行政院及所屬各機關出國報告

(出國類別:其他)

# 赴荷蘭瓦根尼罕大學(Wageningen University) 討論「發展多國生物技術與熱帶花卉之 遠距教學網路計畫」計畫事宜

服務機關:國立屏東科技大學

出國人 姓名/職稱: 古源光 技術合作處處長

許祥純 食品科學系副教授

出國地區:荷蘭瓦根尼罕大學

出國期間: Feb. 16~Feb.23, 2002

報告日期: May, 2002

### 系統識別號:C09101228

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報告名稱:

發展多國生物技術與熱帶花卉之遠距教學網路計畫

主辦機關:

國立屏東科技大學

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古源光 國立屏東科技大學 食品科學系 教授 許祥純 國立屏東科技大學 食品科學系 副教授

出國類別: 其他 出國地區: 荷蘭

出國期間: 民國 91 年 02 月 16 日 -民國 91 年 02 月 23 日

報告日期: 民國 91 年 05 月 16 日

分類號/目: I0/綜合(科學類) I0/綜合(科學類) 關鍵詞: 遠距教學 生物技術 荷蘭瓦根尼罕大學

內容摘要: 遠距教學是近代教學方法的一大突破,本校執行教育部「發展多國生物技

術與熱帶花卉之遠距教學網路計畫」,與姊妹校荷蘭Wageningen University (WU) 合作之部分爲生物技術相關基礎教學課程,結合兩校教學資源,發 展生物技術遠距教學。爲此,本校由技合處古源光處長及食品科學系許祥 純副教授於九十一年二月十六日至二十三日赴該校並商討計畫事宜。除了 解該校遠距教學課程規劃設計方式及及內容外,基於學術交流原則,雙方 初步同意提供交換教授共同設計發展生物技術遠距教學之課程內容及其 「教」、「學」上之技術問題;在學生選課方面,WU將對本校學生給予 遠距教學課程較優惠的選讀條件,並同意若本校學生選讀該校遠距教學課 程,若日後至該校深造,可獲得學分之承認並可抵免。訪問期間,本校並 提出熱農所可提供學費全免之獎學金,歡迎WU學生至本校進修碩士或博 士學位。行程中也決定二校學生申請入學及訪問教授互惠之條件,亦討論 本校學生至WU進行暑假短期研習之可行性,可增進學生語文能力及認識 荷蘭文化,並希望今年暑假計畫即能實行。目前新興之教育學制Twining System,將由雙方規劃細節,提供本校學生參與機會,並希望於日後能付 諸施行。此行在生物技術遠距教學課程的規劃上得到多項心得,更獲得了 多方面加強雙方學術交流的意見。

本文電子檔已上傳至出國報告資訊網

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### 出國報告摘要

遠距教學是近代教學方法的一大突破,本校執行教育部「發展多 國生物技術與熱帶花卉之遠距教學網路計畫」,與姊妹校荷蘭 Wageningen University (WU) 合作之部分為生物技術相關基礎教學課 程,結合兩校教學資源,發展生物技術遠距教學。為此,本校由技合 處古源光處長及食品科學系許祥純副教授於九十一年二月十六日至 二十三日赴該校並商討計畫事宜。除了解該校遠距教學課程規劃設計 方式及及內容外,基於學術交流原則,雙方初步同意提供交換教授共 同設計發展生物技術遠距教學之課程內容及其「教」、「學」上之技術 問題;在學生選課方面,WU 將對本校學生給予遠距教學課程較優惠 的選讀條件,並同意若本校學生選讀該校遠距教學課程,若日後至該 校深造,可獲得學分之承認並可抵免。訪問期間,本校並提出熱農所 可提供學費全免之獎學金,歡迎 WU 學生至本校進修碩士或博士學 位。行程中也決定二校學生申請入學及訪問教授互惠之條件,亦討論 本校學生至 WU 進行暑假短期研習之可行性,可增進學生語文能力 及認識荷蘭文化,並希望今年暑假計畫即能實行。目前新興之教育學 制 Twining System,將由雙方規劃細節,提供本校學生參與機會,並 希望於日後能付諸施行。此行在生物技術遠距教學課程的規劃上得到 多項心得,更獲得了多方面加強雙方學術交流的意見。

