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**Rural Industries Research and
Development Corporation**

Tasting and Classifying Virgin Olive Oil

**An international course for
panel supervisors**

**12 – 16 December 2005 at
University of Imperia, Italy**

**A report for the Rural Industries Research
and Development Corporation**

by Peter E. Olson

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Foreword

A sensory panel requires continuity of skills in sensory perception from its members. The panel must be managed in an effective and efficient manner to achieve the best performance. The Panel Supervisor must be skilled in all aspects of panel management and familiar with all trends from overseas sensory panels. Rarely an opportunity to attend a translated course on all of these requirements is offered by the international community.

This report outlines the opportunity taken to attend a translated course of international standing which required an immediate application to the task. Once made aware of the course running in December, by mentor and trainer Mr. Richard Gawel on 23 November 2005, applications for funding and passport needed to be made in short time. Support came from all levels of management within the department and with assistance the applications were successful. The trip to Italy would not have been made possible without RIRDC support.

The course conducted by the O.N.A.O.O. in Imperia, Italy brought all of the requirements of sensory panels together to enable Mr. Peter Olson to return as a better prepared Panel Supervisor for the Wagga Wagga Olive Oil Sensory Panel. This project was funded from RIRDC Core Funds which are provided by the Australian Government.

This report, an addition to RIRDC's diverse range of over 1500 research publications, forms part of our New Plant Products R&D Program, which aims to facilitate the development of new industries based on plants or plant products that have commercial potential for Australia.

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Peter O'Brien
Managing Director

Acknowledgments

I acknowledge the assistance freely given to me by Dr. Rod Mailer, Mr. Gregory Stevens and Mr. Geoff File who all encouraged me to apply and assisted me in preparing for travel.

I also acknowledge Mr. Chuck L'Heureux and particularly Mr. Richard Gawel for bringing the opportunity to my attention and encouraging me to apply.

I acknowledge the assistance from the staff of the NSW Department of Primary Industries and Rural Industries Research and Development Corporation for their support in funding the journey and registration of the course. Special mention must be made of Ms. Meagan Wilson who was instructional and very helpful in preparing my travel arrangements.

Abbreviations

- O.N.A.O.O. – Organizzazione Nazionale Assaggiatori Olio di Oliva
- C.O.I. – Consiglio Oleicolo Internazionale
- S.S.O.G. – Stazione Sperimentale Per Le Industrie Degli Oli Dei Grassi

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Executive Summary

This report will outline the journey undertaken by Mr. Peter Olson to Italy in December 2005 to endeavour to become a better sensory panel supervisor. It involved a course of five days and nights experiencing how different people in different places conducted themselves in the management of a sensory panel on the tasting and classification of olive oil. This report outlines the opportunity taken to attend a translated course of international standing which required an immediate application to the task.

This report is presented to inform management of funding bodies, NSW-DPI and RIRDC how much worth the course was to its recipient and how much benefit the olive industry will receive.

A sensory panel requires continuity of skills in sensory perception from its members. The panel must be managed in an effective and efficient manner to achieve the best performance. The Panel Supervisor must be skilled in all aspects of panel management and familiar with all trends from overseas sensory panels. Rarely an opportunity to attend a translated course on all of these requirements is offered by the international community. Once made aware of the course running in December, by mentor and trainer Mr. Richard Gawel on 23 November 2005, applications for funding and passport needed to be made in short time. Support came from all levels of management within the department and with assistance the applications were successful. The trip to Italy would not have been made possible without RIRDC support. The Department and RIRDC dually funded this trip and course. Details are given in the main body of the report.

The course conducted by the O.N.A.O.O. (Organizzazioni Nazionali Assaggiatori Olio di Oliva) in Imperia, Italy brought all of the requirements of sensory panels together to enable Mr. Peter Olson to return as a better prepared Panel Supervisor for the Wagga Wagga Olive Oil Sensory Panel.

