

**Study tour of the  
commercial pest and  
disease monitoring  
systems in the apple  
growing regions of  
southern Germany  
and northern Italy,  
July 2005**

William Rye  
Orchardists and Fruit Cool  
Stores Association of VIC

Project Number: AP05012

## **AP05012**

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**HORTICULTURE AUSTRALIA PROJECT No: AP05012**  
**Overseas study tour (2006)**

**Project Title: OFCSA Cropwatch Pest and Disease Monitoring System.**

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**RESEARCH PROVIDER: OFCSA (Note, the Orchardists and Fruit Cool Stores Association of Victoria is licensed by Agricultural Services Victoria Ltd to use the Cropwatch name and deliver the Cropwatch system of orchard monitoring). OFCSA has since joined with Northern Victorian Fruit Growers Association to form Fruit Growers Victoria Ltd.**

## **HORTICULTURE AUSTRALIA PROJECT No: AP05012**

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**Purpose:** To improve the service offered by the Cropwatch pest and disease monitoring system by visiting several established consultants in Europe to gain experience in their systems, to address inappropriate and over use of chemicals in IPM.

**Funding Source:** HAL Commonwealth funds, APAL levy funds, OFCSA voluntary contribution.

May 2006

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## **MEDIA SUMMARY**

Regional grower organisations in Australia could gain from analysing Southern German and Northern Italian approaches to providing effective pest and disease monitoring and general extension services for their members.

A study tour visited growers in both European regions and found they are currently well serviced by several organisations providing pest and disease forecasting, production and marketing information.

An integrated approach with research, development, education and application in the field is the key to success.

## **ITENERARY**

**Day 1:** Travel to southern Germany.

**Day 2:** Meeting with my host Peter Triloff, “Marketing Group for the Fruit of Lake Constance” (Marktgemeinschaft Bondenseeobst)

**Day 3:** Visit to several orchards in Lake Constance area.

**Day 4:** Orchard visits continued. Discussions with Peter Triloff re grower services, communication systems and weather station network.

**Day 5:** R & D field inspections. Meeting with compliance services officer

**Day 6:** Inspection of marketing groups’ grower supply centre.

**Day 7:** Meeting with the group marketing officer and inspection of packing house.

**Day 8:** Travel to South Tyrol in Northern Italy.

**Day 9:** Discussions with my host Paul Pernter, district manager of the “Ring of Advisors” (Beratungsring).

**Day 10:** Industry training sessions at Laimburg Research Centre.

**Day 11:** Tour of organic orchards

**Day 12:** Inspection of field trials, visit cooperative laboratory and meeting with Walter Waldner, general manager, Beratungsring.

**Day 13:** Tour of Laimburg Research Centre. Dr Markus Kelderer

**Day 14:** Meeting with government extension managers, Agrario Di San Michele All’adige. Final discussion with Paul Pernter

**Day 15:** Start return journey to Australia.

## **OVERVIEW OF AREAS VISITED**

### **Southern Germany**

About 40% of Germany's apples are produced in the Lake Constance area of Southern Germany. Small growers, each on 3-4 hectares, access a restricted government service while most larger growers, up to 30 hectares, are aligned with the Marktgemeinschaft Bodenseeobst eG, "Marketing Group for the Fruit of Lake Constance Ltd". Fruit from 3.500 hectares is marketed by this group

A 2.4% levy on grower turnover funds the Lake Constance group and members have access to:

- A plant protection and advisory service. This provides five-day weather forecasts and current data from seven weather stations. Codling moth, scab and other warnings are delivered by regular newsletter and fax. There are also training days, farm visits and an innovative R&D program with other European researchers.
- An independent soil, plant analysis and advisory service based on extensive European research findings and a regulatory and compliance advisory service at local, state and European Union levels.
- Grower supplies - a complete range from hail netting to secateurs, including premium nursery stock. No pesticides are supplied.
- Market specifications advice including fruit quality assessment service.



