出國報告（出國類別：開會）

「參與 2012 年歐洲農藥殘留研討會」報告

服務機關：行政院農業委員會農業藥物毒物試驗所

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出國地區：奧地利維也納

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報告日期：101 年 9 月 11 日

摘要

第 9 屆「歐洲農藥殘留研討會」（European Pesticide Residue Workshop, EPRW）於 2012 年 6 月 25 日至 6 月 28 日於奧地利維也納舉行，爲與國際間最新農藥殘留檢驗、農藥管理及風險評估等相關研究接軌，本所首次派員參加。

本次大會在殘留農藥分析、農藥監測，殘留物定義、食品安全、風險評估，農藥管理、植物保護、田間試驗等農藥殘留相關領域最新發展趨勢均有相關研發成果發表，其中 3 場專題演講分別針對多重農藥殘留分析之最佳化探討、農藥殘留監測與曝露風險評估、農藥殘留分析方法之挑戰等重要方向邀請國際知名專家進行口頭報告，大會主題日更以殘留物定義（Residue definition）爲主要討論議題，4 天內由各領域專家共進行 29 場演講，廠商演講 16 場及 214 篇壁報論文發表。會議內容涵蓋各項最新農藥檢驗技術，如 UHPLC-ToFMS 搭配 UHPLC-MS/MS 篩檢蔬果中農藥殘留之方法確效，或利用 2D-LC-MS/MS 檢測粗萃物之殘留農藥免除前處理流程等，有助提升檢驗效能。歐盟首先倡導之 QuEChERS 前處理方法仍是大會焦點，許多學者持續因應不同基質差異，特別是農藥或動物用藥在動物性產品 QuEChERS 前處理方法之最適化進行研究，對於不易同步分析之高極性農藥如嘉磷塞等殺草劑亦有分析方法開發之探討。農藥取食風險評估與安全容許量（MRL）制定相關議題仍是本次大會重點，主辦單位特別安排一整日以殘留物定義爲主題的相關演講，並安排座談讓專家與聽眾充分溝通討論，此外農藥田間監測及優良農藥操作規範 GAP（Good Agricultural Practice）之驗證亦備受重視，甚至涵蓋生物農藥蘇力菌（*Bacillus thuringiensis*）菌株之安全性研究調查，顯見本會議觸及面向之廣，相關研究成果之交流與學習，對於國內未來辦理農藥殘留分析及管理等相關工作助益良多。

農產品中農藥殘留問題一直是民眾最關切之首要民生議題，如何降低化學農藥使用與提升農畜水產品中農藥殘留合格率更是當前農委會施政主軸「安全農業」之核心施政目標，本所身爲農委會農藥管理及農藥等毒性物質專責試驗研究機構，同時承接國內農藥登記管理、殘留檢驗、國內及進口容許量評估等重要業務，建議未來應持續派員參與歐洲農藥殘留研討會，藉此平台與國際頂尖農藥殘留相關領域研究單位充分交流及建立溝通管道，讓國內農藥檢驗技術及風險評估等工作能與國際同步，有效管理農藥使用及保障民眾農產品食用安全。

目次

壹、目的

有鑑於近年來農藥殘留研究領域在國際間之發展快速，尤其農藥殘留檢驗技術與儀器之進步更是日新月異，特別在層析儀搭配串聯質譜儀逐漸普及後，同步分析數百種以上之藥物殘留已非難事，不同類型質譜儀更能滿足不同檢驗目的之需求，加上可廣泛應用在不同型態樣品之 QuEChERS 前處理技術問世，大幅加速農藥殘留檢驗之效率及可信度，並減少溶劑使用而符合綠色化學分析精神與降低試驗人員健康風險，隨之而來國際間在相關管理法規也日趨嚴謹，在歐盟地區最爲明顯，對食品安全與相關農藥分析檢驗方法確效要求逐年不斷提升，成爲全球農藥殘留領域學習標竿。本所爲農委會內農藥管理及農藥等毒性物質專責試驗研究機構，同時承接國內農藥登記管理、殘留檢驗、國內及進口容許量評估等重要業務，爲充實本所研發能量，汲取國際間農藥檢驗及風險評估等相關業務最新發展現況，實有參與相關領域國際研討會之必要。

「歐洲農藥殘留研討會」（European Pesticide Residue Workshop, EPRW）爲歐洲地區農藥殘留相關研究最重要之指標性會議，首屆 EPRW 於 1996 年於荷蘭阿克瑪舉辦，之後每 2 年輪流在不同歐盟國家舉行，地點遍及阿梅里亞（西班牙）、約克（英國）、羅馬（義大利）、斯德哥爾摩（瑞典）、科孚島（希臘）、柏林（德國）及斯特拉斯堡（法國），至今已舉辦過 8 屆，本次會議於 2012 年 6 月 25 日至 6 月 28 日於奧地利維也納舉行。爲達與國際接軌之目的，本所於 2011 年提出國際合作科技計畫擬參與 2012 年第 9 屆 EPRW，經農委會核准於今年由本人代表本所首次參加 EPRW，期藉此平台與國際間農藥殘留相關領域之優秀專家學者進行交流並建立溝通管道，提升國內在農藥檢驗技術及風險評估相關工作之水準。

貳、過程

第 9 屆 2012 年歐洲農藥殘留研討會（EPRW 2012）於 2012 年 6 月 25 日至 6 月 28 日在奧地利維也納市中心古城區之維也納科學大禮堂舉行，本次參與 EPRW 2012 之成員共有 514 位，其中多數成員來自歐盟國家，另有來自美國、加拿大、巴西、哥倫比亞、智利、阿根廷、澳大利亞、日本、韓國、泰國、中國大陸及台灣等國家，參加人數超過 500 人，亞洲地區主要國家以日本 9 位人數最多，韓國 8 位次之，泰國 2 位、新加坡 2 位、台灣 2 位，中國大陸 1 位，東方人面孔明顯偏少。

EPRW 2012 由奧地利衛生及食品安全中心（Austrian Agency for Health and Food Safety, AGES）負責主辦，大會主席為 AGES 之 Dr. Sonja Masselter，並與來自奧地利衛生及食品安全中心（AGES）、德國風險評估聯邦局（Federal Institute for Risk Assessment）、瑞典國家食品局（Swedish National Food Agency）、荷蘭食品及消費產品安全局（Dutch Food and Consumer Product Safety Authority）、法國聯合服務實驗室（SCL）、義大利國家衛生研究院（Italian National Institute of Health）、英國食品及衛生研究組織（Food and Environment research Agency）及西班牙阿梅里亞大學（University of Almeria）等 8 個歐洲國家農藥主管機關及學術機構之專家學者組成科技委員會（Scientific Organizing Committee），科技委員會負責審議大會發表之相關論文發表及主導會議進行。

本次研討會議程在 4 天內共包含 29 場演講（Lecture）、3 場壁報討論時間（Poster session）及 16 場贊助廠商演講（Vendor Session），行程安排非常緊湊，所有演講均在 2 樓大禮堂舉行，1 樓為廠商儀器展示區，0 樓則是壁報論文展示區與廠商演講之地點（奧地利 0 樓即臺灣 1 樓，其他以此類推）。會議主題涵蓋殘留農藥分析、農藥監測，殘留物定義、風險評估、農藥管理、植物保護、評估與授權、田間試驗等農藥殘留研究領域。29 場演講中有 3 場專題演講（Keynote Lecture），分別針對多重農藥殘留分析之最佳化探討、農藥殘留監測與曝露風險評估及農藥殘留分析方法之挑戰等重要方向進行介紹，其中第 1 場的主講者是來自美國農業部（USDA）的 Dr. Steven Lehotay，身為現今全球最普遍應用 QuEChERS 前處理方法之共同發明人，該方法由 2003 年問世以來到 2011 年已被超過 500 論文初次引用，Dr. Lehotay 由不同層面探討農藥殘留分析工作檢驗追求檢出多少農藥或毒物種類或投入多少成本才合理等問題，在接受較差檢驗結果但使用法

便宜、快速及簡易方法或追求較好檢驗結果但花費更多時間、金錢及人力？當然終極目標是在便宜、快速及簡易之條件下得到良好結果，但如何取得平衡需要考量太多因素，在保障食品安全的前提下，對於目前一味追求農藥分析品項種類或數據品質之研究方向，檢驗方法之開發究竟應該滿足哪些條件最爲適當，還是應該繼續無限上綱？其論述相當發人深省。

第 2 場風險評估則是由歐盟食品安全局（EFSA）專家 Dr. Hermine Reich 報告，針對歐盟在農藥取食風險評估的概念深入淺出介紹，此部份係個人主要業務範圍，因此特別留意相關內容，Dr. Reich 主要介紹歐盟在殘留監測工作近 10 年來的發展，目前每年固定評估 9 種食品品項，3 年一個循環，涵蓋 40-95%取食量範圍之農產品，自 2009 年起動物性產品及加工產品也列入評估範圍，以明年 2013 年爲例，其重點評估之農產品或加工食品包含蘋果、桃、草莓、萵苣、結球白菜、蔥韭、燕麥、黑麥、牛奶、豬肉及酒。而在檢測農藥種類上，以荷蘭及德國爲例，從 1997 年由 250/80 種左右，分別成長至 2009 年 470/780 種左右，變化相當大，隨著檢出藥劑種類提升相關容許量也會隨之增加。有趣的是歐盟以希臘神話中的人物或妖怪的不同特質，將風險歸納成 6 大類並提出相對之風險策略，讓人印象深刻容易理解，如 Pythia：高不確定性，危害潛力變化大；Cyclops：不確定性，高危害潛力；Damocles：低可能性，高危害潛力，低不確定性；Pandora’s box：無所不在，高存在性；Cassandra：高可能性，高危害潛力，長潛伏期，Medusa：低可能性，高暴露低危害，高致死潛力。其風險處理策略則各依風險性質互有差異，如 Pythia：應限制化學品使用，改進暴露評估模式及危害特性；Cyclops：應改進監測策略，統計農藥使用量；Damocles：禁限用高危害農藥，監測未授權物質殘留情形；Pandora’s box：禁限用高危害農藥，透過降低法定檢出限量監測未授權物質；Cassandra：計畫性管理工業生產，尋找替代產品或定義限用；Medusa：改進風險溝通，通知大眾監測數據及相關性發現。報告中清楚呈現歐盟在風險評估涵蓋面向之廣泛及實際監測工作的長足進步情形。

其他演講主題包括液相層析質譜儀（LC-MS）與液相層析串聯式質譜儀（LC-MS/MS）之合併分析新應用、歐洲農藥殘留檢驗能力試驗趨勢、官方農藥殘留管制查核、農藥殘留測試之認可、法國總膳食調查（Total diet study）及取食風險評估、累積性農藥曝露、超高效液相層析結合飛行時間質譜儀（UHPLC-ToFMS）與超高效液相層析串聯式質譜儀（UHPLC-MS/MS）在蔬果中多重農藥殘留檢測、液相層析串聯式質