International Course for Panel Supervisors of Virgin Olive Oil Tasters

Objectives

The outcome from such a course is to better prepare Mr. Peter Olson as a panel supervisor who will continue to become an effective and efficient Panel Leader of the Wagga Wagga Olive Oil Sensory Panel. This report is presented as a running commentary on the week's journey, relating what was on the agenda and what was learned along the way. There is a description of outcomes at the end.

The Week and the Course

The course program is described in detail below as a chronological record of the way the week unfolded. Each day's presenters and what they brought to the course, plus something of what the group picked up from it.

Monday 12 December 2005

- 0930: Registration took place and the participants were introduced to the translator, who for the week would continuously convert Italian into English for the group through special headsets distributed to all who needed them.
- 1000: Opening ceremony included the course Coordinator – Mr. Fabrizio Vignolini, the President of the Province of Imperia – Mr. Gianni Giulano, the Mayor of the City of Imperia, the President of O.N.A.O.O. – Dr. Lucio Carli and the Director of S.S.O.G of Milan - Dr. Fausto Luchetti. All seventeen participants were then asked to stand up, introduce themselves and let the group know the reason for their involvement in the course. I related that one of the needs of our Panel members was to accurately identify defects.
- 1100: Lucio Carli and Fabrizio Vignolini from O.N.A.O.O. detailed the purpose and objectives of the course. They said that three trips after hours were planned to olive oil processing plants and the private olive museum. So, a full week was scheduled.
- 1130: Sensorial Analysis: definitions and objectives, presented by Dr. Franca Angerosa from I.S.E. Pescara. She described the process occurring when organs involved in gustatory, olfactory and tactile perception. The trigeminal nerve free endings, which pick up pungent, metallic and astringent stimuli and the buccal absorption apparatus, were discussed.
- 1230: Lunch was spent in the University cafeteria where participants had to pay, which was a surprise.
- 1430: Franca Angerosa continued after lunch with - Measurement of Sensory Perceptions and the different sensory tests. Both of her sessions were received well and she did not trouble the translator. She spoke slowly and in doing so, allowed for a clear and concise continuous flow of clear translation.
- 1600: Mr. Tonino Zelinotti from Ministry of Finance and Customs Office – Chemical and Products Laboratory in Rome gave the final lecture of the day on the official COI method for organoleptic assessment of virgin olive oil, the new profile sheet for assessment and classification of oils.
This was followed by a panel discussion on: “Practical tests for recognition of positive and negative attributes using the profile sheet”. The panel consisted of Tonino Zelinotti, Marcello Scoccia – Panel Leader of the Imperia Sensory Panel, Fabrizio Vignolini – ONA OO and Roberto Zecca an American who spoke excellent Italian, who was an experienced Panel Leader from California.
- 1900: That night the group were bussed to the Carli Oliva processing plant in the heart of Oneglia in Imperia. The night consisted of a tour of the processing plant and then a visit to their world famous private Museum to the Olive, and then we were guests at dinner at the factory.

Tuesday 13 December 2005

- 0900: Ms. Franca Camurati presented the first lecture of the day. She is from S.S.O.G. in Milan and outlined the official C.O.I. regulations on sensory analysis. Franca Camurati continued in the morning session on the official C.O.I. method for organoleptic assessment of virgin olive oil. She covered the development of the methodology, the objectives and the procedures.
- 1130: Franca Angerosa covered the specific vocabulary associated with sensory analysis, mid morning. The positive and negative attributes perceived by the olfactory and gustatory systems for olive oil. She explored the differences of fruity oils and the importance of the positive perceptions on the new profile sheet.
- 1230: Lunch was spent in the University cafeteria.
- 1430: Dr. Luciano Di Giovacchino of I.S.E. Pescara presented, Methodology for the Determination of Mean Threshold and Perception of Attributes by a Group of Candidates. He continued with the Practical Determination of the Mean Threshold, making up dilution solutions of defects and getting the participants to try their skills. This session was very worthwhile as he gave us tips on efficient ways to get the dilution concentrations that are required. An interesting panel discussion session followed with Fabrizio Vignolini and Franca Angerosa joining in.
- 1630: Tonino Zelinotti was back from Rome and very thoroughly instructed participants on the Quality Standards of Virgin Olive Oils: Commercial Regulations for Virgin Olive Oils. He organised to have both of his talks saved in English versions on CD copies, which were made available at the end of the week for us all. He was very knowledgeable on the standards and regulations and government policy.