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二十一世紀將是生物技術的時代,此技術整合了醫藥、 農業、生物、化學、化工及資訊等多項學門領域,並將全面 影響人類的生活,有鑑於此,落實生物技術教學,實屬重要。 傳統面對面授課方式外,針對因時間及距離限制而無法到學 校上課的社會人士或國際學生,遠距教學為一非常適宜的授 課方式,可同時讓這些學生也能有接受新知、繼續進修的機 會,因此發展網路同步或非同步遠距教學,為目前許多學校著手進 行規劃的新型態課程,讓知識的傳遞沒有距離。目前本校也已開始 籌畫遠距教學課程,生物技術即為其中一重要科目。本校因 執行教育部「發展多國生物技術與熱帶花卉之遠距教學網路計畫」, 需至姊妹校荷蘭瓦根尼罕大學 (Wageningen University) 訪問,商討在 生物技術遠距教學雙方之權利義務關係,及其他課程或學制之學術合 作交流。

### 二、訪問行程及重要記事

二月十六日晚間搭機,經由曼谷於次日清晨抵達荷蘭阿姆斯特丹機場,再搭乘火車抵達 Wageningen,由 Mr. Christiaan Loef 接送我們至下榻旅館。

二月十八日(星期一)先至 International Education Office 與 Mr. Christiaan Loef 討論屏東科技大學與瓦根尼罕大學 (Wageningen University) 學術交流事宜。該校今年已接受一位本校畢業生就讀碩士 班之申請,並給予學費全免的優惠,為本校學生至姊妹校繼續深造跨 出了成功的第一步。關於交換教授部分,Wageningen University 將提 供本校教師來回機票、住宿及視年修與否給予授課鐘點費,至該校教 授專長,開設課程則由不同科系自行協調,因此 Mr. Loef 會將各系主 任之聯絡資料送交技合處古源光處長,便於雙方聯繫之用,另 Wageningen University 每年均有數位教授參與外交部國合會 (ICDF) 之研習活動,本校可趁此些教授訪台之際,邀請他們至本校演講,若 Wageningen University 有教授願意至本校授課,本校亦提供同等之條 件,促進二校學術交流。本校熱農所提供學費全免之獎學金,歡迎 Wageningen University 學生至本校進修碩士或博士學位,申請條件為 托福成績 530。

關於遠距教學課程方面,與負責課程管理的 Dr. Rob Hartog 交換

意見,得知目前 Wageningen University 已提供食品工程,植物分子生物及基因選殖實驗等多項課程給予學生選讀,以基因選殖實驗課程為例,其內容包含有 announcement、course information、staff information、course material、books 及 external links 等項目,為2學分課程,每學分之收費為美金150元,最少修課人數為每年50人,若本校學生想選讀這些遠距教學課程,基於姊妹校互惠原則,每學分僅收費45歐元,且這些學生畢業後繼續至 Wageningen University求學時,該校將承認並抵免此些學分。目前本校則有生物技術及熱帶花卉二項課程,正進行英文版教材之編輯,若欲與 Wageningen University合作,先採用該校課程供學生選讀,經與 Dr. Hartog 討論後,發現仍有多項技術問題需要克服。

每年暑假本校均舉辦遊學團至姊妹校訪問,研習英語及當地文化,前二年行程均安排至美國華盛頓州立大學及澳洲新英格蘭大學二所姊妹校,此行亦與 Mr. Loef 討論至 Wageningen University 進行暑假短期研習之可行性, Mr. Loef 建議除了在該校修讀語文及荷蘭文化課程外,尚可至鄰近歐盟國家,如德國、比利時的大學訪問開拓學生視野,他將著手進行規劃,並會將評估結果送至本校技合處,並希望今年暑假計畫即能實行。

Twining System 是一新興之教育學制,意思是學生可在原先就讀

學校完成部分課程後,再至另一學校修完其他課程後可獲得二校之畢業文憑,目前大陸中國農業大學之生物技術、食品科學及環境工程系與南京大學管理及植物生物技術系均已和 Wageningen University 簽訂此教育系統合約,此批學生現均在大陸修讀大學部一、二年級課程,2003 年時,將有 100 位北京大學學生及 20-40 位南京大學學生至 Wageningen University 完成另外二年之大學課程。取得學士學位後,可繼續修讀 Wageningen University 之碩士學位,此課程系統之收費標準為外國學生每年 4200 美元,碩士生每年 2000 美元。若屏東科技大學學生亦想參加此種教育體系,Wageningen University 建議可經由非政府機構之 ICDF 簽訂合約,或在 MOU 中加註教育及研究交流項目。加入此種 Twining System 的學生,必須先在本校完成三年學業,再到Wageningen University 讀書一年,完成大學學業,但每批學生至少需有 15-20 人,將由雙方規劃細節,希望不久後可付諸施行。