譜儀（LC-MS/MS）與簡易快速前處理流程（QuEChERS）結合檢測多種農藥、氣相層析串聯三段四級柱質譜儀（GC-QqQ-MS/MS）在穀物多重農藥殘留檢測、使用未登記生物性農藥蘇力菌（*Bacillus thuringiensis*）安全性調查、免前處理之二維液相層析串聯式質譜儀（2D-LC-MS/MS）多重農藥分析、嘉磷塞等高極性農藥分析方法開發與確效、哥倫比亞柿子之殘留分析與 GAP 評估等主題;另外本次大會特別安排 6 月 27 為主題日，將「殘留物定義」（Residue Definitions）相關議題之演講均安排在同一天，其議題包含農藥登記者（即農藥廠商）的期望、風險評估者（即政府及相關管理研究單位）的期望、代謝產物及結合物與殘留定義、複雜的殘留物定義、容許量制定與消費者保護之關係、動/植物源性產品安全容許量之法規殘留物定義對有效執法之影響等,演講結束後特別邀請當天所有主講者及參加者進行「與利害關係人之講台討論」（Podium discussion with stakeholders ），現場提問及討論相當踴躍，充分達到交流目的，相關議程如附件二。

壁報發表論文則依其性質不同分成 5 大類：（1）PV：廠商論文，（2）PA：分析方法之開發及應用，（3）PM：監測及取食評估，（4）PR：法規及風險評估，（5）PO：其他主題，共計發表 214 篇壁報論文，包括 PV 組 38 篇、PA 組 101 篇、PM 組 36 篇、PR 組 9 篇及 PO 組 30 篇，內容包羅萬象。PV 組廠商壁報論文為本次大會新增之類別，各主要儀器廠商紛紛展示自家最新分析設備在農藥、動物用藥及環境毒物之應用研發成果，主要以分析方法及前處理應用為主；一般壁報論文最大宗的則是 PA 組分析方法開發應用，超過 100 篇的論文發表，內容主要針對 QuEChERS 前處理方法之改進或在不同基質之應用，特別是動物性產品，舉凡牛奶、肉品甚至飼料上，新儀器方法之應用也是重點，如利用二維液相層析串聯式質譜儀（2D-LC-MS/MS）檢測粗萃物殘留農藥及自動化前處理流程開發以提升檢驗效能，值得注意除了傳統蔬果農藥分析，以茶葉、蜂蜜甚至酒類之分析方法研究數量不少，顯見此領域逐漸受到重視；PM 組監測及取食評估則涵蓋歐洲及以外如韓國、阿根廷等地區，在各類蔬果、穀物、茶葉、有機作物、動物內臟、飼料、嬰兒食品及土壤中之有機氯類、除草劑及其他各類農藥殘留長期調查監測結果，部分論文則針對殘留結果進行取食評估；PR 組法規及風險評估雖然僅有 9 篇論文，但探討面向廣泛，除了一般農藥取食評估結果及模式建立，新農藥之分析、結合物在殘留物定義之研究也被提出，連取食量甚低的啤酒花也有相關報告，尤其韓國在這部份相當重視，9 篇論文即佔了 2 篇，因同為東方人，飲食文化較為相近，其評估方式未來可持續觀察參考；PO 組其他類別則主題眾多，如針對環境如地下水之殘留分析、

在蔬果或橄欖油上能力試驗之相關探討等、農藥與其代謝物之轉換因子（Conversion Factors）之線上試算系統，也有提出採收前殘留限量或容許量（Pre-Harvest Residue Limits ,PHRLs）之概念，未來或許能供我國農藥管理之另一種依據。此外雖然歐盟最新版次之歐盟在農藥分析之確效及品管法規（SANCO/12495/2011）方於 2012 年初公告，本次已有數篇報告以此規範探討動物用藥及農藥在動物性產品之不確定度。

大會同時開放與會人員在投票選出最佳壁報論文，並於會議最後一天頒獎，獲獎研究人員可獲得 5 分鐘上台口頭向大眾介紹其研發成果，3 篇獲獎論文中 2 篇爲 PA 組，其主題爲整合性差動遷移率頻譜儀配合串聯式質譜儀（DMS-MS/MS）在三唑類農藥分析、三亞蟎及其代謝物之分析方法比對，另 1 篇爲 PO 組在農藥轉換因子線上系統使用，報告重點著重在代謝產物之檢驗方法開發及評估標準建構，足見與農藥殘留物定義議題相關之代謝產物轉換與分析方法備受各界關注，研討會中發表壁報論文標題詳如附件三。

參、心得

承蒙所內長官給予學習機會，本人有幸派赴維也納參加 EPRW 2012 吸收歐洲與其他世界各國在農藥殘留相關檢驗技術及安全評估等研究之最新資訊，尤其對於歐盟對農藥殘留風險評估之發展深感受益良多，希望帶回相關研究資訊能對所內同仁推動業務有所助益，個人已於 7 月 9 日在本所第 157 次所務會報中口頭報告此行心得，演講簡報如附件四。

此行主要心得是看到歐盟在農藥殘留分析各項議題均投注大量人力、物力，不論在最新檢驗技術、農藥監測、農藥管理、田間試驗、取食風險評估、總膳食調查、消費者保護等領域其相關研究均領先全球，足為各國標竿，十分值得我國仿效學習，單舉檢驗方法之檢測農藥種類 1 項來看，雖然各國經濟規模及設備不同，檢驗藥劑種類不一，但主要國家如荷蘭已可同步分析將近 500 種農藥，德國甚至已能分析將近 800 種農藥為歐洲之冠，可見歐盟確實將研發成果運用執行，作為保障食品安全目標的實質手段。

在風險評估工作上歐盟專家提出許多實際問題值得我國思考與探討，特別在農藥安全容許量之制定上仍有許多困境尚待突破，如生物農藥之標準如何規範？另外因為嬰兒取食量與成人差異極大，嬰兒食品如何制定相關法規不致與一般成人使用差異過大，再者農產品或食物在不同加工過程中，對於農藥殘留引起之濃縮或降解效應，這些處理因子如何設定，由其是冷凍儲存之影響均待一一釐清；另外農藥中非有效成分之保護劑及增效劑等其他物質之容許量如何制定與管理？這些都是臺灣目前同樣面臨亟需解決的問題，特別是加工處理因子，臺灣目前農產品殘留農藥安全容許量標準除茶葉等少數作物少數品項，大多仍以未加工之作物型態評估，對於加工產品適用性一直有所疑慮，儘快建置不同型態農產品之處理因子應是臺灣未來重要的農藥殘留研究方向之一。

除了一般植物性農產品，動物性產品中農藥容許量之評估也應加以關注，尤其雙用途（同時是動物用藥及農藥之有效成分）藥劑之評估如阿巴汀（Abamactin），評估時須同時考量來自農產品或飼料與來自動物本身兩種使用方法，才能合乎實際使用狀況。至於本次大會主題「殘留物定義」，只有對殘留物正確定義才能制定合宜容許量，實際使用時農藥受到動植物本身代謝作用，除了有效成分外，哪些代謝產物或結合物需要被考慮當成指標化合物（Marker Compound）？其評估最低百分比應該設為多少（如>10%）？指標化合物存在所有作物中或只在重要作物？是否包含中間可轉換化合物？如何估算

不同來源之指標化合物？以上種種問題在容許量制定時都需要加以考量。

關於例行監測之合理分析方法，專家提出如果一種方法在 3 種不同分析系統下，使用超過 5 種以上不同淨化步驟，則該分析方法不適用於例行監測，如何在成本、時效及檢測數據中間取得平衡是重要評估依據，否則即使分析方法回收率或敏感度等數據品質再好，如果需要投入非常龐大的人力、成本及時間才能得到，則該方法仍不適合用在樣品量極爲龐大的例行監測工作，相關建議可作爲國內未來建立相關檢測規範之參考。

除了會議內容本身，EPRW 2012 主辦單位在籌備工作用心之深，由許多環節的細膩規劃中可略窺一二，在在顯示出奧地利團隊對本國深厚文化的自信心與榮譽感，讓不遠千里而來的世界各國成員在會議期間除了分享交流最新檢驗科技介紹與法規管理發展經驗外，也能從各項活動中體會到千年歷史維也納的文化底蘊，坐落在市中心古城區的科學大禮堂本身就是歷史建築，天花板上略顯斑駁又古意盎然的眾天使圖騰，讓人有置身古代宮廷的感覺，開幕式中在每場官員來賓致詞中間巧妙安排樂團伴奏表演，悠揚的小提琴樂聲響徹全場，親自讓人感受維也納「音樂之都」的美名，配合現場柔和的藍紫色背景燈光照明，營造出的輕鬆氛圍與一般研討會明亮但令人緊張的風格迥然不同，會議期間雖然沒有樂團相伴，但總能感受會場的氣氛特別平和，不論是大會或是餐飲服務的工作人員，臉上幾乎都掛著親切笑容，熱心又有禮貌地向來賓提供各項協助，或許是他們以身爲享譽全球音樂神童莫札特出生地市民爲榮而展現出的特有自信與態度。

即便社交活動大會同樣精心安排，尤其是大會第 2 天的正式晚宴，雖然時值盛夏，較高緯度的維也納大概要晚上 9 點半以後天色才逐漸轉暗，但主辦單位竟讓大家一直等到超過 9 點半以後才用餐，原來晚宴地點並非一般餐廳，而是當地著名景點「科學工藝博物館」，必須等到博物館營業時間過後才能讓餐飲服務人員進駐佈置用餐空間，連大會工作人員自己也說這是有生以來第一次在博物館用餐，想來應該是永生難忘的回憶，享受當地特有美食的同時還能一邊逛著博物館，不但周遭充滿各式骨董級蒸汽火超頭、電聯車車廂、跑車引擎及工業器械，抬頭更是人造衛星、飛機、直升機及熱氣球等飛行器羅布，耳邊則不時傳來現場演奏的美妙樂章，配合與會場同樣柔和的燈光氛圍，讓人想不放鬆也難，各國研究人員彼此交流更加熱絡，達到增進彼此認識互動的效果，維也納人的創意與品味實在令人佩服，而驚喜的是科學工藝博物館願意爲了招待來自世界各國難得齊聚一堂的科學家們，答應出借場地變身餐廳，讓各國學者無不受寵若驚，奧地利或說歐洲國家對專業人士的禮遇及敬重可見一般，往後應該很難有機會在禁止飲食的

博物館內享受晚宴佳餚，這好比在國立自然科學博物館或國立科學工藝博物館的展覽大廳中辦流水席一樣的特別。

第 3 天會後社交行程則分成搭船遊多瑙河與徒步參訪古蹟兩種，雖然因預算考量選擇了便宜的後者，由當地人士充當領隊以英語導覽介紹市中心名勝古蹟，從晚上 7 點出發走到 9 點，自 1147 年建造的維也納地標聖史帝芬大教堂（Stephansdom）啓程，在莫札特曾經登台表演的國家歌劇院（Wiener Opernball）解散，周遭一幢幢外觀精美的奧地利傳統及宮廷建築，搭配導遊對相關歷史生動又活潑的解說，讓心靈享用了一場豐盛的文化饗宴，即使過了晚餐時間尚未進食卻不感到飢餓，心中現起將來如有機會在國內舉辦這樣大型的國際研討會，臺灣要如何呈現我們自己的特色文化而讓外賓在心中留下深刻的感動？而不僅止於學術或專業上的收穫，這個問題只能暫時留待心中慢慢思考醞釀，期待將來有朝一日時機成熟，臺灣有能力主辦類似研討會，在分享我國在農藥殘留檢驗及相關領域之研發成果的同時，也能讓與會各國專家體驗臺灣人文及土地之美。

