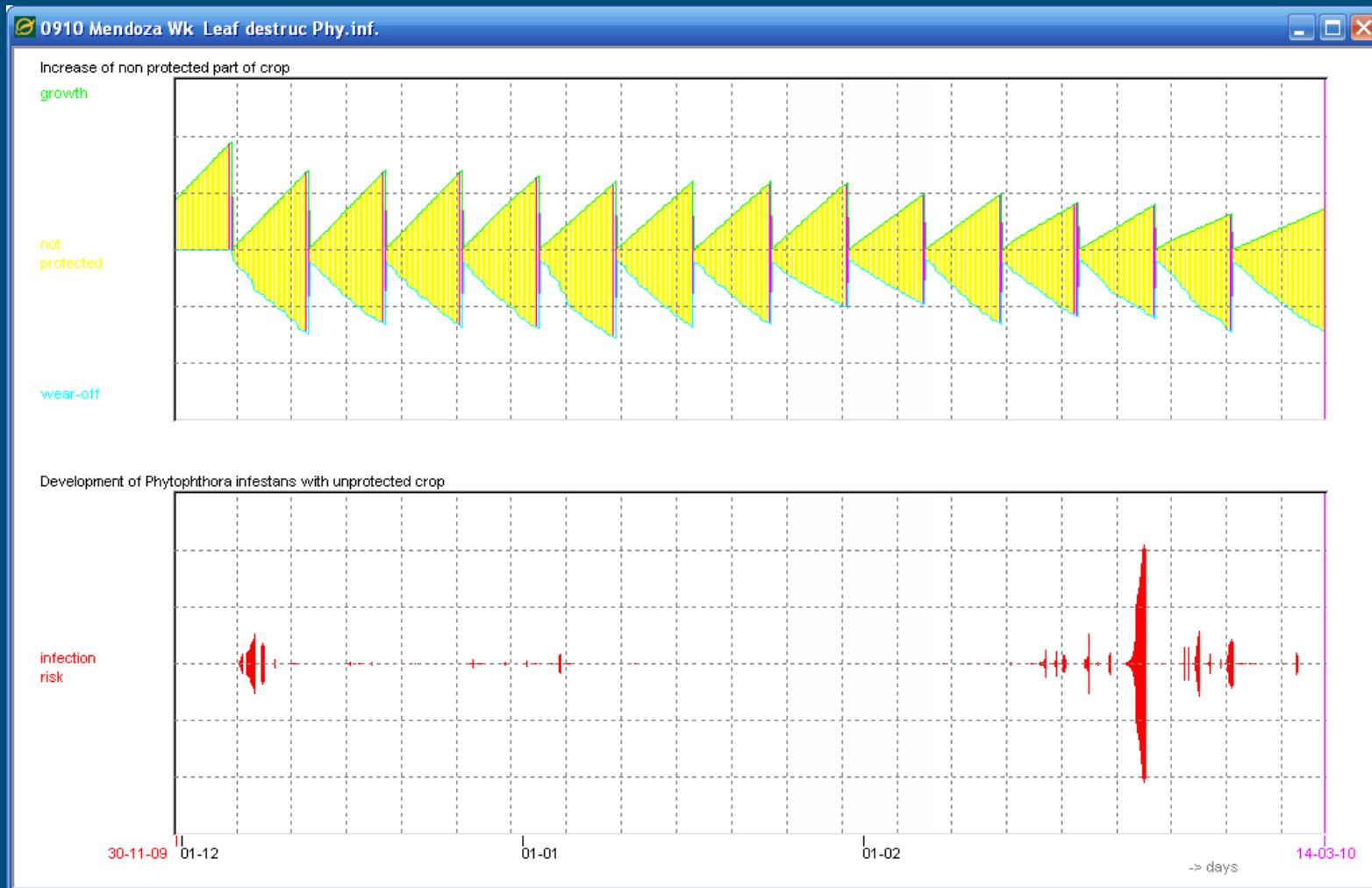


New developments

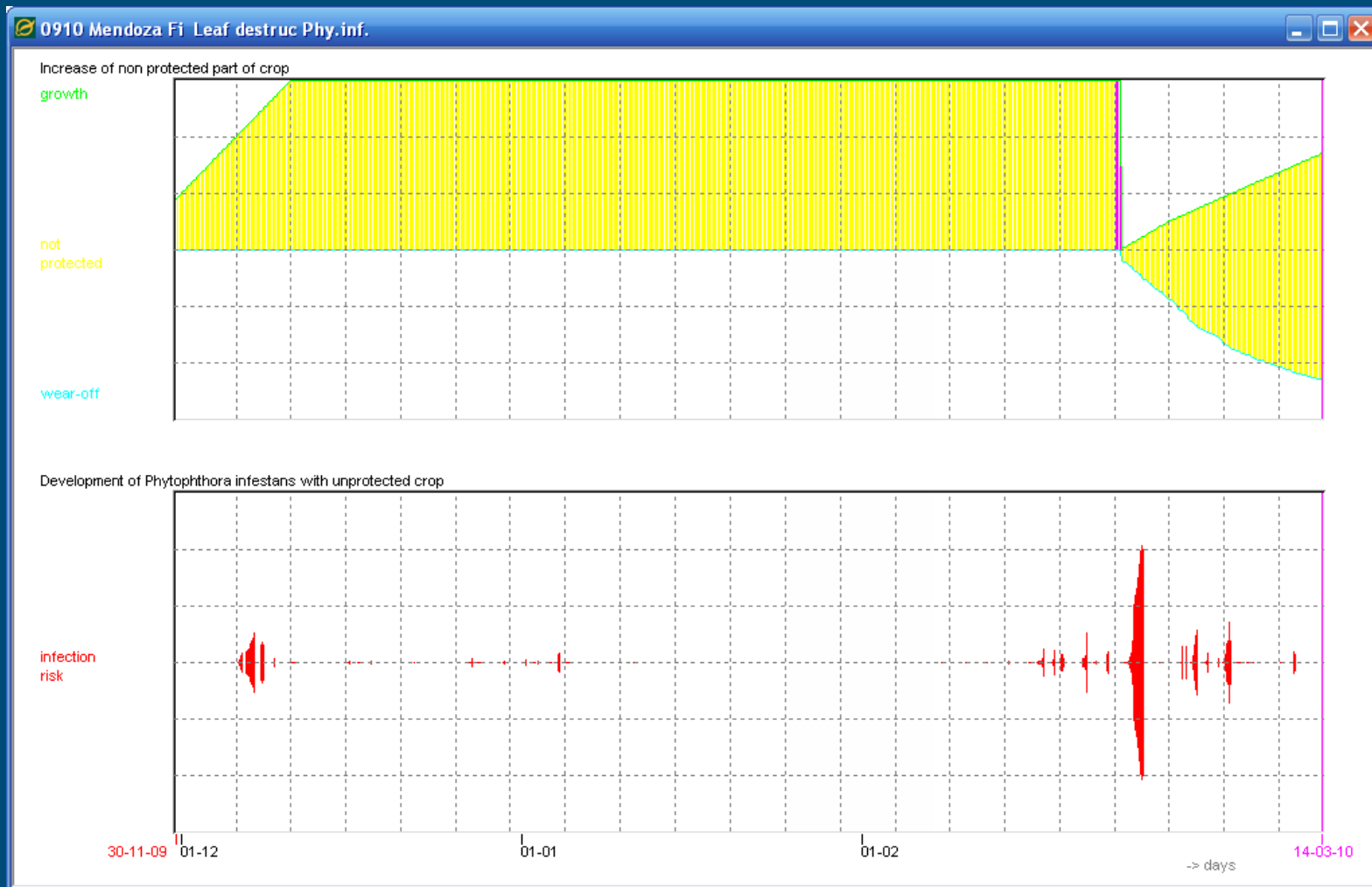
- Introduction of Dacom weather stations and PlantPlus to:
 - Control & optimize irrigation
 - Schedule fungicide sprays
 - Supervision & support by Dacom and PRI/PPO
 - Control strategy
 - Interpretation of weatherdata
 - Spray advice & choice of fungicides
 - Spray technology