This evening was free for all participants.

Wednesday 14 December 2005

- 0900: The official COI method involving the Duties of the Panel Supervisor was presented here by Franca Camurati. She is a very experienced Panel Leader. She was well qualified to talk on the Selection of Tasters and the Training of the Panel as well. It resulted in a very productive session.
- 1130: Practical tests for recognition of organoleptic attributes of oils were presented in panel form with Marcello Scoccia, Fabrizio Zignolini and Robert Zecca all from O.N.A.O.O. sitting in. Each participant was given a selection of olive oil samples to try and assess one by one. The panel would discuss the attributes which were perceived from each sample and discussion continued. This was a very constructive session.
- 1230: Lunch was spent in the township of Porto Maurizio next to the University.
- 1430: Franca Camurati took up after lunch with a further examination of the COI method for organoleptic assessment of virgin olive oil. She retraced the development and outlined the objectives aimed for and the procedures finally arrived at. Franca is a Panel Leader in Milan and presided over the testing of over 800 olive oil samples last season. She mentioned to me that in their circumstance they are asked to test not only freshly prepared oils that easily obtain the EVOO classification, but also many oils with different levels of defects, to determine what kind of treatment they will require. So, in her assessment records she felt that nearly 40% of the oils her Panel tested last season were faulty, either just virgin or worse from ordinary to lampante grades.
- 1630: In this session further practical tests were demonstrated, this time with Franca Camurati sitting in with the Panel. During this session, a sample of “grubby” defected oil was sent around to all participants and then the Panel gave their findings. Two on the Panel, one of which was Franca, had trouble identifying this defect along with the rest of us. This demonstrated to me the difficulty met by Panels sometimes in accurately determining the identification of a defect. This particular defect occurs from oil contamination by the Olive Fly larvae, found in many olive trees in Europe but not yet found in any olive trees in Australia.

1845: Another trip was organised to an olive oil grower and processor. This time we were bussed up into the hinterland of Oneglia; about a half hour trip. The Anassa brothers greeted the group and showed off their family business and their future expansion and development plans. The factory housed a large processing plant and had a labelling and bottling machines. They also produced eating olives, condiments and sauces at this factory. The Anassa brothers were very gracious hosts and laid on a very good spread of food after the tour.

Thursday 15 December 2005

0900: Dr. Mauro Amelio – Quality Control Manager, started the day with a talk on “Composition of Virgin Olive Oils and the Analytical Control for Genuineness”. He systematically went through the different tests that can determine how authentic an olive oil sample is and what levels that the IOOC and other bodies deem for the oil to be extra virgin quality.

Mauro was due to be the last speaker of the day and finish off on Friday, but instead carried his entire talk right through the morning. Even though I had a good knowledge of all of the methods and the IOOC levels of acceptance, I picked a lot of information on the composition of the aromas and flavones of olive oil. He was very interesting and very interested in keeping contact over the manufacture of “artificial” defect concentrates. He and Franca Angerosa are going to assist in this activity.

1230: Lunch was on the run after a little shopping around the town.

1430: After lunch another session on the practical tests for recognition of organoleptic defects and their intensity, plus the use of the profile sheet.

Mauro Scoccia, Fabrizio Vignolini and Roberto Zecca from ONAOC formed a question and answer panel and gave the participants some very helpful hints and tricks of the trade in running Panels and managing the data that emanates from one. Some Panel rules such as;

1. Do not think in numbers,
2. Fold the profile sheet,
3. Use your instincts / senses,
4. Know what defect it is and (as a Panel),
5. Be under 20% CVr.

Other information to help identify some defects better was delivered such as;

1. Fusty and Winey only on the nose and lasts just a few seconds,
2. Musty carries through to the palate,
3. Muddy sediment is a full mouth effect. It lingers after the aroma and then in the mouth.