肆、建議

隨著安全農業與食品安全議題日益受到全球關注，國際間在農藥管理、殘留檢驗及容許量等標準制定上不斷投入更多人力與成本，唯有保持與國際主流規範同步之先進檢驗技術才能讓國內在農業生產安全無縫管理及外銷農產品之品質管制更加完善，未來本所在安全農業中扮演角色將更加重要，尤其是與食品安全息息相關之農藥殘留檢驗及取食風險評估等領域，因此針對提升研究能量與水準方面，個人建議數點如下：

一、持續提升分析能力與國際標準同步：歐盟在此領域十分注重，投入許多人力物力研發分析方法及制定相關規範，隨著檢驗方發不斷更新，其農藥殘留分析方法確效、品質管制之規範文件「Method Validation and Quality Control Procedures for Pesticide Residues Analysis in Food and Feed」更是持續更新，繼前 1 版 SANCO/10684/2009（01/01/2010 發行 ），今年再次更新至 SANCO/12495/2011（01/01/2012 發行），建議國內含本所在內權責單位應同步比對並適時修正國內相關規範，以符合國際趨勢，同時針對檢驗設備及人力技術等缺口，投入更多資源，不僅維繫現有檢測能量更要持續提升，除了增加例行性同步檢驗之藥劑種類，簡化前處理流程以降低人力、時間及成本也非常重要，對於各藥劑之殘留物定義應與國際一致並對須檢驗之指標化合物建立適當分析方法，尤其農產品可能出現之農藥或動物用藥等化學物質之國際能力試驗比對更應持續參加。

二、擴展殘留監測範圍及安全評估層面：比對歐盟或其他先進國家在風險評估及殘留監測及取食調查等相關安全性評估工作上，臺灣仍有許多進步空間，如多重藥劑檢驗種類、加工處理因子、取食評估方式及實際暴露量評估模式等，均值得國內借鏡參考，期能在汲取國外經驗的同時配合國內實際狀態，建構出一套適用臺灣之農藥殘留風險評估模式。

三、持續派員參加國際研討會交流及建立溝通管道：此行為本所首次派員參與 EPRW，美中不足的是臺灣只有衛生署食品藥物管理局沈盈如技正及本人兩位，相較日韓至少 8、9 人集體行動臺灣人數實在略顯單薄，尤其在 6 月 28 日大會結束當天，看著大禮堂門口告示牌上寫滿各國文字歡送與會成員旅途平安（Have a safe Journey），有日文、韓文，卻獨獨缺了中文，強烈建議不論是農業或衛生單位，未來應持續派員參加 EPRW 等重要國際農藥殘留研討會，除能拓展視野與國際接軌，汲取最新觀

念及技術提升我國農藥殘留研究水準，透過分享臺灣在這個領域的研究成果及經驗，更讓台灣聲音被世界聽見，衷心期待未來在更多臺灣研究人員的參與下，EPRW 的官方歡送告示上能出現中文版的「旅途平安」。

四、邀請專家來台交流及辦理國際研討會：雖然是歐洲農藥殘留研討會，然與會專家遍及全球各主要國家，此行交流之國外專家學者多半非常樂意進行分享研究經驗，不吝提出寶貴建言，未來若有機會建議可邀請如 Dr. Lehotay 等國際知名專家至國內分享最新研發成果，對提升國內農藥殘留檢驗能力或相關風險評估觀念都能有極大助益。目前在國際農藥殘留研討會中，EPRW 固定每兩年於不同歐洲國家輪流辦理，下一屆 EPRW 2014 年將在比利時布魯塞爾舉行，會議結束前比利時代表自本次大會主席手上接下了會旗並以短片介紹比利時人光風光，大會同時介紹在 2013 年 5 月 26 日至 29 日於哥倫比亞波哥大舉行之第 4 屆拉丁美洲農藥殘留研討會（Latin American Pesticide Residue Workshop, LAPRW）與即將（2012 年 7 月 15 日至 18 日）在美國佛羅里達聖比德海灘舉辦之佛羅里達農藥殘留研討會（Florida Pesticide Residue Workshop, FPRW），而 FPRW 在 2013 年將更名爲北美化學殘留研討會（North American Chemical Residue Workshop, NACRW），涵蓋層面將更加廣泛，反觀亞洲地區，目前爲止仍未舉辦過類似國際農藥殘留專業研討會，透過持續與全球及大陸地區專家交流與規劃，期盼有朝一日能讓第 1 屆亞洲農藥殘留研討會（Asia Pesticide Residue Workshop）正式在臺灣舉行。

附件一：**EPRW 2012** 會議照片

2012年第9屆EPRW大會開幕及演講

主會場科學大禮堂2樓講堂與成員

奧地利官員向與會來賓致歡迎詞

開幕式現場音樂演奏表演

USDA Dr. Steven Lehotay專題演講

會議討論與壁報論文發表

專題演講結束後統一提問交流討論

殘留量定義主題日之Podium discussion with stakeholders

壁報論文發表區-各主題論文配置

壁報論文發表區-服務臺與工作人員

正式晚宴-科學工藝博物館

維也納科學工藝博物館宏偉外觀

人照衛星高掛博物館內屋頂

眾多展覽品圍繞下的自助餐吧臺

與會各國成員享用餐點及熱絡交流

徒步導覽-維也納市區

在地導遊詳細說明古蹟之歷史典故

維也納皇宮霍夫爾堡著名景點-瑞士門

維也納地標-氣派雄偉的聖史帝芬大教堂

舉世聞名的表演聖地-維也納國家歌劇院

國內外人士交流合影

與USFDA Dr. Jon Wong合影

與TFDA 沈盈如技士合影

與USDA Dr. Steven Lehotay合影

與HJ Heinz Ms.Polly Grundy 合影

EPRW 2012大會閉幕及會場留影

大會主席 Dr. Sonja Masselter 致詞

大會司儀向Dr. Sonja Masselter獻花

獨缺中文版旅途平安的歡送告示牌

會議結束前於科學大禮堂前留影紀念

附件二：**2012** 年歐洲農藥殘留研討會議程表

Monday, June 25, 2012

10.30 - 18.30 **Delegate registration**

10.30 - 18.30 **Mounting of posters**

15.00 - 15.20 **Opening Ceremony, Introduction and Welcome**
Sonja Masselter, AGES, Chairperson of EPRW 2012

15.20 - 15.35 **Opening Speech**
Carolin Krejci, Federal Ministry of Health

15.35 - 15.50 **Opening Speech**
Friedrich Sövegjarto, Head of business area Food Safety, AGES

Chairpersons: ***Ionara PIZZUTTI; Amadeo R. FERNANDEZ-ALBA***

15.50 - 16.20 **Keynote Lecture 001**
MMM means multiclass, multiresidue method, which accommodates "more more more," but when is "more" enough?
Steven Lehotay, United States Department of Agriculture (USDA), Wyndmoor, PA, USA

16.20 - 17.05 **Coffee break**

17.05 - 17.30 **Keynote Lecture 002**
The use of pesticide residue monitoring data for dietary exposure assessments
Hermine Reich, EFSA - Pesticides Department (PRAPeR,), Parma, Italy

17.35 - 18.00 **Keynote Lecture 003**
"Current challenges in the analysis of pesticide residues"
Jana Hajslova, Institute of Chemical Technology, Prague, Czech Republic

18.05 - 18.15 **Questions and Discussion**

18.15 - 18.30 **EPRW Award**

18.30 - 19.30 **Poster Session I**

19.30 - 21.00 **Welcome reception**

Tuesday, June 26, 2012

08.00 - 09.00 **Registration desk open**

09.00 - 09.10 **Announcements**

Chairpersons: ***Darinka ŠTAJNBAHER; Vincent HANOT***

09.10 - 09.30 **Lecture 004**
Flow injection –– MS for rapid screening of pesticides not amenable to multi-residue methods: potential and limitations
Hans MOL, RIKILT (Institute of Food Safety), Wageningen, The Netherlands

09.35 - 09.55 **Lecture 005**
To target or not to target in pesticide routine testing?
Katerina MASTOVSKA, Covance Laboratories - Nutritional Chemistry and Food Safety, Greenfield, IN, USA

10.00 - 10.20 **Lecture 006**
Ion mobility – mass spectrometry as a new approach for the screening of pesticide residues in food
Séverine GOSCINNY, Scientific Institute of Public Health, Brussels, Belgium

10.20 - 10.35 **Questions and discussion**

10.35 - 11.40 **Coffee break / Exhibition / Posters**

10.45 – 11.30 **Vendor Session 1: THERMO FISHER SCIENTIFIC**

Chairpersons: ***Mette Erecius POULSEN; Paul ZOMER***

11.40 - 12.00 **Lecture 007**
New developments for combined accurate LC-MS and LC-MS/MS analysis of pesticide residues
Carmen FERRER, University of Almeria, EURL FV, Almeria, Spain

12.05 - 12.25 **Lecture 008**
Conclusions and future trends of the European Proficiency Tests for pesticides in Fruits and Vegetables (EUPTs-FV)
Paula MEDINA, University of Almeria, EURL FV, Almeria, Spain

12.30 - 12.50 **Lecture 009**
FVO audits of official pesticide residue controls
Jan VON KIETZELL, Food and Veterinary Office of the European Commission, Grange, Ireland

12.50 - 13.05 **Questions and discussion**

13.05 - 14.50 **Lunch break / Exhibition / Posters**

13.10 - 13.55 **Vendor Session 2: BRUKER**

14.00 - 14.45 **Vendor Session 3: SPEX**

Chairpersons: ***Susanne EKROTH, Henk A. VAN DER SCHEE***

14.50 - 15.10 **Lecture 010**
Accreditation Procedures in the field of testing for pesticide residues in foods and beverages: View of EA Accreditation Bodies
Ioannis SITARAS, E.SY.D. (Hellenic Accreditation System S.A.), Kallithea, Greece

15.15 - 15.35 **Lecture 011**
French total diet study on pesticide residues: levels in food and dietary risk to consumers
Alexandre Nougadère, Risk Assessment Directorate - French agency for food, environmental and occupational health & safety (ANSES) ,Paris, France

15.40 - 16.00 **Lecture 012**
Cumulative exposure assessment to pesticides
Jacob van Klaveren, National Institute for Public Health and the Environment (RIVM), Bilthoven, The Netherlands

16.05 - 16.20 **Questions and discussion**

16.20 - 17.15 **Coffee break / Exhibition**

16.30 - 17.15 **Vendor Session 4: GERSTEL**

17.15 - 19.00 **Poster session II**

19.00 **Conference dinner**

Wednesday, June 27, 2012

EPRW Themed Day
RESIDUE DEFINITION

08.00 - 09.00 **Registration desk open**

09.00 - 09.10 **Announcements**

Chairpersons: ***Lutz ALDER, Michelangelo ANASTASSIADES***

09.10 - 09.30 **Lecture 013**
Introduction of the Themed Day "Residue Definitions
Eric Truchot, French agency for food, environmental and occupational health & safety (ANSES), Paris, France

09.35 - 09.55 **Lecture 014**
Residue Definitions – A Registrant's Perspective
Monika Bross, BASF SE, Crop Protection – Product Safety and Registration, Germany