此行我們也參觀了 WICE 機構,為加拿大之一個基金會所贊助成立,附設於 Wageningen University,這是一個以發展休閒旅遊為目的之研究機構,世界聞名,該機構每年均有來自全球各地的自願教師教授課程,取得在此機構任教之證明。此機構與本校農企管系、森林、野生動物保育及休閒運動系之研究教學方向有所關連,因此建議此四科系可與 WICE 聯繫,建立日後學生升學或老師學術交流之管道。

數天在 Wageningen University 的行程緊凑且內容豐富,不僅在遠 距教學課程的規劃上得到多項心得,更獲得了多方面加強雙方學術交 流的意見。離開 Wageningen University 後,再度返回阿姆斯特丹,搭 機返台,結束此次 Wageningen University 參訪之旅。

### 三、訪問心得與建議

藉由這次的訪問考察,提升了雙方在學術資源的整合及交流,Wageningen University 對於遠距教學課程的設計,都相當極具心思,利用網路上架設虛擬實驗室、線上測驗等方式,以期達到最大的教學效益,亦讓我們吸收許多新資訊;同時在行程中亦針對兩校間交換教授及學生申請深造等事宜進行商洽,基於姐妹校之互惠原則,均給予彼此最大之優惠權利,在雙方共同的努力規劃下,讓交流更進一步,而對於此次為期八天的行程中所進行的討論及會議,提出以下的心得與建議:

- 1.遠距教學雖為新興教學法,但與 Wageningen University 合作上 仍有下列困難:
  - (1)課程編寫英文為主,但本校學生英文能力仍不足,故選讀 以英文授課之科目的意願較低,造成選讀人數不足。
  - (2)考試的安排及試卷的評閱等細要需再規劃
  - (3)學習效果仍未較傳統教學佳
  - (4)雙方發展課程速度及差距太大
- 2. Wageningen University 遠距教學課程之教材編寫,均由專人或博士班學生負責一門課程的設計,但本校則由老師負責課程規劃事宜,在教學研究外,實難在短時間能完成課程設計,建議

可參考 Wageningen University 的發展模式,編寫課程。

- 3.可由本校挑選具相關研究背景之教師或專人由教務處或電算中心指派至 Wageningen University 進行為期數月的短期研習進修,交換雙方於課程設計、教學資源製作等意見與心得,待學成回國後,負責作為本校之相關科目發展遠距教學的諮詢及建議,使課程推展及發展順遂無礙。
- 4. 暑假遊學團及 Twining System 教育系統均是可增進 Wageningen University 與本校學術交流的管道,在雙方共同努力規劃下,希望可在不久的將來付諸實行。
- 5.鼓勵本校學生申請 Wageningen University 的研究生課程,也希望 Wageningen University 學生申請本校熱農所深造,另各系可經由技合處,邀請 Wageningen University 或 WICE 機構教授來講學,或至 Wageningen University 訪問,增進二校交流。

### 四、附錄

- 1. Wageningen University 資料
- 2. 訪問行程
- 3. 訪問記實

Wageningen University 資料



# ntroducing Nageningen University and Research Centre

our mission, our integral approach,

pur itvolvement, our partnership approach,

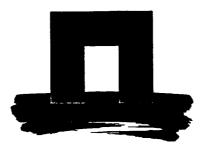
our quality, our responsibility, our integrity



WAGENINGENUR

### WAY SASANANA SASANA (III RIII

Vageningen University and Research Centre (Wageningen UR) is committed to developing and disseminating scientific knowledge that will provide the world with sufficient healthy food, while maintaining a sustainable environment in which humans, animals and plants can thrive. Wageningen UR focuses on the responsible production and distribution of high-quality agricultural products, the careful management of soil, water and air, and the harmonious use of all facets of the natural environment. Vageningen UR has a clear international orientation, while maintaining strong ties with the agricultural sector in the Vetierlands i. .



Wageningen University and DLO have combined forces in Wageningen UR (Wageningen University & Research Centre).

The new logo of Wageningen UR depicts two upright walls and a roof – an agreeable place on earth. This is the symbol for 'house'. In this basic form it refers to all types of living and human existence, in all times and all cultures.

Man builds a house in order to be able to eat and drink in a sheltered place – to make the world a habitable place. The concept of a house can also represent the complex of connections and relations between man and his surroundings.

The scientific term 'ecology' stems from the ancient Greek 'oikos', which simply means house. That's why this symbol is so suitable for Wageningen UR. After all, our mission is to help people to obtain safe food in a vital world.

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# a dual focus on food and t

The way food is grown has changed rapidly over the last few decades. All over the world, agriculture is becoming more and more market-driven, while pressures on the environment are increasing. These dynamic forces create an urgent need for a research and education agenda that integrates the requirements of the total food supply chain with those of industry and the environment.