1600: This session was all about the “Statistical Evaluation of the Practical Tests of Organoleptic Assessments of oils”, delivered by Alberto Ugolini from the Tasters Study Centre in Brescia. He presented a very boring subject with gusto and kept us all very interested to the end. The most useful determination learned by me were the “superior and inferior limits of confidence interval. The variability each panel gets amongst its members is critical to how well the panel performs.

Alberto continued on with “Reliability of the COI method of organoleptic oil assessment”. He covered the control required of the taster panels and the candidates to gain recognition by the COI on proficiency testing programs. Overall he covered the subject material with such enthusiasm that it kept all participants keenly interested.

1915: A third and final trip was organised for the hinterland again in a slightly different direction. This time we venture to a processing plant named Frantoio, which is a famous varietal name for an olive tree type. I assumed that this may have been the original home of this well known Italian variety and by all accounts it may have been. The processing plant was a smaller one than encountered by the other two previous visits, but it became quickly obvious that the Italians accompanying us from the course very much respected this family as “expert” at their business. It was a family run business and everything was grown and processed on the premises and through the plant. It was most impressive to realise that all of the ingredients and dishes served at the dinner afterwards were made on the property.

Friday 16 December 2005

- 0900: Prof. Lanfranco Conte from the University of Udines' Department of Food Science started the last session of lectures for the course. He continued the theme from Mauro Amelio's talk on the composition of virgin olive oils. He divided this into two criteria and looked at each in detail. These were the Quality Criteria, with chemical and sensory considerations and the Purity Criteria, which involved the detection of admixtures with other vegetable oils, with olive pomace oils and with refined oils.
- Although this is primarily my field of knowledge it is always worthwhile getting an insight from such a well recognised and respected person. He was able to describe a number of the causes of defects and how adulteration occurs in olive oil. Some of the peripheral, seemingly insignificant tests to conduct were realised as more important when looking for genuineness in virgin olive oil.
- 1200: The final session was chaired by Dr. Lucio Carli – President of the ONAOC in Imperia and CEO of Carli Oliva, the first olive oil processing plant visited on Monday evening. He was accompanied by the Anassa brothers and most of the lecturers that presented for the week. The course coordinator Mr. Fabrizio Vignolini and Dr. Fausto Luchetti, a past president of the IOOC was on hand to make the presentations. Each participant was given the opportunity to describe what they received out of the experiences during the week. I was heavy in my praise for the Italian translator who with a tireless and continuous effort all week was faultless in her performance. This effort made the whole course possible for most of the participants, who would have been lost without any translations.
- 1300: Course closed

Outcomes

I have come away from this International course with a greater depth and scope of understanding of the business of managing sensory panels.

I have made very important contacts of colleagues within this business. The lecturers from Imperia, Pescara, Milan and Rome in Italy will be useful to work with. The participants from California-USA, Croatia, Denmark, New Zealand, South Africa and Syria are interested in collaborative efforts with proficiency testing and as general sounding boards on panel management issues. I have already received and made contact with most of them.

Observing the olive oil processing practices in the area that we visited gave me an further insight into the olive industry and highlighted the requirements every processor has for hygiene criteria and strict controls on their modus operandi. With these controls each batch of oil processed could vary in quality by enough to make a difference.

Since arriving back to Wagga Wagga I have conducted two training sessions for a trainee group of tasters, some of who will be selected to join the Wagga Wagga Olive Oil Sensory Panel (WOOOSP). Before I left there was a meeting of the Australian Olive Association President, Mr. Paul Miller, departmental executive and managers, Dr. Rod Mailer and myself on the formal arrangements required to merge the AOA panel with this one. The WOOOSP will be meeting again for the first time this season on 26 February 2005 to continue to improve skills by further individual testing and learning.

All of these activities that are about to occur this year in the lead up to the olive season will be better served by the Panel Leader of WOOOSP having participated in this course for panel supervisors.

Prepared by Peter E. Olson
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WOOOSP