10.00 - 10.20 **Lecture 015**
Residue Definitions - a Risk Assessor´s Perspective
Christian Prohaska, Austrian Agency For Health And Food Safety (AGES), Vienna, Austria

10.20 - 10.35 **Questions and discussion**

10.35 - 11.40 **Coffee break / Exhibition / Posters**

10.45 - 11.30 **Vendor Session 5: AGILENT TECHNOLOGIES**

11.40 - 12.00 **Lecture 016**
Metabolites, conjugates and residue definition: Steps during validation of analytical methods for pesticides and the practice of monitoring
Harald Weber, Eurofins Agroscience Services Chem GmbH, Hamburg, Germany

12.05 - 12.25 **Lecture 017**
Complex residue definitions – Possibilities for simplification
Bruno Dujardin, European Food Safety Authority (EFSA), Pesticides Unit MRLs, Parma, Italy

12.30 - 12.50 **Lecture 018**
Tentative title: Relation between MRL setting and consumer
Francesca Arena, DG SANCO, Unit E3 - Chemicals, contaminants, pesticides, Brussels, Belgium

12.50 - 13.05 **Questions and discussion**

13.05 - 14.50 **Lunch break / Exhibition / Posters**

13.10 - 13.55 **Vendor Session 6: LECO**

14.00 - 14.45 **Vendor Session 7: RESTEK**

14.50 - 15.10 **Lecture 019**
The impact of legal residue definitions on an efficient enforcement of maximum residue limits for food of plant origin
Finbarr O'Regan, Pesticide Control Laboratory, Backweston, Celbridge, Co. Kildare, Ireland

15.15 - 15.35 **Lecture 020**
The impact of legal residue definitions on an efficient enforcement of maximum residue limits for food of animal origin
Ralf Lippold, State Institute for Chemical and Veterinary Analysis of Food (CVUA Freiburg) and EURL AO, Freiburg, Germany

15.35 - 16.20 **Podium discussion with stakeholders**
Moderation: Andre de Kok

16.20 - 17.15 **Coffee break / Exhibition / Posters**

16.30 - 17.15 **Vendor session 8: AB Sciex**

17.15 - 19.00 **Poster session III**

19.00 **Social Events: Boat trip or Guided tour**

Thursday, June 28, 2012

08.00 - 09.00 **Registration desk open**

09.00 - 09.10 **Announcements**

Chairpersons: ***Despo Louca CHRISTODOULOU; Stewart REYNOLDS***

09.10 - 09.30 **Lecture 021**
Development and validation of a UHPLC-ToFMS and UHPLC-MS/MS based approach for screening pesticide residues in fruit and vegetables
Richard Fussell, Food and Environmental Research Agency (Fera), York, UK

09.35 - 09.55 **Lecture 022**
Multiresidue analysis of 412 pesticides in botanical dietary supplements by modifications of the QuEChERS procedure and analysis by liquid chromatography-tandem mass spectrometry (LC-MS/MS)
Jon Wong, U.S. Food and Drug Administration College Park, MD, USA

10.00 - 10.20 **Lecture 023**
Enhancing the analytical performance of multiresidue pesticides determination in cereals and feedingstuffs by acetonitrile-based extraction and GC-QqQ-MS/MS
Stanislaw Walorczyk, Institute of Plant Protection - National Research Institute, Poznan, Poland

10.20 - 10.35 **Questions and discussion**

10.35 - 11.40 **Coffee break / Exhibition / Posters**

10.45 - 11.30 **Vendor Session 9: WATERS**

Chairpersons: ***Patrizia PELOSI; Magnus JEZUSSEK***

11.40 - 12.00 **Lecture 024**
Forensic investigations into the use of illegal strains of Bacillus Thuringiensis
Theo de Rijk, RIKILT (Institute of Food Safety), Wageningen, The Netherlands

12.05 - 12.25 **Lecture 025**
Processing factors of several pesticides in melons and carrots by household and industrial processing
Vincent Hanot, Scientific Institute of Public Health, Brussels, Belgium

12.30 - 12.40 **Lecture 026**
Automated Raw Extract Analyser for Pesticides - Determination of 300 pesticides from different foods without sample preparation by 2D-LC-MS/MS
Stefan Kittlaus, State Laboratory for Health and Veterinary Affairs (LUA) Saxony, Dresden, Germany

12.40 - 12.50 **Lecture 027**
Effect of common household processing treatments on levels of pesticide residues in vegetables
Asimina Papadi–Psyllou, University of Thessaly, Nea Ionia - Volos, Greece

12.50 - 13.05 **Questions and discussion**

13.05 - 14.50 **Lunch break / Exhibition / Posters**

13.10 - 13.55 **Vendor Session 10: PHENOMENEX**

14.00 - 14.45 **Vendor Session 11: SHIMADZU**

Chairpersons: ***Horacio HEINZEN, Christoph CZERWENKA***

14.50 - 15.10 **Lecture 028**
Development and validation of a novel residue analysis method for glyphosate and AMPA in plant matrices by LC-MS/MS
Kaushik Banerjee, National Research Centre for Grapes, Pune, INDIA

15.15 - 15.35 **Lecture 029**
Analysis of pesticide residues to evaluate agricultural practices in Colombian passion fruit production
Jairo Arturo Guerrero Dallos, National University of Colombia, Bogota D.C., Colombia

15.35 - 15.50 **Questions and discussion**

Chairpersons: ***Antonio VALVERDE and Vincent HANOT***

15.50 - 16.25 **Poster Award** (plus 5 minutes oral presentation of Poster Award winners)

16.25 - 16.55 **Closing remarks, Announcement of the next EPRW, LAPRW, FPRW**

16.55 - 17.30 **Farewell Coffee and refreshments / Closing of the workshop**

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The Determination of Mancozeb Residues in Olive and Orange Processed Commodities using UPLC-MS/MS
Brewin Stephen, Miller Chris, Khoshab Ali

PV 002
Development and applications of a pesticide multiresidue analysis turn-key system utilizing UHPLC-Orbitrap MS and post data processing
Bromirski Maciej, Chang James, Wong Jon, Yang Paul, Yang Charles, Ghosh Dipankar

PV 003
Pesticide Multiresiduse Analysis in Vegetables by GC-MS/MS equipped with LVI/PTV after Modified QuEChERS Sample Preparation
Cha Kyung Hoon, Kim Eunhye, Kim Jeong-Han

PV 004
A New Capillary GC Column for Highly Efficient Separation of Polycyclic Aromatic Hydrocarbons Including the EFSA PAH4
Cochran Jack, Rigdon Amanda, Lautamo Roy, Reese Shawn, Kowalski Julie

PV 005
Enhanced Degradation of Organochlorine, Organophosphorus, Organonitrogen, and Carbamate Pesticides During Hot Splitless GC Injection of QuEChERS Extracts of Canola Seed
Cochran Jack, Misselwitz Michelle, Kowalski Julie

PV 006
Is It Better to Use an Empty or Glass Wool Packed Liner for Hot Splitless GC Injection? A Case Study with a QuEChERS Extract for Pesticides in Tobacco
Cochran Jack, Kowalski Julie, Misselwitz Michelle

PV 007
Comprehensive Confirmation Workflow for Full Scan Accurate Mass Multi-Target Screening of Pesticides in Food giving Results with Maximum Confidence
Decker Petra, Scherbaum Ellen, Loetterle Rebekka, Raether Oliver, Krebs Ilmari, Wendt Karin

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A new complete solution for automated, comprehensive ESI-(Q-)TOF full scan accurate mass screening of pesticides in food with high confidence
Decker Petra, Krebs Ilmari, Hillis James

PV 009
Evaluation of the Performance Improvements Needed in an ESI-QTOF-MS System for Qualitative and Quantitative Multi-Target Pesticide Screening in Food
Decker Petra, Scherbaum Ellen, Loetterle Rebekka, Raether Oliver, Krebs Ilmari

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Gledhill Antonietta, McCullagh Mike, Rao Ramesh

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A comparative study of two commercial pressurized solvent extractors for the determination of pesticides in chili and paprika spice
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Online coupled turbulent flow chromatography – triple quadrupole mass spectrometry for the analysis of pesticide residues in grapes, baby food and wheat flour matrices
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PV 014
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PV 018
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Lock Stephen, Unterluggauer Hermann

PV 019
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PV 022
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PV 023
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Yang Charles, Yang Paul, Thach Serei, Bromirski Maciej, Ghosh Dipankar

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Young Michael, Ross Euan, Tran Kim

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Amelin Vasily

PA 003
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Amelin Vasily

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LC-MS/MS Screening method for pesticide residue analysis: a targeted acquisition approach
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Ströher Kolberg Diana Inês, Anastassiades Michelangelo, Fussel Richard, Hetmanski Michael, Mol Hans, Meijer Thijs

PA 084
Method validation of the low level determination of Amitraz and its degradation products in bio honey
Suszter Gabriella, László József

PA 085
LC-MS/MS pesticide residue analysis in garlic
Telles Danuza, Silva Maria Carolina, Cunha Adriano, Albuquerque Junior Eden, Silva Marileide, Araujo Adelia

PA 086
Analysis of pesticide residues in animal feed – method comparison
Thielen Andreas, Oellig Claudia, Schwack Wolfgang

PA 087
Validation of QuEChERS method using CG-μECD for analysis of 12 pesticides organochlorine in tomato (Solanum lycopersicum Mill)
Torres Nádia Hortense, Nazato Carina, Vilca Franz Zirena, Tornisielo Valdemar Luiz

PA 088
Development and validation of a method for Pentachlorophenol (PCP) determination in Honey and Milk
Ubaldi Alessandro, Lucchetti Dario, Berretta Sesto, Russo Katia

PA 089
Development of clean-up options for the pesticide screening in hop and hop extracts at low levels
Uhlemann Rico, Lipinski Juergen, Speer Karl, Romanotto Anna, Mucuk Kayhan, Kittlaus Stefan

PA 090
Comparison of initial method validation and on-going method validation/verification results for multi-residue analysis of 112 pesticides in vegetables by ethyl acetate extraction and GC/MS/MS determination
Valverde Antonio, AguileraAna, Lozano Rafael, Amat Francisco, Aldavero Pilar, Rodriguez Mariano

PA 091
Ascorbic acid as analyte protectant applied within the QuEChERS multi-method (GCMS)
van der Heide Martin, Bruns Silke, Lach Günter, Parlar Harun

PA 092
Analysis Of Pesticide Residues In Food Of Animal Origin With LC-MS/Ms And GC- MS/MS
Waha Angela, Lichtmannegger Karolina, Manuela Rohn, Fischer Roman, Unterluggauer Hermann, Masselter Sonja

PA 093
Analysis of pesticides by QuEChERS - application of Z-Sep family of sorbents for cleanup
Wallworth Denise, Shimelis Olga, Stenerson Katherine, Barrey Emily

PA 094
Investigation of honeybees poisoning incidents by gas and liquid chromatography coupled with tandem quadrupole mass spectrometry
Walorczyk Stanislaw, Drozdzynski Dariusz, Gnusowski Boguslaw

PA 095
Results of multiresidue determination of pesticides in wines using gas and liquid chromatography with tandem quadrupole mass spectrometry
Walorczyk Stanislaw, Drozdzynski Dariusz, Czaczyk Zbigniew, Gnusowski Boguslaw