Piloting productivity / There are very few organizations that are in a position to meet the demands of that agenda. Wageningen UR is one. A major international player in agricultural education and research, we see our role as supporting profitable and sustainable production in a viable environment. We have expertise in organic, integrated and agroindustrial production systems, as well as key processes within both agricultural and non-food industries.

Twin pillars of research and education / Our research and education focus on ensuring reliable supplies of safe, high-quality food, while maintaining the 13 biodiversity of natural habitats and conserving natural resources.



# environment

We are in a unique position to advise on such closely linked aspects as food security, farm income security, customer choice, and environmental sustainability. Recognizing the importance of disseminating information, we offer students from around the world a wide range of educational programmes.

Wageningen UR combines fundamental and applied research with innovative education. By joining these two powerful forces we are able to improve the quality of both, as well as engage in consultancy and knowledge transfer in a number of important fields. By implementing the distinctive 'Wageningen' vision of a productive, sustainable world, the university and research centre (with a staff of 6,000) generate added value for farmers and growers, industry, and other stakeholders, including special interest groups and the general public.

An extensive research base enables us to meet the urgent need for expertise in agriculture, the food industry, and renewable resources. Our scope covers the entire food chain, intermediates, non-food agricultural production, as well as environmental and land-use-related issues.

# interaction

# between science, society and business - a shared responsibility

The UN Conventional Development scenario anticipates that global income levels and health will continue to improve. However, economic development is taking place unevenly, often at the expense of natural ecosystems. Threats include emissions to air and water and a reduction in biodiversity. Dietary patterns, such as the increase in consumption of animal products, likewise deplete scarce natural resources. On the other hand, environmental changes have a major impact on land use. Incremental climate change can significantly influence regional

patterns of vegetation, food production and trade.



Quality of life / With population growth and urbanization putting pressure on scarce natural resources everywhere, Wageningen UR makes a contribution as a partner in land use projects around the world – from measuring the effects of climate change on the Amazon basin to analysing the effects of eutrophication, pesticides and ecological imbalance on forests and soils in Europe. From satellite remote sensing to monitor compliance with sound farming practices, to working out how to minimise the impact of road and rail infrastructure on the planet's dwindling natural areas. Success in halting deforestation and avoiding further loss of biodiversity will help determine the quality of life in the 21st century.

Finding viable solutions to the challenges of tomorrow / Projected economic and population growth will cause considerable environmental degradation in the decades ahead unless it is accompanied by investment in improved agricultural methods, social development, environmental protection, and nature conservation.

There is clearly an urgent need to explore alternative options now if we are to find viable solutions to the problems of tomorrow. Land and fresh water resources are crucial to global development. They provide the basis for human settlement, food and timber production, water supply, and habitats in which humans, plants and animals can thrive. Yet a range of human activities disturb the very biosystems that provide the basic conditions for life on earth, for instance through acidification and climate change.

Wageningen UR's contribution to improving methods along the total food supply chain can help meet these challenges, while avoiding encroachment on marginal land and recreational areas. Specialised research units focus on sound land use planning and sustainable forestry management.

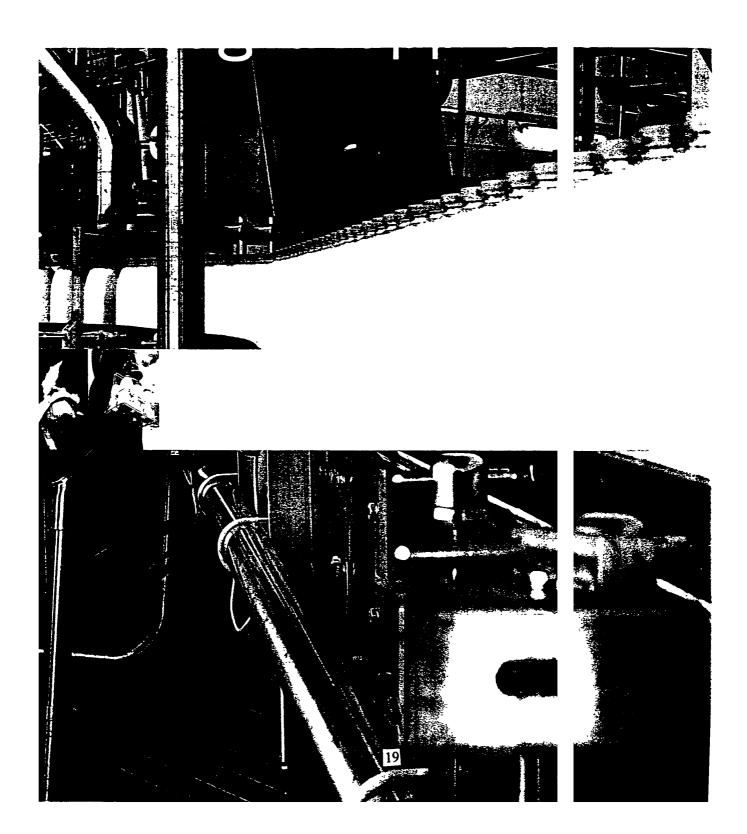
# versatile, yet closely integrated

We are unique in bringing practical, applied and fundamental knowledge under one roof. Our multidisciplinary and interdisciplinary approach to both research and education produces the kind of integral solutions and well-rounded graduates that our clients need.