## **Northern Italy**

The South Tyrol region produces one million tonnes of apples from 50 million trees spread over 15,000 hectares, about a third of Italy's production. Orchards are small, down to 1/10 hectare, but one grower may own many small holdings. Most are inherited. Fruit is marketed through local co-ops.

The Beratungsring or "Ring of Advisors" is a group administered by the regional autonomous government. It provides 5,000 grower members with an extensive range of services through 40 staff operating from seven district offices. It is 60% grower funded and 40% funded by the regional autonomous government.

Main features of the group are:

- An orchard advisor assists 250 growers covering up to 700 hectares. Advisors hold evening meetings every three weeks to discuss seasonal issues and do orchard walks four times a year for their various groups.
- Each advisor is a specialist and contributes to a number of publications on topics such as nutrition, organics, machinery and various field guides. The publications are updated regularly and are available through each office.
- Plant protection and advisory information is provided through recorded phone message, weekly newsletter and monthly magazine.
- It accesses a network of 17 weather stations.
- Performance trials are held of various nursery stocks, load assessments and thinning advice along with a central lab test for harvest dates.
- Market specifications advice is available, including fruit quality assessment
- Advisors are closely connected with research teams at the Laimburg Research facility.

## **EXPECTED OUTCOMES**

That an improved monitoring and extension service be developed for orchardists in Australia achieved through:

- Introduction of a more comprehensive computer model for pest predictions, involving the technique of historical data capture updated with current weather data and pest population numbers.
- New scab management program based on spore load, leaf growth and climate data.
- Pest and disease newsletter and information sheets.
- Upgraded pest and disease monitoring methods and scout training.
- Provision of a prescriptive management advise service. Upgraded communication systems with growers.
- Expanded service capabilities to new districts.
- Decision making tree for varying pest and disease populations and management paths
- Ongoing communication and cooperation with European contacts.
- Work experience at Laimburg Research Centre for Agriculture and Forestry, Italy for interested workers in the Australian horticultural industry.

## **IMPLICATION FOR AUSTRALIA HORTICULTURE**

The adoption of any part of these two European systems by the Australian Horticultural Industry needs to be considered in the context of the following:

- Cost/price pressure
- Environmental, consumer and orchard employee concerns about chemical use.
- The “free market” approach to selling fruit in this country.
- Industry adoption of “best practice” intensive production systems.
- Refocusing of government research and extension services.
- Grower dependence on chemical resellers for advice on pest control programs.
- The promotion by marketing divisions of chemical manufactures of niche products which do not well serve the long term viability for Integrated Fruit Production.
- The large and diverse number of grower groups and organisations that represent horticulture.
- Free trade agreements.
- Restructuring.

In an industry undergoing so much change there needs to be found a place for the further development and application of pest management through:

- Improved monitoring and use of historical data for targeted pest and disease control
- Introduced and managed biological organisms.
- IPM strategies using limited strategic chemical application.
- Spray application methods that minimise drift and maximise efficacy.
- Improved training and communication systems
- Availability of improved nursery stock suitable for intensive orchard systems.
- Widespread application of modern orchard husbandry.
- Adopting a proven scientific approach to nutrient management.

Addressing these issues will go along way to achieving sustainable IFP and validation for quality assurance programs.

Grower groups and organisations, and industry consultants need to work closely together and with existing centres of research and development to achieve these goals.

## **DISSEMINATION**

Improvements to Cropwatch program starting with the season 05-06.

This will include availability to the amalgamated OFCSA and NVFGA group. Results of improvements to Cropwatch system pasted on to DPI for scientific validation at the end of each season.

Technology available Australia wide through licensing agreement with Agriculture Victoria Services Pty Ltd.

Joint operations with existing chemical and biological suppliers.

Compressive PowerPoint presentation to the R&D group at last August's APAL conference

Presentations to the Gippsland, Mornington Peninsular, Eastern Melbourne Metropolitan and Goulburn Valley Growers Groups have been given.

A report has been completed for APAL.

## CONTACT LIST

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