PA 096 UHPLC/ESI-MS/MS and UHPLC/ESI Q-Orbitrap MS analysis of 151 pesticides in soybeans and pulses
Wang Jian, Cheng Wendy, Chow Willis

PA 097
Determination of four quats Chlormequat, Mepiquat, Paraquat und Diquat
Witt Gabriele, Schmidt Klaus, Seidler Gabriele, Brand Ingrid

PA 098
Monitoring and Quantitation of Pesticides and Chemical Contaminants by Ultrahigh Performance Liquid Chromatography-High Resolution Orbital Trap Mass Spectrometry
Wong Jon, Zhang Kai, Hayward Douglas, Liao Chia-Ding, Yang Paul

PA 099
Analysis of twelve organochlorine pesticide residues in strawberries using QuEChERS AND GC-µECD
Zirena Vilca Franz, Tornisielo Valdemar Luis

PA 100
Validation of a fully automated qualitative screening method for pesticides in vegetables and fruits based on LC-full scan high resolution (Orbitrap) MS
Zomer Paul, de Koning Maarten, Mol Hans

PA 101
Multi-residue analysis of pesticides in products of animal origin by generic extraction and LC-MS/MS
Zomer Paul, Venema Dini, de Rijk Theo, Mol Hans

Monitoring and Intake Assessment

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Principles of planning risk based monitoring programmes
Ambrus Árpád, Horváth Zsuzsanna, Cseh Júlia, Szeitzné-Szabó Mária

PM 002
Organic Wine Production - Cross Contamination with Pesticide Residues Caused by Filtration?
Bauer Nadja, Schüle Eberhard, Wieland Marc, Scherbaum Ellen

PM 003
Method validation of pesticide residues with LC-MS/MS in different tea sorts and monitoring results in 2010
Brand Ingrid, Schmidt Klaus, Seidler Gabriele

PM 004
Pesticide residues evaluation of bean and rice commercialized in Sao Paulo state
Ciscato Cláudia, Gebara Amir, Silva Diogo, HamadaNatalia, Souza Gisele, Barbosa Claudia

PM 005
Monitoring of pesticide residues in common bean (Phaseolus vulgaris, L.) consumed in Brazil
Costa Márcia, Faria Vanessa, Franklin Heloiza, Peixoto Tânia

PM 006
Survey results of pesticides and mycotoxins in cereals, maize and rice for the years 2008-2011
de Kok André, Pizzutti Ionara, , Scholten Jos, de Kroon Marijke, Kiedrowska Basia, Volp Teuni

PM 007
Monitoring of the Use of Pesticides in Ornamentals 2002-2011, Findings and Trends
de Rijk Theo, Zomer Paul, van Dam Ruud, van der Kamp Henk, Derksen Jacqualine, Mol Hans

PM 008
Monitoring Pesticide Residues in different vegetal matrices by LC-MS/MS and GCMS/MS
Ferretti Enrica, Gasparini Mara, Angelone Barbara, Castrezzati Giuseppina, Pellegrini Elena,

PM 009
Dieldrin in cod liver from the North Sea - Time trend from 1988
Fromberg Arvid, Højgård Arne, Poulsen Mette Erecius

PM 010
Residues of carbofuran and carbaryl in rice straw for livestock feed in Korea
Gil Geunhwan, Kim Jinbae, Kim Chansub, Park Jaeeup, Lee Kyuseung

PM 011
Monitoring of pesticide residues in Polish feed of plant origin in 2006-2010
Gnusowski Boguslaw, Nowacka Anna

PM 012
Pesticide residues in Polish organic crops in 2006-2010
Gnusowski Boguslaw, Nowacka Anna, Walorczyk Stanislaw

PM 013
Frankfurt/Main Airport: 5 years of new border control system for food originating from third world countries
Heinzler Matthias,

PM 014
Analysis and monitoring of the herbicide glyphosate in legumes particularly in lentils
Hrbek Vojtech, Urbanova Jana, Vodrazka Petr, Kocourek Vladimir, Hajslova Jana

PM 015
Residues in Citrus Fruits – Comparison of Whole Fruits and Flesh
Jezussek Magnus, Elß Sandra, Banspach Leena

PM 016
Official Control of Organic Viticulture in the Czech Republic: Pesticide Residues Analysis in Vine Leaves and Grapes
Kosubová Petra, Tieffová Pavla, Prudil Martin, Urban Jiří, Pospíchalová Markéta

PM 017
Control of pesticide residues in fruit samples on the market of the Republic of Serbia in 2011
Lazić Sanja, Pucarević Mira, Bursić Vojislava, Kecojević Isidora, Vasiljević Ivana

PM 018
Determination of Pesticide Residues in Berries by GC/MS and LC/MS
Marosanovic Biljana, Banic-Siminic Jelena, Stankov

PM 019
Incidental detection of pesticide residues in organic seeds
Mol Hans, Zomer Paul, Groot Steven

PM 020
Official testing of pesticide residues in Polish crops in 2005-2010
Nowacka Anna, Gnusowski Boguslaw, Walorczyk Stanislaw, Drozdzynski Dariusz, Raczkowski M.

PM 021
Preliminary study of DDT metabolites residues in soils and horticultural crops within a pilot area in the Neuquén Province, Argentina
Ohaco Patricia, Zanetta Verónica, Vitulich Guillermo, Cuevas Mónica, Ruiz Claudia, Iglesias Norma

PM 022
Pesticide residues in feeding stuff for laying hens – results from samples collected in 20 EU member states
Poulsen Mette Erecius, Fromberg Arvid

PM 023
Australian National Residue Survey – rationale, roles, responsibilities, results
Reichstein Ian, Budd Karina, Jim Derrick, Kevin Healy

PM 024
The Brazilian National Programme of Pesticide Residue Analysis in Food: a Decade of Experience
Rembischevski Peter, Barretto de Toledo Heloisa Helena, Meirelles Luiz Cláudio

PM 025
Monitoring of Glyphosate Residues in Herbicide Tolerant Soybean from Commercial Production Areas: Seasons 2005/2006, 2006/2007, 2007/2008, 2008/2009 and 2009/2010
Rodrigues Nadia R., Abakerli Rosângela B., Souza Ana P. F., Favoretto Luís R. G.

PM 026
Determination of Pyretroids and Organophosphorous pesticides residues in vegetable samples from the Central Department in Paraguay
Romero Maria Isabel, Montiel Claudia, Lezcano Lorena, Dominguez Alba, Pavón Olga, Moriya Vidal

PM 027
Investigation of organochlorine pesticide residues in vegetables and soil
Sadiku Drenusha, Lichtmannegger Karolina, Rohn Manuela, Unterluggauer Hermann, Unmann Alfred, Masselter Sonja

PM 028
Organochlorine pesticides in food and environmental samples and their regulation in Bangladesh
Shoeb Mohammad, Rouf Mamun M. Iqbal, Nahar Nilufar

PM 029
Pesticide residues in food from India and China – a Nordic Project
Skretteberg Lise Gunn, Lyrån Birgitte, Holen Børge, Sivinen Kalivi, Andersen Jens Hinge, Jansson Anders , Wannberg A.

PM 030
Morpholine, Diethanolamine and Triethanolamine - Prohibited Additives in the EU
Ströher Kolberg Diana Inês, Wildgrube Cristin, Scherbaum Ellen, Wieland Marc, Bauer Nadja, Anastassiades Michelangelo

PM 031
Residues of Pesticides in Lentils - Glyphosate and What Else?
Ströher Kolberg Diana Inês, Wildgrube Cristin, Wieland Marc, Bauer Nadja, Scherbaum Ellen

PM 032
Disappearance of fluquinconazole and pyrimethanil residues in apples for baby food production
Szpyrka Ewa, Kurdziel Anna, Grzegorzak Magdalena, Matyaszek Aneta, Slowik-Borowiec Magdalena

PM 033
Monitoring of pesticide residues in strawberries grown in various model regimes of treatments
Urbanova Jana, Hrbek Vojtech, Kocourek Vladimir, Kloutvorova Jana, Hajslova Jana

PM 034
Risk based official control. Developments during the last 10 years in the Netherlands
van der Schee Henk A., Kaandorp Ben

PM 035
Results from the Monitoring Programm 2002 - 2011 – Pesticide Residues in Organically Grown Commodities from the German Market
Wauschkuhn Carmen, Scherbaum Ellen, Schüle Eberhard, Wieland Marc, Bauer Nadja

PM 036
QuEChERS Method for determination of eight new generation fungicides in grapes using GC-MS
Zirena Franz, Sanz-Asensio Jesus, Gárriz-Soba Laura, Gárriz-Soba Martínez-Soria Maria Teresa

Regulatory Issues and Risk Assessment

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Residue analysis of new pesticides
Bergelt Sebastian, Franz Helke

PR 002
Estimated daily intake and human risk assessment of pesticide residues on agricultural products in Republic of Korea produced in 2010
Han Guk-TakChoi Nam-Geun, Lee Chul-Ho, Lee Yu-Ri, Kim Ill-Jung, Lee Kyu-Seung

PR 003
Determination and risk assessment of endocrine disrupting pesticides in total diet studies using QuEChERS extraction combined with GC-MS
Karakitsou Anastasia, Hela Dimitra

PR 004
Estimation of dietary exposure to pesticide residues in Polish crops in 2006-2010
Nowacka Anna, Gnusowski Boguslaw, Raczkowski Michal

PR 005
Toward the Development of Consumer Risk Assessment Models through the Consumption of Agricultural Commodities in Korea
Paik Min-Kyoung, Lee Je-Bong, Oh Jin-A, Youn Jung-Eun, Gil Geun-Hwan, Kim Doo-Ho

PR 006
Fate of plant protection agents during hop processing
Schmidt Roland, Faltermeier Alois, Wuzik Andreas

PR 007
Why conjugates should be included in the residue definition: overview
Sochard Bérangère, Abbott Claire, Chalbi Bouaouaja Aïda, Ferreira Lucien

PR 008
Factors effecting the estimated acute exposure
Szabó István, J.Zentai Andrea, Sali Judit, Szerletics Turi Mária, Ambrus Árpád

PR 009
A Regulatory Authority's experiences of conversion factors: a perspective from residue chemists in the UK Chemicals Regulation Directorate
Williams, Gary L.Scrivens R., Stephenson Claire L.

Other Topics

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Residue Analysis of Pyridaben in Tomato, and Azoxystrobin in Zucchini: Evaluation of the Sample Processing Uncertainty
Aguilera Ana, Valverde Antonio, Boulaid Mourad, Camacho Francisco

PO 002
Analytical aspects for the improvement of controls of glyphosate in Argentina
Beldomenico Horacio R., Repetti María Rosa, De Jesús Juan José, Demonte Luisina, Michlig Nicolás, García Silvia Rosa

PO 003
Difficulties found in determination of pesticides through the European Union Proficiency Tests for pesticides in fruits and vegetables (EUPT-FV)
Belmonte Noelia, Medina Paula, Malato Octavio, Mezcua Milagros, Ferrer Carmen, Fernandez-Alba Amadeo R.