Integrated research has opened up promising new perspectives, such as methods for eradicating animal and plant diseases, and breeding new varieties of crops. Broad scope / We cover the total food supply chain, but also respond to growing interest in both ecological and aesthetic aspects of the countryside by monitoring key biological and sociological indicators and developing long-term scenarios for rural spatial planning. With expertise in all aspects of production, marketing, logistics and distribution, we are able to put together dedicated project teams composed of the best experts in their field to serve the specific needs of clients.

sociologists. Clients include food quality controllers and land use specialists, car manufacturers and Nature conservation agencies, local government and global organizations like the FAO and World Bank.

Broad customer base / Our customer base spans the whole spectrum from producers to exporters of food, from fisheries to the meat industry, from supermarket chains to pressure groups, from economists to



The strength of the Wageningen approach lies in the integration of a broad range of scientific and business disciplines. We are not only exploring and teaching better methods of food production, we are also engaged in more efficient food processing, packaging and distribution. We are currently examining promising new processing technologies like Ultra High Pressure and Pulsed Electrical Fields.

Within Wageningen UR you will find specialists in international supply chain management, logistics, and marketing, effectively covering the entire food chain. For instance, we develop transport and distribution methodologies, including intelligent climate control, to ensure that food arrives fresh on supermarket shelves.

Beyond food / Beyond areas related to food, we are also actively engaged in research into renewable materials and non-food products. Examples are biomass as a source of energy and the use of short flax fibre (fluffy flax) in nonwoven applications such as diapers. Then there is our education and research on raw materials-based polymer chemistry, organic chemistry and materials science, which is leading to the development and application of new detergent ingredients, plasticisers, adhesives and paints based on carbohydrates and proteins.

# covering the entire chain

Adequate nutritional levels depend on the availability and effective distribution of healthy, affordable food. As one of the world's leading independent agricultural, industrial and environmental research/educational organizations, we work on improving yields and industrial processes, within criteria set by society such as the use of sustainable methods.

Strategic alliances / Our strong links with global knowledge networks include strategic alliances with multinational companies as well as with supranational bodies.

Knowledge transfer / We maintain close ties with other research and educational bodies around the world. Well known for the quality and relevance of our research and educational programmes, we have been engaged in developing and emerging nations for most of this century. We will continue to play a role in such development, with a growing emphasis on transferring knowledge and building up local expertise.

# ur invo vement Biosphere'. Combining research into The consequences of climate change / Wageningen UR has created a global climate change and plant focal point for policy makers and others sciences, a multi-disciplinary team requiring integrated solutions in focuses on the interaction between land agriculture, forestry, water management use, vegetation and climate, and the and nature conservation, with a special effects of climate change on society. programme called 'Climate Change and

# our network

educational organizations

the media

governmental bodies regional, national and supranational

# Wageningen Univers

non-governmental organizations (NGOs)