 - Save around 7000 euro per unnecessary spray application ...



Plant Plus output for San Fili Farm; Weekly sprays



Plant Plus output for San Fili Farm; Optimum



Farm Frites Tandil

- Potato production on hired land
- 250 – 500 ha/farmer



Crop protection at Tandil

■ Main problems:

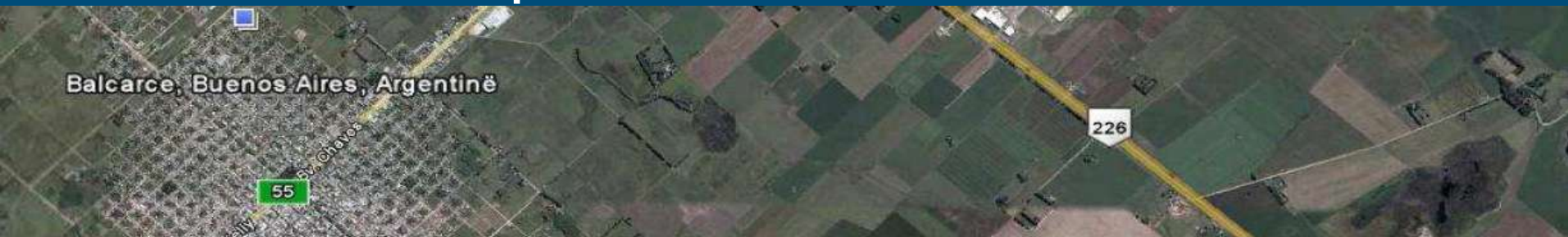
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Plant Plus output for Balcarce