PO 004
Developing a Web-based System for Computing Pre-Harvest Residue Limits (PHRLs)
Chang Han Sub, Song In Ho, Sohn Byoung Cheol, Lee Cheol Ho, Choi Nam Geun, Lee Young Gu

PO 005
Behavior of ametryn and glyphosate herbicides applied in association in soils of cultivation of sugar cane
de Toledo Alves Paulo Alexandre, Luiz Tornisielo Valdemar, Ribeiro Dias Ana Carolina, Bonfleur Eloana

PO 006
Persistence of MCPO and Imidacloprid in Mediterranean soils under different land use
Gamón Miguel, Sancenón J., Roca-Pérez, L., Alcover S. , Mormeneo, S., Gil, C., Boluda, R.

PO 007
Occurrence of fungicides, pharmaceuticals and mycotoxins residues in different raw materials
Gamón Miguel, Sancenón J., Romera D., Mormeneo S., Marimón L, Boluda, R.

PO 008
Kinetic study of the photodegradation of Ametoctradin under different pH conditions
Gárriz-Soba Laura, Sanz-Asensio Jesus, Zirena Vilca Franz, Martínez-Soria Maria Teresa

PO 009
Proficiency test results on pesticide residues in olive oil organized by the italian NRLAO
Generali Tiziana, Amendola Graziella, Pelosi Patrizia, Attard Barbini Danilo, Stefanelli Patrizia, Girolimetti Silvana, Santilio Angela, Dommarco Roberto

PO 010
Dissipation curves of Imazalil in citrus during storage in packhouses
Heinzen Horacio, Besil Natalia, Perez Andres, Cesio Veronica

PO 011
Effects of processing on a level of dithiocarbamate residues in apples intended for production of foods for infants and young children
Kurdziel Anna, Szpyrka Ewa, Matyaszek Aneta, Slowik-Borowiec Magdalena, Grzegorzak Magdalena

PO 012
The most common non-conformities during the assessment of pesticides residues laboratories for accreditation according to the ISO 17025:2005
Liapis Konstatinos S.

PO 013
The Brazilian laboratory network: Progress towards the evolution of the national residue and contaminants control plan on plant products
Lins Erick, Mauricio Angelo, Brito Marriel

PO 014
Integrated analytical approaches to assess indicators of the effectiveness of pesticide management practices at a catchment scale
Maestroni Britt, Nario Adriana, Nordgard Anders, Ramiro Castro Cesar, Carazo Elizabeth, Guang-Guo Ying

PO 015
Conversion Factors e-learning
Medina Paula, Malato Octavio, Mezcua Milagros, Ferrer Carmen, Fernández-Alba Amadeo R.

PO 016
UK Prospective on Trends in Residues
Nawaz Sadat, Barker Helen

PO 017
Transfer factors of six pesticide in lettuce during manipulation and preservation in modified atmosphere packaging (MAP)
Oliva José, Morales Ascensión, Maestro Alba, Fuster Aurelio, Cámara Miguel Ángel, Barba Alberto

PO 018
Effect of freezing on the persistence of six pesticides in zucchini. Calculation of transfer factors
Oliva José, Morales Ascensión, Maestro Alba, Fuster Aurelio, Cámara Miguel Ángel, Barba Alberto

PO 019
In vitro bioavailability of six pesticide residues in lettuce preserved in modified atmosphere packaging (MAP)
Oliva José, Mulero Juana, Girón Francisco, Maestro Alba, Cámara Miguel Ángel, Barba Alberto

PO 020
LC-MS/MS determination and method validation of several herbicides in surface and ground waters
Papadakis Emmanouil-Nikolaos, Kotopoulou Athina, Tsampoula Aggeliki, Vryzas Zisis, Kintzitoglou Katerina, Papadopoulou-Mourkidou Euphemia

PO 021
Estimation of measurement uncertainty by the SANCO/12495/2011 top-down approach in a MR organochlorine pesticides method for food of animal origin
Pecorelli Ivan, Piersanti Arianna, Tavoloni Tamara, Alunni Sabrina, Paoloni Angela, Lestingi Carmela

PO 022
Alternative estimation of measurement uncertainty by top down approach for pesticide MRM in fruit and vegetables when PTs data are not available or are lacking
Pecorelli Ivan, Paoloni Angela

PO 023
The first Brazilian proficiency testing provider for pesticides residues in fruit and vegetables accredited
Pinto Bastos Lucia Helena, W. M. Cardoso Maria Helena, V. Gouvêa Adherlene, C. de La Cruz Marcus Henrique, Nóbrega Armi

PO 024
Innovative determination of polar organophosphate pesticides in agricultural soils based on high-resolution Orbitrap mass spectrometry
Pinto Bastos Lucia Helena, Padilla-Sánchez Juan Antonio, Romero-González Roberto, Garrido-Frenich Antonia

PO 025
Use of additive extemporaneous vegetable oil combined with oligosaccharides to improve the quality of the treatments with plant protection products
Rousseau Gilles, DUCAT N., DE VOS P., COUTANCEAU P., PIGEON O.

PO 026
Uncertainty estimation in the analysis of pesticide residues in olive oil using data from proficiency tests
Stefanelli Patrizia, Generali Tiziana, Danilo Attard Barbini, Girolimetti Silvana, Dommarco Roberto

PO 027
Trifluralin Analysis in Wind-Eroded Soils by QuEChERS Method
Tiryaki Osman, Temur Cemile

PO 028
Fully 13C-Labeled Internal Standards – A Must for LC-MS/MS Multi Analysis? A Discussion on the Example of Mycotoxin Analysis
Wanzenböck Eva, Schiessl Alois

PO 029
Residue and dissipation pattern of three insecticides in cucumber during the cultivation
Yun Mun Hee, Kim Nam-Kuk , Lee Seung Hwa, Park Min Ho , Nam Yu Jeong, Kim Mi Young

PO 030
Determination of QAC (Quaternary Ammonium Compounds) in Food P325 Products
Friedle, Nitsopoulos, Bruns, Lach

附件四：農業藥物毒物試驗所第 **157** 次所務會議：**101** 年科技計畫

（**101** 農科**-4.1.1-**藥**-P1** ）出國報告**-**簡報

藥毒所101年科技計畫（101農科-4.1.1-藥-P1 ）出國報告

參與2012年歐洲農藥殘留研討會（EPRW）

會議地點：奧地利維也納

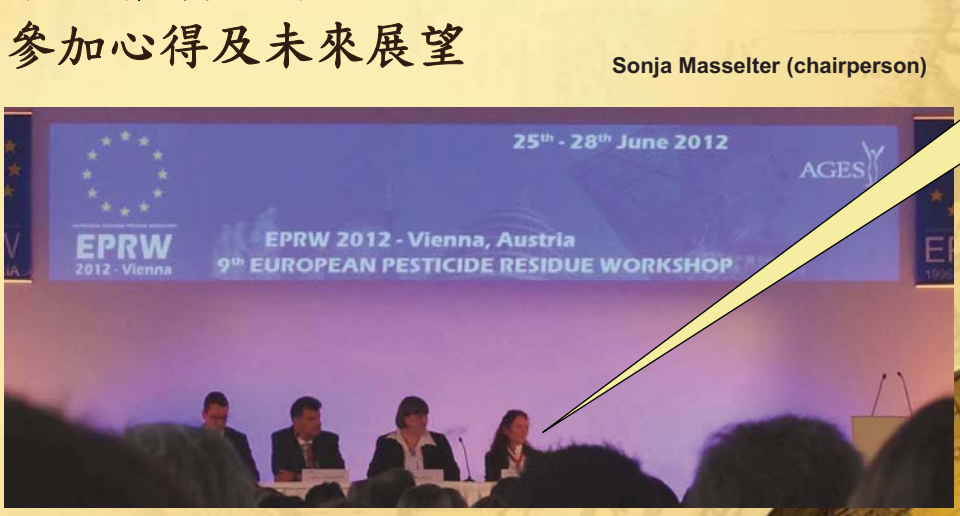
所屬組室：殘毒管制組

報告人：涂青宇

報告日期： 101年7月9日

大　綱

- EPRW之沿革
- 2012年大會內容介紹
- 本次會議主題
- 參加心得及未來展望



Sonja Masselter (chairperson)

Opening Ceremony, 2012/6/25

EPRW之沿革

- 有鑒於農藥種類繁多，相關檢驗分析及安全評估方法之發展日新月異，歐盟自1996年起每2年舉辦1次「歐洲農藥殘留研討會」（European Pesticide Residue Workshop, EPRW），針對食品及農畜產品中農藥及其他毒性物質殘留等相關領域最新研究發展進行交流，除歐盟成員國，全球許多主要國家也共同參與論文發表及討論。

EPRW之沿革

- 「歐洲農藥殘留研討會」（EPRW）於1996年在荷蘭阿克瑪首次舉辦，每2年輪流在不同歐盟國家舉行，地點遍及阿梅里亞（西）、約克（英）、羅馬（義）、斯德哥爾摩（瑞典）、科孚島（希臘）、柏林（德）及斯特拉斯堡（法），已舉辦過8屆。
- 2012年第9屆EPRW於2012年6月25日至6月28日移至奧地利維也納舉行，由奧地利衛生及食品安全中心（Austrian Agency for Health and Food Safety, AGES）負責主辦。

EPRW之沿革

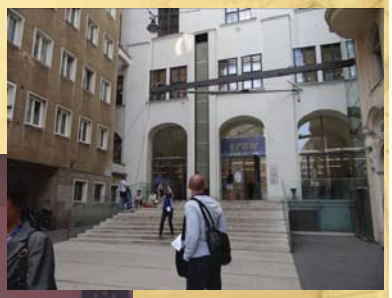
- EPRW 2012科技委員會（Scientific Committee）之成員由來自8個歐洲國家之代表組成。
- 委員服務機關如下：
  1. 奧地利衛生及食品安全中心（AGES）
  2. 德國風險評估聯邦局（Federal Institute for Risk Assessment）
  3. 瑞典國家食品局（Swedish National Food Agency ）
  4. 荷蘭食品及消費產品安全局（Dutch Food and Consumer Product Safety Authority）
  5. 法國聯合服務實驗室（SCL）
  6. 義大利國家衛生研究院（Italian National Institute of Health）
  7. 英國食品及衛生研究組織（Food and Environment research Agency）
  8. 西班牙阿梅里亞大學（University of Almeria）

EPRW之沿革

http://www.ages.at/ages/eprw2012/

2012年大會內容介紹

- 會議場地
- 參加人數
- 科學性議程
- 壁報論文
- 參展廠商



Opening Ceremony, 2012/6/25

2012年大會內容介紹-會議場地

- 維也納科學大禮堂
  The "Aula der Wissenschaften"

Address: Wollzeile 27a, 1010-Vienna

2012年大會內容介紹-參加人數

1. 共計來自全球58個國家，514位參加者參與本次會議，主要來自歐美國家。
2. 東亞地區大陸1位，南韓8位，日本9位。
3. 台灣共有2位與會，TFDA及本所各1位。