politics

pressure groups





## universities

· national and international

# trade and industry

riculture, food, pharmaceutical, refail and chemical industries consultancies

# & Research Centre

students

research institutes



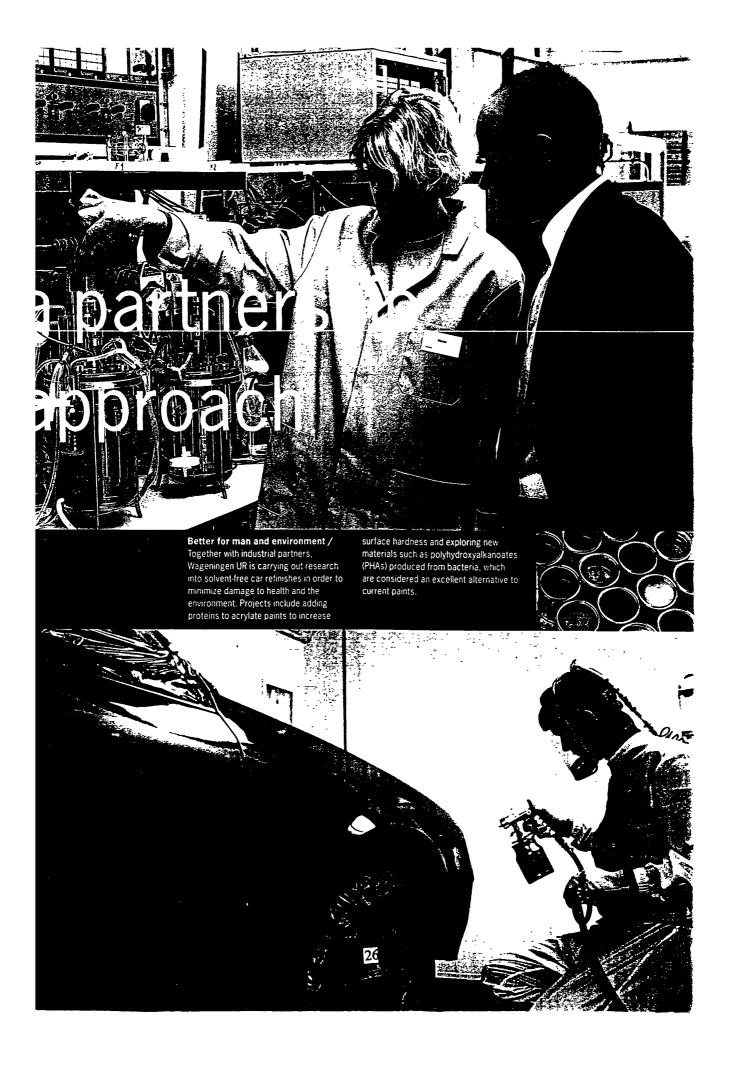
# value-added elationships

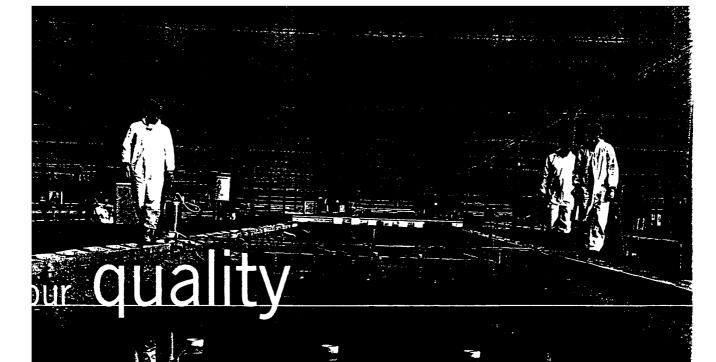
At Wageningen UR, partnership is the key to successful development. Partnership within our large staff of specialists, and partnership with other research and higher education institutes as well as with commercial companies around the world. All focused on exchanging knowledge – not just in farming, but also in land use, industrial and social processes.

Market-oriented / With broad experience of carrying out market-oriented research, we provide viable, long-term solutions, often

through strategic alliances with our partners in industry. We think through with clients the full range of potential consequences of technological developments.

Science park / We have close ties with knowledge-based firms that benefit from the synergies created in what is fast becoming a leading science park. Wageningen's location and excellent infrastructure offer the right climate for further entrepreneurial development of knowledge-based industries.







Ecological risk assessment of agrochemicals / As an example of research services that Wageningen UR can offer industry and government, the potential ecological effects of new pesticides on aquatic ecosystems are evaluated with a sombitivated decision support system Computer modelling is combined with monitoring of indicator plant and animal species at a unique outdoor test facility.

High-quality research that is relevant to global, regional and local needs; reliable and verifiable; independent and reproducible; scientific, objective and open.

Leading edge / We see our role as that of a first-class knowledge centre, developing the kind of leading-edge scientific know-how that leads to practical, tailor-made solutions. Fundamental and applied research all under one roof. Our staff include scientific researchers, advisors, problem-solvers and trouble-shooters. Innovative and forward-thinking, they are willing to take the initiative in pursuing imaginative and creative solutions.

Among our clients are food and nonfood industries, regional, national and supranational governmental bodies, non-governmental organizations (NGOs), farmers, as well as engineering consultants, environmental pressure groups and nature conservation agencies. Our institutes operate under a rigorous system of scientific quality control. We have ISO 9001 certification for our diagnostic services and comply fully with current Good Manufacturing Practice in our vaccine and other production units. We deliver facts & figures, data monitoring, scientific analyses and reports, scenarios, advice, and product innovation.

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# igh-quality research

# responsibility

Distance learning / Recognizing the global need for quality distance learning, Wageningen UR is currently developing a pilot multi-disciplinary MSc programme in Food and Biotechnology which is accessible via Internet. The project focuses on three core areas:

recombinant DNA, transfer processes, and food fermentation, combining expertise in microbiology, biochemistry, genetic and process engineering, food science and human nutrition.