Development of *Phytophthora infestans* with unprotected crop



Development of *Phytophthora infestans* with unprotected crop



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INTA & McCain Balcarce

- INTA: El Instituto Nacional de Tecnología Agropecuaria
 - 47 experimental stations
 - 260 extension units
 - 15 research institutes
- Balcarce

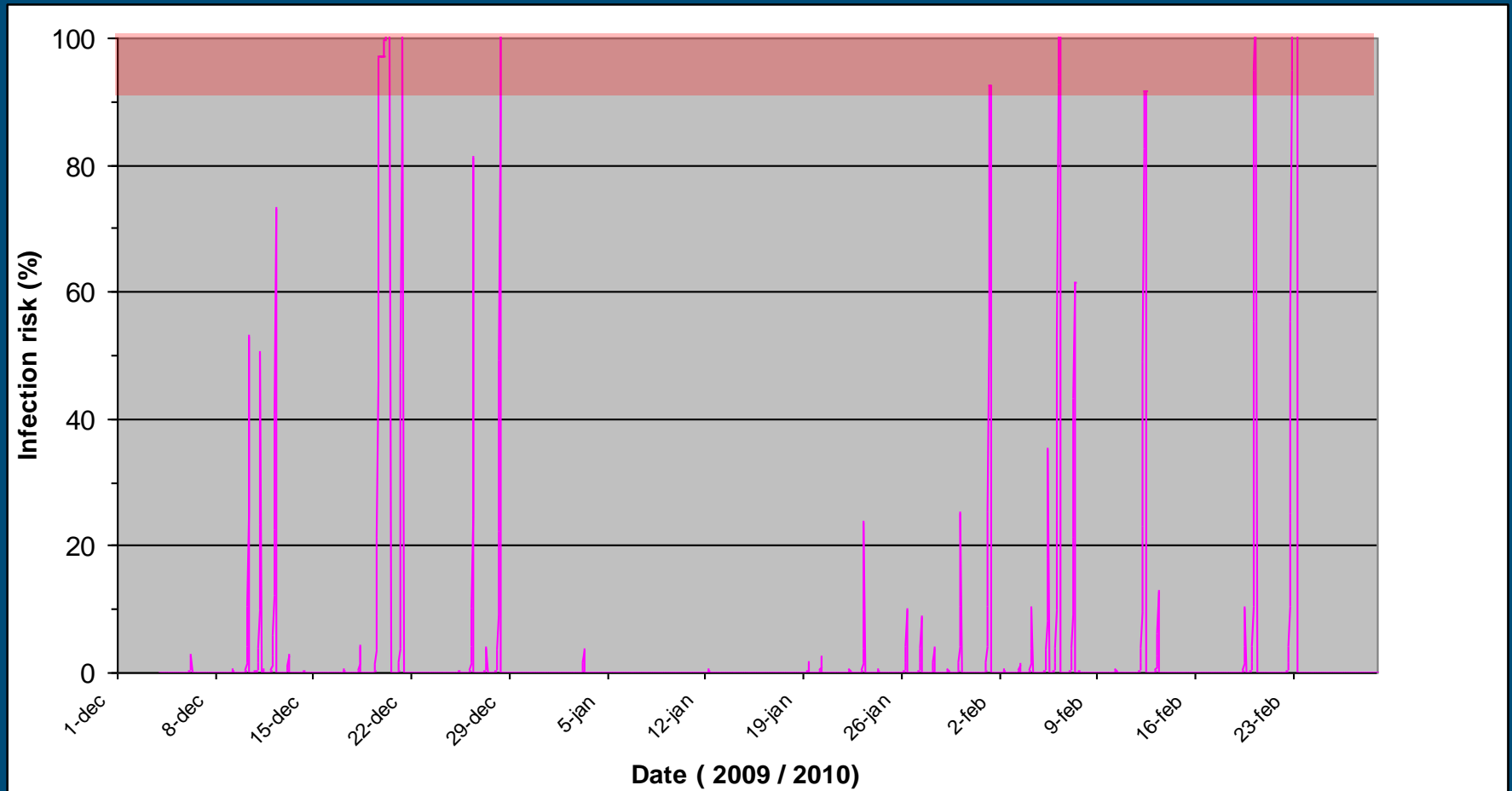


Activities with INTA & McCain Balcarce

- Development of Decision support system based on SIMCAST blight units
- Start up of a monitoring system for *P. infestans* 2010/2011
 - Isolates collected by McCain and Farm Frites
 - PRI supports/carries out characterization SSR (12Plex) & virulence (DuRPh)
 - Visit to PPO/PRI & SCRI july 2010



Analysis of weatherdata Balcarce 2010



Conclusions

- Ample opportunities for introduction of PLB dss
 - To improve the quality of control
 - To reduce the cost of production
 - To reduce the impact of potato production on the environment

A satellite-style map of South America is centered on a dark blue globe. The continent is outlined with a thin yellow border. The text "Thank you for your attention" is written in white, sans-serif font across the middle of the continent.

Thank you for your attention