EPRW 2012 - Vienna
EUROPEAN PESTICIDE RESIDUE WORKSHOP

AGES

	FirstName	LastName	Organisation	Country
Mrs	Biljana	Trajkovska	State Institute for Chemical and Veterinary Analysis of Food	Germany
Mr	Tyler	Trent	Teledyne Tekmar	United States
Mr	Jurgen	Troch	Fytolab cvba	Belgium
Mr	Eric	Truchot	ANSES	France
Mrs	Angeliki	Tsampoula	ARISTOTLE UNIVERSITY OF THESSALONIKI	Greece
Mr	Ching Yu	Tu	Taiwan Agricultural Chemicals and Toxic Substances Research Institute	Taiwan
Mr	Keith	Tucker	SPEX	United Kingdom
Mr	Anton	Turkowitsch	Österreichische Agentur für Gesundheit und Ernährungssicherheit GmbH	Austria
Mr	Rico	Uhlemann	SOFIA GmbH	Germany
Mr	Christoph	Unger	Österreichische Agentur für Gesundheit und Ernährungssicherheit GmbH	Austria
Mr	Hermann	Unterluggauer	Österreichische Agentur für Gesundheit und Ernährungssicherheit GmbH	Austria
Mrs	Jana	Urbanova	ICT Prague	Czech Republic
Mrs	Diana	Uria	Agilent Technologies	Germany
Mrs	H.Filom			
Mr	Antonio			
Mrs	Daphne			
Mr	Martin			
Mr	Henk			
Mr	Ed			
Mr	Dorn			
Mr	Jacob			
Mr	Johann			
Mrs	Katrin			
Mrs	Laurenc			
Mrs	Angela			
Mr	Jan			
Mr	Simon			
Mr	Franz Si			
Mrs	Angela			
Mr	Stanisla			

EPRW 2012 - Vienna
EUROPEAN PESTICIDE RESIDUE WORKSHOP

AGES

	FirstName	LastName	Organisation	Country
Mr	Maximilian	Schicher	Institut Dr. Wagner	Austria
Mr	Heiko	Schiebel	Eurofins Dr. Specht Laboratorien	Germany
Mr	Christian	Schlitt	University Hospital Luigi Sacco - Milan	Italy
Mr	Roland	Schmidt	NATECO2 GmbH & Co. KG	Germany
Mr	Ralf	Schoening	Bayer CropScience AG	Germany
Mr	Jos	Scholten	NVWA - Netherlands Food and Consumer Product Safety Authority	Netherlands
Mr	Tobias	Schoop	Harlan Laboratories Ltd.	Switzerland
Mr	Andre	Schreiber	AB SCIEX	Canada
Mrs	Pat	Schreiter	Chemisches und Veterinäruntersuchungsamt Stuttgart	Germany
Mr	Eberhard	Schuele	Chemisches und Veterinäruntersuchungsamt Stuttgart	Germany
Mr	Georg	Schulte	Bayer CropScience AG	Germany
Mr	Andreas	Schürmann	Kantonales Labor Zürich	Switzerland
Mr	Wolfgang	Schwack	University of Hohenheim	Germany
Mr	Hakoto	Sebata	Japan Tobacco Inc.	Japan
Mrs	Thanuthaporn	Semathong	Overseas Merchandise Inspection CO.,Ltd.	Thailand
Mr	Carlos	Sepulveda	Agrolab Mexico	Mexico
Mrs	Vassilia	Sgouri	Bayer Cropscience SAS	France
Mr	Don	Shelly	UCT	United States
Mrs	Ying Ru	Shen	Food and Drug Administration	Taiwan
Mr	Mohammad	Shoeb	University of Dhaka	Bangladesh
Mrs	Petra	Sieghart	Qualiservice GmbH	Switzerland
Mr	Kalevi	Sivonen	Finnish Customs Laboratory	Finland
Mrs	Katrin	Sindelhauf	CLF Central Laboratories Friedrichsdorf	Germany
Mr	Ioannis	Sitaras	Hellenic Accreditation System S.A. - ESYD	Greece
Mrs	Lise Gunn	Skretteberg	Bioforsk, Norwegian Institute for Agricultural and Environmental Research	Norway
Mr	Mark	Slater	Syngenta	United Kingdom
Mr	Eric	Snyder	Nestlé	United States
Mrs	Bérangère	Sochard	ANSES	France
Mr	Friedrich	Soceveljarto	Österreichische Agentur für Gesundheit und Ernährungssicherheit GmbH	Austria
Mrs	Andrea	Solt	Österreichische Agentur für Gesundheit und Ernährungssicherheit GmbH	Austria

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2012年大會內容介紹-科學性議程（Scientific programme）

EPRW 2012 - Vienna

AGES

	Monday, June 25, 2012		Tuesday, June 26, 2012		Wednesday, June 27, 2012 Themed Day "Residue Definitions"		Thursday, June 28, 2012	
Morning session			8:00 - 9:00	Registration desk open	8:00 - 9:00	Registration desk open	8:00 - 9:00	Registration desk open
			9:00 - 9:10	Announcements	9:00 - 9:10	Announcements	9:00 - 9:10	Announcements
			9:10 - 9:30	Hans Mol, RIKILT, The Netherlands	9:10 - 9:30	Eric Truchot, ANSES, France	9:10 - 9:30	Richard Fussell, Fera, UK
			9:35 - 9:55	Katerina Mastovska, Covance Labs, USA	9:35 - 9:55	Monika Bross, BASF, Germany	9:35 - 9:55	Jon Wong, FDA, USA
			10:00 - 10:20	Séverine Goscinny, WIV, Belgium	10:00 - 10:20	Christian Prohaska, AGES, Austria	10:00 - 10:20	Stanisław Walorczyk, National Research Institute, Poland
			10:20 - 10:35	Questions and Discussion	10:20 - 10:35	Questions and Discussion	10:20 - 10:35	Questions and Discussion
			10:35 - 11:40	Coffee break (Sponsored by **Shimadzu**) Exhibition and Posters	10:35 - 11:40	Coffee break (Sponsored by **Agilent Technologies**) Exhibition and Posters	10:35 - 11:40	Coffee break, Exhibition and Posters
			10:45 - 11:30	VS1 - Thermo Fischer Scientific	10:45 - 11:30	VS5 Agilent Technologies	10:45 - 11:30	VS9 - Waters
			11:40 - 12:00	Carmen Ferrer, University of Almeria, Spain	11:40 - 12:00	Harald Weber, Eurofins, Germany	11:40 - 12:00	Theo de Rijk, RIKILT, The Netherlands
			12:05 - 12:25	Paula Medina, EURL FV, Spain	12:05 - 12:25	Bruno Dujardin, EFSA, Italy	12:05 - 12:25	Vincent Hanot, WIV, Belgium
			12:30 - 12:50	Jan von Kietzell, FVO, Ireland	12:30 - 12:50	Francesca Arena, DG SANCO, Belgium	12:30 - 12:40 12:40 - 12:50	Stefan Kittlaus, LUA Saxony, Germany Asimina Papadi – Psyllou, University of Thessaly, Greece
			12:50 - 13:05	Questions and Discussion	12:50 - 13:05	Questions and Discussion	12:50 - 13:05	Questions and Discussion
			13:05 - 14:50	Lunch break, Exhibition	13:05 - 14:50	Lunch break, Exhibition	13:05 - 14:50	Lunch break, Exhibition
Afternoon session	Delegate registration for the Conference Mounting of posters		13:10 - 13:55 14:00 - 14:45	VS2 - Bruker VS3 - SPEX	13:10 - 13:55 14:00 - 14:45	VS6 - Leco VS7 - Restek	13:10 - 13:55 14:00 - 14:45	VS10 - Phenomenex VS11 - Shimadzu
			14:50 - 15:10	Ioannis Sitaras, ESYD, Greece	14:50 - 15:10	Finbarr O'Regan, Pesticide Control Lab, Ireland	14:50 - 15:10	Kaushik Banerjee, National Research Centre for Grapes, INDIA
		15:00 - 15:20	Opening Ceremony Introduction and Welcome	15:15 - 15:35	Alexandre Nougadère, ANSES, France	15:15 - 15:35	Ralf Lippold, EURL AO, Germany	15:15 - 15:35	Jairo Arturo Guerrero Dallos, University of Colombia
		15:20 - 15:50	Opening Speeches	15:40 - 16:00	Jacob van Klaveren, RIVM, The Netherlands	15:35 - 16:20	Podium discussion with stakeholders (Moderator: A. de Kok)	15:35 - 15:50	Questions and Discussion
		15:50 - 16:20	Keynote Lecture 1 - Steven Lehotay	16:05 - 16:20	Questions and Discussion			15:50 - 16:25	Poster award (plus 5 minutes oral presentation each)
		16:20 - 17:05	Coffee break, Exhibition and Posters	16:20- 17:15	Coffee break, Exhibition and Posters	16:20- 17:15	Coffee break, Exhibition and Posters	16:25 - 16:55	Closing remarks Announcement of next EPRW, LAPRW, FPRW
		17:05 - 17:30	Keynote Lecture 2 - Hermine Reich	16:30 - 17:15	VS4 - Gerstel	16:30 - 17:15	VS8 -		
		17:35 - 18:00	Keynote Lecture 3 - Jana Hajslova					16:55 - 17:30	Farewell coffee and closing of the workshop
		18:05 - 18:15	Discussion	17:15 - 19:00	Poster session II (**even** numbered posters)	17:15 - 19:00	Poster session III (**odd** numbered posters)		
		18:15 - 18:30	EPRW AWARD						
		18:30 - 19:30	Poster session I (**all** posters)						
social events	10:30 - 18:30								
		19:30 - 21:00	Welcome reception	19:00	Conference dinner	19:00	Social events Boat trip sponsored by *Agilent Technologies* or Guided tour		

Legend: VS - Vendor seminar
Keynote L - Keynote lecture

2012年大會內容介紹-科學性議程（Scientific programme）

- 4天內共計邀請全球農藥殘留相關領域專家進行29節專題演講（ Oral Presentations ）。
  - 主要演講（Keynote Lecture ）3場。
  - 一般演講（Lecture）共計26場。

Keynote Lecture 1 Speaker:
Dr. Steven Lehotay, USDA

2012年大會內容介紹-科學性議程（Scientific programme）

- 每2-3場演講後，統一進行問題及討論。

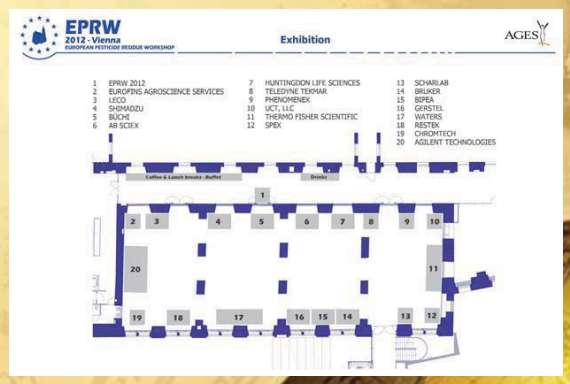
2012年大會內容介紹-壁報論文
（Poster Presentations）

- 壁報發表論文可區分5大類，共214篇。：

1. PV：廠商發表壁報，共38篇。
2. PA：分析方法之開發及應用，共101篇。
3. PM：監測及取食評估，共36篇。
4. PR：法規及風險評估，共9篇。
5. PO：其他主題，共30篇。

2012年大會內容介紹-參展廠商
（Vander Seminars）

- 全球主要分析儀器及耗材相關設備大廠均設攤展示。
- 計有Thermo Fisher Scientific, Bruker, SPEX, Gerstel, Agilent Thechnologies, Leco, Restek, AB SCIEX, Waters, Phenomenex, Shimadzu等11廠商舉行16場分析設備及技術最新發展之口頭報告。



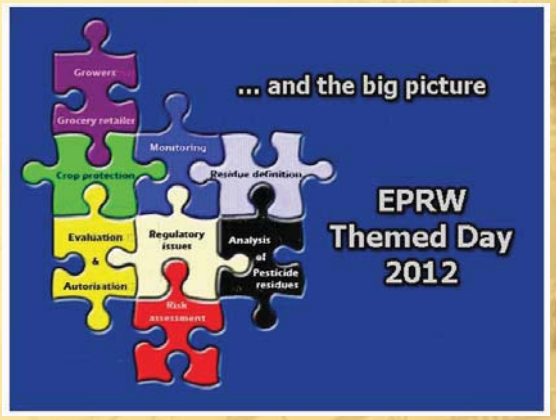
http://www.ages.at/ages/eprw2012/exhibition-and-sponsorship_1/

本次會議主題

- 重要議題
- 6/27主題日
- 壁報論文獎

本次會議主題-重要議題

- 會議主要議題涵蓋殘留農藥分析、農藥監測，殘留物定義、風險評估、農藥管理、植物保護、評估與授權、田間試驗等農藥殘留相關領域之最新發展趨勢及新知。



http://www.ages.at/ages/eprw2012/scientific-programme_2/

本次會議主題-重要議題

Keynote Lecture

1. Steven Lehotay
(AOAC International Harvey W. Wiley Award Winner, 2011)
United States Department of Agriculture (USDA)
Philadelphia, USA
MMM means multiclass, multiresidue method, which accommodates "more more more," but when is "more" enough?