# lucation that meets

# ional and global needs

Wageningen University – founded in 1918 - has seven decades' experience of international education and research. As a leading educational institution in the Netherlands, we are unique in offering the possibility to integrate the natural and social sciences. Our study programmes cover the full range from plant sciences, food technology and health to supply chain management, from environmental sciences to sociology and economics.

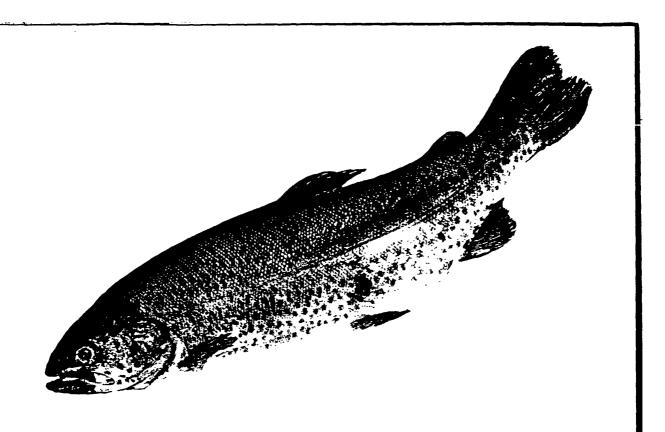
Standard programmes / We have adopted the BSc/MSc model to ensure that our courses are compatible with programmes elsewhere in the world, and tuition at Masters level takes place in English. Our policy of forming strategic alliances and participating in exchange programmes allows graduates from universities around the world to come here to continue their studies at a Masters or PhD level. Exposure to a wide range of cultural influences is just one of the advantages of studying at Wageningen. Our students are highly motivated – with the highest percentage in the Netherlands of students completing courses and graduates are particularly well prepared for international careers.

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# io ivory tower

We are committed to carrying out excellent research and education. Our work is thorough and scientifically sound, results-oriented and future-oriented. The Wageningen approach is based on participative networks that are capable of identifying the key issues and devising innovative solutions.

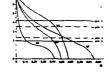
At the heart of society / We actively engage in debates on a wide range of scientific, ethical, social and environmental issues, and aim to play a significant role in social developments by combining scientific knowledge with an understanding of societal processes. In line with the principles of the Dutch economic, social and political 'polder' model, we co-ordinate conflicting interests in order to arrive at viable solutions that command broad acceptance in society.



Environmentally compatible fish breeding / Within the 'Blue label' project, Wageningen UR and fish breeders have joined forces to develop a breeding system that will meet the very highest environmental standards. Key issues are the use of energy and water,

SE

and dealing with waste. The ultimate aim of the programme is to develop an accredited fish breeding system which can be marketed.



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integrity

# ur five expertise groups

## plant sciences

For efficient, sustainable production from plants / This expertise group aims to discover more about the potential of plants and how that potential can be used. Such knowledge is vital, because the burgeoning world population and rising prosperity have created a demand for efficient yet sustainable plant-based production. There are also more and more industrial applications of plant products. The combination of the different approaches within this group - those of molecular biology, biotechnology and bio-informatics, but also of ecology and a systems approach - offers prospects for totally new insights and perspectives in Wageningen. /1845 staff

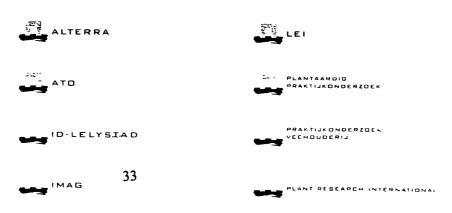
# Wageningen University & Research Centre

education / research / knowledge transfer

### environmental sciences

A socially accountable nature-based approach to rural areas / Greenspace is a major theme running throughout Wageningen UR's work. Establishing nature conservation areas and countryside planning involves not only soil, water, flora and fauna, but must also with take into account what society wants. This is the interface between the natural and social sciences. The resulting intensive contact between environmental technologists, ecologists, sociologists, planners and those trained in the natural and social sciences and humanities has spawned a new heuristic polyscience. In Wageningen, we call it 'delta science'. It exemplifies Wageningen's strength. / 955 staff.

se are the units within our expertise groups:



