

## Partner Search Form

Date	2007	February	Valid until:	2008	December
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### CONTACT DETAILS

Organisation full name	Institute of Agricultural Information CAAS Institute of Apicultural Research CAAS		Contact person:		
Organisation acronym (Abbreviation)	BRI CAAS IAI CAAS		Title	Professor, Head of laboratory B Professor, Head of laboratory	
Department / Sector / Faculty	Laboratory of research of intelligence in agriculture Laboratory of research of quality-safety and evaluating for bee product		First Name	Yeping Jing	
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Former participation in EU research projects as Co-ordinator: YES  NO

### PPOJECT IDEA

<b>Title</b>	the application of computer sciences and information technology in modern apiary	<b>Acronym</b>	
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**Project type:** Specific Targeted Research Project

### CALL REFERENCE

**Call identification code:** KBBE-2007-1-4-03  
**Topic addressed:** The farm of tomorrow

**Short description of the project idea:**  
 Project target  
 Study the key technology of bee products in aspects of its production, circulation and quality control, according to the need of basing quality control of bee products on information and the demand of agriculture development in China. Realize resource sharing and coordination of decision-making by research of network application platform and framework of the production, circulation, quality tracing and control of bee products. By research standards, specifications and coding rules of bee products, achieve the standardization of its production. Setup database of producing area's environment, quality

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monitoring, products detection and products circulation of bee products, and realize duplex tracing of its quality. Setup portal web side of bee products to achieve the digitalization and intellectualization of its overall arrangement, production, distribution, circulation and quality tracing, and then complete the transformation of bee products as 'from the field to dinner table'. By running these in experimental, paradigmatic and operative environment, then, ulteriorly, study the management and function mechanism of production, circulation and quality tracing system of bee products, and its industry standards and system's evaluation and optimization.

### Description of study content

\*Study the information acquisition standards, specifications and coding rules and informatization control system of bee products.

Study and institute the information acquisition standards, specifications and coding rules of bee products that coincide with the situation of China and international standards, to serve the standardized production, circulation and source tracing.

\*Develop the information system platform and application framework of production, circulation and quality tracing of bee products.

Study and develop components of bee products' production, quality tracing, data collection, quality diagnoses and decision making service, management service and market circulation prediction.

Construct a public information network support platform of bee products' production, circulation and quality tracing, which is extensible, co-operable and convenient.

\*Setup quality monitoring system of bee products.

Monitor and manage the whole life time of bee products including production, processing, and circulation by products' code. Create the ability to use a final product code to trace back the condition of apiary and the path of its circulation, even the basic information of pasture, and circulation amount statistic. Setup a bee products information query system based on Short Message Service. End user can use mobile terminal such as cellphone to enter a product code and send it to the server, and get the detail information of this product from apiary to current step.

\*Setup management and publication platform of bee products based on GIS.

Study the management, query, analysis and visualization of spatial information of pasture, apiary and bee products. Setup a bee products information portal based on RSS to publish enterprise and bee farmer's products information, and publish corelated policy. Portal user can read information by using a RSS reader.

\*Setup a portal web site of bee products.

Study the distribution of bee products enterprise using GIS, including the query, analysis and visualization of spatial information. Perform realtime analysis of bee products 'supply and demand. Setup a logistics system of bee products. Realize realtime tracking, monitoring and SMS query. By integrating all the portal web sites, digitalize and intellectualize the distribution, production, sells, circulation, and tracing back, and finally achieve the transformation of bee products as 'from the field to dinner table'.

\*Apply and demonstration.

Choose 2 apiaries to perform the experiment and demonstration of co-related sub system of resource using, production, circulation and quality tracing. Perform the tracing from apiary to customers and from end sales to pasture. By setup demonstration area, perform integrated information service to the typical enterprise of bee products and co-related authorities.

### Expertise and references in the filed of agricultural information technologies

Our research group possesses a good experience in:

- \* Expert System and decision support system development.
- \* Corp modelling.
- \* Agriculture information system design and development.
- \* Application of GIS, RS, GPS in agriculture
- \* Bee products' origins tracing
- \* Bee products quality insurance
- \* Scale-up and application of information technology in collaboration with national and international industrial partners.