2. Hermine Reich
European Food Safety Agency (EFSA) - Pesticides Department (PRAPeR)
Parma, Italy
The use of pesticide residue monitoring data for dietary exposure assessments

3. Jana Hajslova
Institute of Chemical Technology
Prague, Czech Republic
"Current challenges in the analysis of pesticide residues"

本次會議主題-重要議題

特別與個人業務相關風險評估及容許量研訂部份，有幾項重點值得參考：

1. 歐盟（EFSA）每年固定評估9種食品品項，3年一個循環，涵蓋40-95%取食量，自2009年起動物性產品及加工產品也列入評估。
2. 2013年重點：蘋果、桃、草莓、萵苣、結球白菜、蔥韭、燕麥、黑麥、牛奶、豬肉、酒。
3. 以荷蘭及德國檢驗農藥種類為例，從1997年由250/80種左右，成長至2009年470/780種左右，變化相當大，隨著檢出藥劑提升容許量也隨之增加。

本次會議主題-重要議題

- **歐盟（EFSA）將風險歸納成6大類。**

1. Pythia：高不確定性，危害潛力變化大。
2. Cyclops：不確定性，高危害潛力。。
3. Damocles： 低可能性，高危害潛力，低不確定性。
4. Pandora's box：無所不在，高存在性。
5. Cassandra：高可能性，高危害潛力，長潛伏期。
6. Medusa：低可能性，高暴露低危害，高致死潛力。

本次會議主題-重要議題

- **風險處理策略如下：**

1. Pythia：限制化學品使用，改進暴露評估模式及危害特性。
2. Cyclops：改進監測策略，統計農藥使用。
3. Damocles： 禁限用高危害農藥，監測未授權物質。
4. Pandora's box：禁限用高危害農藥，透過降低法定檢出限量監測未授權物質。
5. Cassandra：計畫性管理工業生產，尋找替代產品或定義限用。
6. Medusa：改進風險溝通，通知大眾監測數據及相關性發現。

本次會議主題-6/27主題日
（EPRW Themed Day）

- 6/27大會主題日以殘留物定義（Residue definition ）為主題。

- 共計舉行8場相關議題之演講：

1. Introduction of the Themed Day "Residue Definitions“
2. Residue Definitions - a Registrant's Perspective
3. Residue Definitions - a Risk Assessor's Perspective
4. Metabolites, conjugates and residue definition: Steps during validation of analytical methods for pesticides and the practice of monitoring
5. Complex residue definitions - Possibilities for simplification
6. Relation between MRL setting and consumer protection
7. The impact of legal residue definitions on an efficient enforcement of maximum residue limits for food of plant origin
8. The impact of legal residue definitions on an efficient enforcement of maximum residue limits for food of animal origin

本次會議主題-6/27主題日
（EPRW Themed Day）

- 主題日演講結束後特別邀請主要講者及參加者進行「與利害關係人之講台討論」（Podium discussion with stakeholders ）。
- 現場提問及討論相當踴躍，充分達到交流目的。

本次會議主題-6/27主題日
（EPRW Themed Day）

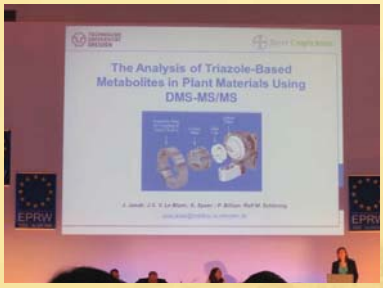
- 與風險評估及容許量研訂相關部份，有幾項內容值得參考省思：

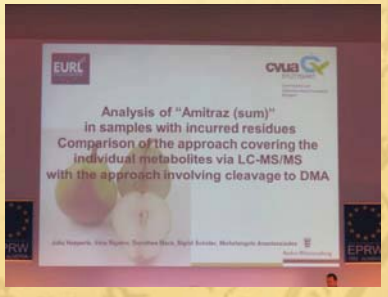
1. 農藥容許量評估待突破困境：生物農藥之標準，嬰兒食品之法規、處理因子，特別是冷凍、保護劑及增效劑之MRL。
2. 合理分析流程建立，超過5種以上不同淨化步驟之分析方法不適用於例行監測（3種不同分析系統下）。
3. 動物性產品中MRL之評估：雙用途（動物用藥及農藥）藥劑之評估，如Abamactin，需進行雙邊調和。
4. 指標化合物（Marker compound）之觀念，最低百分比值應該設為多少（>10%？），需要每次在所有作物存在或只在相關時於重要作物？是否包含中間可轉換化合物？如何估算不同來源之指標化合物等，均需加以考量。

本次會議主題-壁報論文獎
（Poster Award）

- 3組壁報獲獎，得獎人可上台口頭介紹論文5分鐘。

1. PA035：The analysis of Triazole-Metabolites in Plant Materials Using DMS-MS/MS
2. PA031：Analysis of Amitraz (sum) from QuEChERS Extracts - Comparison of the Method involving Analysis of Individual MRM-Amenable Metabolites (DMF, DMPF and DMA) with a Method Involving Cleavage to DMA
3. PO015：Conversion Factors e-learning

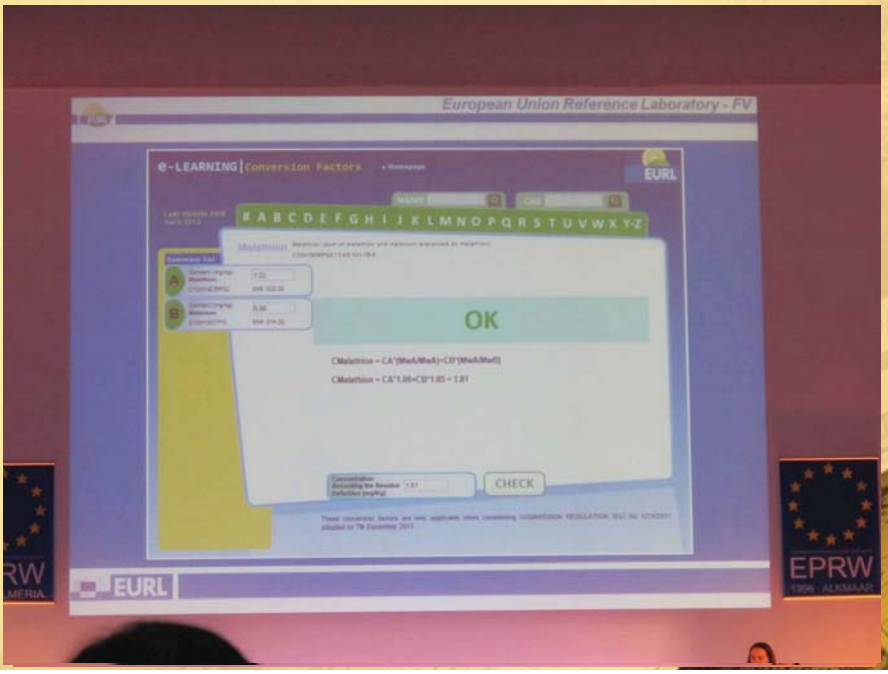




本次會議主題-壁報論文獎

（Poster Award）

- 殘留量定義：未來本所可參考利用歐盟參考實驗室（EURL）之e-learning軟體估算殘留農藥轉換率，評定合適殘留量作為訂定MRL基準。



參加心得及未來展望

- 此行看到國際農藥檢驗技術不斷更新，如以UHPLC-ToFMS搭配UHPLC-MS/MS篩檢蔬果中農藥殘留之方法確效，或利用2D-LC-MS/MS檢測粗萃物之殘留農藥而免除前處理流程等，均有助提升檢驗效能。
- QuEChERS前處理方法仍是焦點，許多方法持續修正中，高極性農藥分析方法也是討論重點。
- 殘留物定義、風險評估、合理化訂定容許量為本次大會重點，著墨甚多，田間監測及GAP驗證也同樣受到重視，連生物農藥之未登記蘇力菌菌株（*Bacillus thuringiensis*）安全性研究調查亦被提出，顯見本研討會面向甚廣。

參加心得及未來展望

- 歐盟農藥殘留分析方法確效、品質管制之規範文件「Method Validation and Quality Control Procedures for Pesticide Residues Analysis in Food and Feed」持續更新，繼前1版SANCO/10684/2009（01/01/2010發行），今年再次更新至SANCO/12495/2011（01/01/2012發行），大會中口頭報告及壁報論文均以此最新規範作為標準，顯示歐盟對殘留分析之要求不斷提升。
- 歐盟在農藥殘留分析各項議題均投注大量人力物力，值得我國仿效學習，本次會議相關內容相當龐雜，大會將於取得作者授權後提供完整資料，未來將再另行彙整相關資訊及撰寫出國報告供所內同仁參考。

參加心得及未來展望

- 建議未來不論農業或衛生單位應持續派員參加EPRW等重要國際農藥殘留研討會，與國際接軌，汲取最新觀念及技術。
- 國外農藥殘留研究專家均非常樂意進行交流，提出諸多建言，未來若有機會可多邀請至國內分享最新研發成果。

與USDA Dr. Steven Lehotay合影


與TFDA 沈盈如技士合影

參加心得及未來展望

- 活動預告
  - 10th EPRW = June, 2014比利時布魯塞爾
  - 4th LAPRW（Latin American Pesticide Residue Workshop）=May 26-29th, 2013 哥倫比亞波哥大
  - 49th FPRW（Florida Pesticide Residue Workshop）=July 15-18th, 2012 美國佛羅里達聖比德海灘（2013年FPRW將更名為North American Chemical Residue Workshop, NACRW）
  - 1st APRW（Asia Pesticide Residue Workshop）= ?

Thanks for your attention !!

維也納地標：聖史蒂芬大教堂 (Stephansdom)