# agro-technology and food sciences

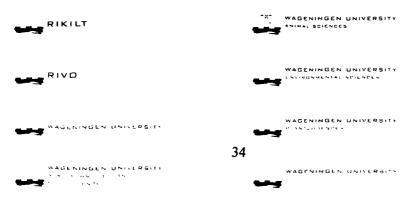
Innovations for the entire agricultural production chain / This expertise group encompasses the entire production chain: from preparing a seedbed or building a livestock barn to the final product, be that food or non-food. It contributes importantly to producing attractive and safe food in a clean environment. Though their input is primarily technological, Wageningen's practical designers never forget people and society, and pay particular attention to the critical consumer. The partners in this group pool their resources in innovation and apparatus centres, to ensure optimal concentration of expertise and the most efficient use of their investments. / 1530 staff

# animal sciences

Desirable livestock farming, based on an understanding of animals / Animal science is one of the more traditional agricultural sciences within Wageningen UR. But in this context, 'traditional' does not mean static. Livestock farming is in flux; the system of livestock farming is changing rapidly, as it must if a healthy future is to be assured. It is no longer enough to tackle problems on an individual basis; instead, the entire system is scrutinized, looking for ways to innovate. With its bundled expertise on animals, livestock enterprises and the livestock sector, this expertise group aims to achieve the transition from a tolerated to a desirable way of livestock farming. / 1295 staff.

### social sciences

The human heart of a technical environment / The social sciences occupy a special position within the predominantly technological environment of Wageningen UR. Tuned into society's preoccupations, they are indispensable in the university's degree programmes and in Wageningen's research. There are two main disciplines in this expertise group: economics and sociology. Their area of work spans the entire agricultural production chain and also the countryside and its natural resources. / 590 staff



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# ur addresses

Wageningen UR

**Headquarters** 

P.O. Box 9101, 6700 HB Wageningen, the Netherlands

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### 訪問行程

### **NPUST** Program

Dr. M. Guu Dr. S. Sheu Dr. Chiou

Flight BR075 09:40 AM Sunday 17 February Arrival departure By train Travel

Ĵ	Alternative train connections Amsterdam Schiphol to Ede Wageningen	Train Station
	Departure Amsterdam Schiphol 09:40 10:10	10.40 11.10 11.40
	Arrival Ede-Wageningen 10:44 11:14	11:44 12:14 12:44
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For each alternative following track details: 🛠

Departure Schiphol track 2 direction

Arrival Duivendrecht frack 1 Departure Duivendrecht track 8 direction Utrecht

Arrival Ede-Wageningen 36 O

For more information please turn to http://www.ns.nl/do 

I will pick you up from the train station. Please give me a call upon arrival

mobile phone 06 - 20859380 home number 0317 - 418836

Arrival WIR

Reservations have been made at the Wageningen International Residence (WIR)

Arrival: Sunday 17-02, Departure: Tuesday 19-02

For more information, please turn to http://www.wicc-wir.nl/.

Optional Tour Wageningen Area Aftenoon Dinner Loef family 20:00

**Monday 18 February** Meeting, Mr. C. Loef (Central Office) 10:00 - 12:00

> Lunch, De Kater (host: R. Hartog) 12:30 -

Meeting, Mr. R. Hartog (Department ATV) - 15:00

Meeting, Mr. T. Kamphorst and Mr. J. te Kloeze (WICE) 15:15 - 17:00

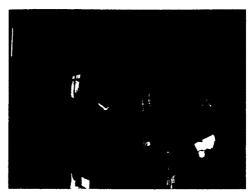
Dinner, Restaurant (host: C. Loef)

Tuesday, 19 Febuary Optional program! depending on interest set up additional meeting, tour Wageningen UR in the morning. Alternatively if you are interested Mr. te Kloeze is available to join on a siteseeiing trip to some place in the Netherlands during the afternoon or during the whole day. If you're still planning a few days vacation, I could offer some ideas upon arrival. It is very easy to take day-trips to nice places in both Germany or Belgium.

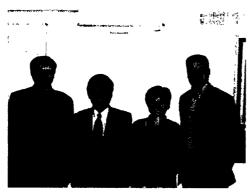
### 訪問記實



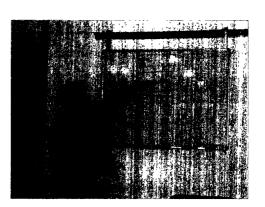
與 Christiaan Loef 商討二校各科合作 事宜



拜訪 WICE, 並與 Dr. Jon te Kloeze 商談學術交流事宜



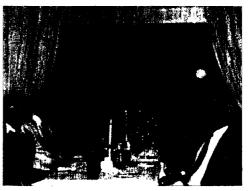
拜訪 Wageningen University 校務發展中心,並由 Mr. Hartog 接待



Mr. Hartog 進行簡報說明



Mr. Hartog 進行簡報說明



WICE 主任 Dr. Kamphorst (右一) 及其同事設宴接待