### Main Publications from 2004 in this field

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1. ZHU YEPING. (2004). Digitalization of agriculture ecology information. Proceeding of the Second International Symposium On Intelligent Agricultural Information Technology
2. ZHU YEPING, LI SHIJUAN, SUN KAI MENG, E YUE. (2004). Corp stimulation and visualization technology and application. Seminars of the stratagem of development of China digital agriculture and informatization of country side.
3. ZHU YEPING, XUE YAN. (2004). Research of information analysis system of agriculture economy. Chinese High Technology Letters
4. ZHU YEPING, LI SHIJUAN. (2004). Research of Wheat-maize continuous cropping intelligent decision system. Information technology and information management of agriculture.
5. Zhaojing (2004) A long load to the improve the condition of bee product quality safe in our country. The national bee product information exchanges conference, Collection of essays
6. Zhaojing (2004) Perfecting standardize construction to create China bee Industry. The agricultural product quality safety Collection of essays
7. ZHU YEPING, LI SHIJUAN, SUN KAI MENG, E YUE. (2005). Research of digitalization and informatization of corp production. China agricultural sciencetech press.
8. ZHU YEPING, YAN DINGCHUN, LI SHIJUAN, XUE YAN. (2005). Research on Agent-based Quality Inspection Tool in Agricultural Expert System. Proceedings of the 3rd International Symposium on Intelligent Information Technology in Agriculture (ISIITA). Beijing: China Agricultural Science & Technology Press.
9. LI SHIJUAN, ZHU YEPING, YAN DINGCHUN. (2005). Application of Multimedia Maize Management System for Within-season Prediction in North China. Proceedings of the 3rd International Symposium on Intelligent Information Technology in Agriculture (ISIITA). Beijing: China Agricultural Science & Technology Press
10. Zhaojing (2005) The standardization building of beekeeping industry in China. Apimondia Ireland 2005 Abstracts
11. YAN DINGCHUN, ZHU YEPING. (2006). A Quantitative Knowledge-based Model for Designing Suitable Growth Dynamics in Rice. Plant Production Science.
12. YAN DINGCHUN, ZHU YEPING. (2006). Implementation of 3D Visualization System for Maize Growth. The Second International Symposium on Plant Growth Modeling, Simulation, Visualization and Applications.
13. ZHU YEPING, FENG ZHONGKE, XUE YAN. (2006). Application of Agent in Agricultural Expert System Inspection Software. SCIENTIA AGRICULTURA SINICA
14. ZHAO JING. (2006). The research prospect of the key technique for quality safe bee product. Apiculture of China Journal.
15. ZHAO JING. (2006). "Detection methods and Applied Techniques of Bee products", book. Chinese agriculture publisher.
16. ZHAO JING. (2006). "national and International Laws and Regulations of Bee products", book. Chinese agriculture publisher.

### Main projects in recent years

- National 863 Project: 20060110Z2059. 2006-2010. Research of Wheat and corn cooperate model and its annual production stimulation system.
- National 863 Project: 2002AA243051. 2002-2005. Research and development agricultural information system software.
- Fund for Nature Beijing: 4042026. 2004-2006. Decision support system based on wheat and corn growth and its pest model.
- National 863 Project: 2003AA209032. 2003-2005. Sub project of Digital Agriculture, corn system model and corn-wheat annual plant digital system.
- National 863 Project: 2004AA115193. 2004-2005. Research of tools of quality inspection of agricultural intelligent system.
- Fund of commercialization of research findings: O4EFN216900370. 2005-2006. Demonstration and promotion of wheat-corn intelligent decision support system.
- 2002-2007. Project of investigation on the national bee product quality and safety.
- 1999-2007. Project of supervision plan to inspecting agrochemical to remain the honey which were exported to EU.
- EU the sixth frame item. sub-special subject, research of technologies in honey quality and original tracing.

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<b>Keywords describing the project idea</b>	<b>Sustainable production and management of biological resources from land, forest and aquatic environments:</b>	
	<input type="checkbox"/> Biological resources <input type="checkbox"/> Biodiversity <input type="checkbox"/> Genomics/Proteomics/Metabolomics <input type="checkbox"/> Bioinformatics <input type="checkbox"/> Agriculture <input type="checkbox"/> Forestry <input type="checkbox"/> Fisheries <input type="checkbox"/> Aquaculture <input type="checkbox"/> Horticulture	<input type="checkbox"/> Novel feeds <input type="checkbox"/> Novel plants <input type="checkbox"/> Plant Health <input type="checkbox"/> Animal Production and Welfare <input type="checkbox"/> Animal husbandry <input type="checkbox"/> Vaccines and Diagnostics <input type="checkbox"/> Organic production methods <input type="checkbox"/> Dairy Production <input checked="" type="checkbox"/> Tracking and tracing
	<b>Fork to Farm: Food, health and well being</b>	
	<input type="checkbox"/> Consumer behaviour <input checked="" type="checkbox"/> Functional Food <input type="checkbox"/> Nutrition Science <input type="checkbox"/> Physiology <input type="checkbox"/> Food Technology <input type="checkbox"/> Food Processing <input type="checkbox"/> Packaging <input type="checkbox"/> Food safety	<input type="checkbox"/> Potable/Safe Drinking Water <input type="checkbox"/> Animal Feed <input type="checkbox"/> Chemical Food Safety <input type="checkbox"/> Microbiological Food Safety <input type="checkbox"/> New detection methods <input type="checkbox"/> Risk Assessment <input checked="" type="checkbox"/> Food Chain Analysis/Management <input type="checkbox"/> Pesticide/BioActive Additives/Substances Control
<b>Life sciences and biotechnology for sustainable non-food products and processes</b>		
<input type="checkbox"/> Biomass production <input type="checkbox"/> Bio-products <input type="checkbox"/> Bio-refinery <input type="checkbox"/> Bio-processes <input type="checkbox"/> Fibres (Wool, cotton, novel-bio-fibres)	<input type="checkbox"/> Wood-production <input type="checkbox"/> Pollution <input type="checkbox"/> Ecology <input type="checkbox"/> Waste Processing	

### PROFILE OF PARTNER SOUGHT

**Type**

Research Organisation    
  University    
  SME    
  Other, please specify:

**Role to cover in the project**

technology development    
  research    
  training  
 dissemination    
  demonstration    
  other

**Country / Region**     China- Asia Partener countries region

**Start of collaboration**

start-up phase    
  mid-term    
  end-phase

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Expertise required

**I agree with the publication of my data!**  
Please fill-in in English and return to: