

QuaTerNes

## Focused on Development

*Seed Breeding & Propagation*

*Agronomy, Irrigation, Cultivation and Crop Rotation*

*Mechanization, Post Harvest Handling & (Fresh) Storage*

*Added Value Creation (Processing)*



# QuaTerNes

Focused on Development

QuaTerNes BV combines expert knowledge in all segments of the Agro, Food & Technology sector. Since its establishment in 1980, the group integrated existing organizations into its portfolio and created many new collaborations and joint ventures. Today, this strategy enables QuaTerNes to manage and advise first class development and investment projects throughout the agricultural and food sectors in Europe, Asia, Africa and the Americas. Valuable experiences gained are readily available for QuaTerNes' clients and partners.

## Our Mission

To facilitate the development of secure and sustainable agri-food chains, supporting local agri-food systems and nourish partnerships and agri-food related initiatives.

## Work ethics

QuaTerNes takes time to evaluate the possibilities of each project. Beforehand, the geographic regions are investigated and possibilities for development in the areas of sustainable agri-food production, food quality and safety, human nutrition and health are evaluated in depth. Special attention is given to water management, climate change effects as well as to the available capital flows and presence of sufficient talent and other resources.

QuaTerNes uses a people-focused approach. We assume that life, under the right conditions, leads to a continuous self-improving process. Each person is unique, has multiple capabilities and ambitions, in work as well as in private life. Personal growth is thus a continuous interaction between goals, exploration and realization of the result. This is a self-improving process which QuaTerNes gladly stimulates.

# Experiences & References in P. R. China

QuaTerNes BV operates in P.R. China since 1985 with the aim to stimulate quality development investments in the field of agriculture and food processing. Its daughter company Hak&Partners is known as first-mover in the Chinese Potato sector introducing hi-tech solutions for potato storage and potato processing: starch, potato flakes, snacks (chips), French fries, potato products and more. It also initiated the establishment of NAFTC-China and the Orange Potato Program.

Its Chinese daughter company QuaTerNes Agricultural Science & Technology Tianjin Co. Ltd. in Beichen, Tianjin has offices with dedicated agronomists, engineers and food experts present. It offers full-scale local services in Research & Development and in design and (turnkey) realization.

Based on its experience gained in the past thirty years, many successful ventures have been established and direct deliveries made. QuaTerNes is currently involved in several large-scale development projects. These include the HakHandan Industrial Park, the Yakeshi Agro-Food Logistic Center, investments in potato seed multiplication laboratories (Ilan Bio), the realization of potato processing factories and the production of agricultural machinery (HAKING). Other activities include being leader in introduction and installation of Dutch fruit tree nurseries, new fruit varieties and orchard technology (Cloutwijnck), in beekeeping and honey processing (Sangdi) as well as in producing several food products.

QuaTerNes is also active in advising partners on integrated potato value chain developments in North-West China and Inner Mongolia, where new systems of propagation, post-harvest handling and deep processing are being introduced.



# Meet the Team



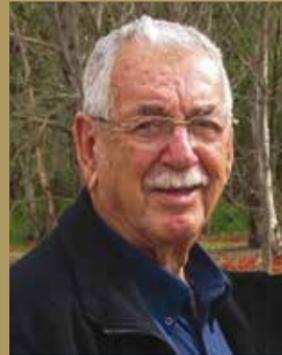
**Jan Hak**  
*President and Owner*



**Willem-Jan Hak**  
*Manager, Technical Research & Development, Implementation*



**Gerben Koeslag**  
*Senior Project Manager Potatoes*



**Yaakov Cohen**  
*Senior Agronomist*



**Britt van Heteren**  
*Manager Nurseries and Propagation*



**Frank Maas**  
*Senior Expert Propagation and Nurseries*



**Zheng Wei**  
*Manager Business Development China*



**Alon Amirim**  
*Senior Architect and Design Expert*



**Jose Hak**  
*Manager Marketing and Public Relations*



**Bep Versluijs**  
*Manager Finance and Administration*



**Elza Slob**  
*Management Assistant*



**Linda de Langen**  
*Secretary to the Board*



**Sarah Raams**  
*Secretary to the Board*

# QuaTerNes & the Potato Value Chain

QuaTerNes is convinced that the quality and quantity of the final product is already largely determined in the field. After planting seed, each following phase adds further value to the product and thus influences the quality and quantity of the final product. Therefore, QuaTerNes has committed itself to assistance in every stage of the Value Chain: from seed propagation and large-scale multiplication to agronomy services to post-harvest handling and to processing and logistics.

## Our services

In each step, we use only the best Western technologies and offer our customers the knowledge of our close partners, under strict confidentiality if so requested. This approach for optimal quality and has proven very successful, resulting in many satisfied clients and partners.

Our rich portfolio in specialized organizations provide the best expertise and service in every stage of the potato value chain.



# Phase 1

## Seed Breeding & Propagation



### Ilan Bio International

In close cooperation with our partner Ilan Bio we provide a revolutionary approach in large-scale in vitro plant propagation cloning. Hence we provide highly efficient laboratories for the multiplication and acclimatization of uniform, disease-free elite tissue culture plants. Ilan Bio International is a specialist in producing micro and mini tubers through the technique of Temporary Immersion (T.I.S.).

### Core competencies

- Innovative (micro)-tuber propagation system
- Improved seed production via T.I.S.
- Worldwide breeding solutions

### Contact information

**Ilan Bio international B.V.**  
Woudrichemseweg 36A  
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P.O. Box 38, 4286 ZG Almkerk  
Phone: +31 (0) 183 4060 60  
E-mail: [info@ilanbio-international.com](mailto:info@ilanbio-international.com)  
[www.ilanbio-international.com](http://www.ilanbio-international.com)



# Phase 2

## Agronomy, Irrigation, Cultivation and Crop Rotation



### Cloutwijck Estate

Cloutwijck Estate possesses a wealth of (international) experience in agronomy and agricultural cultivation practices. Our experts are qualified in the use of modern drip irrigation technology and special crop rotation programs. Custom-made planning, advisory services and turnkey implementation are available worldwide.

### Core competencies

- Professional turnkey farm management
- Sustainable crop rotation programs
- Modern irrigation technologies

### Contact information

**Cloutwijck Estate**  
Woudrichemseweg 36A  
4286 LB Almkerk, The Netherlands  
P.O. Box 38, 4286 ZG Almkerk  
Phone: +31 (0) 183 403 794  
E-mail: [info@cloutwijck.nl](mailto:info@cloutwijck.nl)  
[www.cloutwijck-estate.nl](http://www.cloutwijck-estate.nl)



# Phase 3

*Mechanization, Post Harvest Handling & (Fresh) Storage*



## **Q Solution & QuaTerNes Agriculture Science & Technology**

Q Solution and our Chinese organizations QuaTerNes Agricultural Science & Technology and HakHandan operate with a hands-on mentality and customer focus in the field of agro mechanization, post harvest handling and storage. Their practical and result driven insights enable custom-made designs and practical solutions.

### **Core competencies**

- Qualitative solutions in agro mechanization, post harvest handling and storage
- Western (international) expertise with local focus
- Personal approach and customer dedication

### **Contact information**

**Q Solution B.V.**  
Industrieweg 35  
4283 GX Giessen, The Netherlands  
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### **QuaTerNes Agricultural Science & Technology Tianjin Co. Ltd.**

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Economic & Technological Development Area  
Tianjin City, P.R. China  
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[www.quaternes-agritec.com](http://www.quaternes-agritec.com)

### **Hak Handan Agriculture Machinery & Equipment Manufacture Co.Ltd.**

**(Brand: Haking Agriculture Equipment)**  
No.67, Hexie Avenue, East District  
of Economic Development Zone,  
Handan City, Hebei Province, P.R. China  
Phone: +86 310 6039797  
[www.hakhandan.com](http://www.hakhandan.com)



# Phase 4

*Added Value Creation  
(Processing)*



## **Hak&Partners**

Hak&Partners is renown worldwide for its design and turnkey implementation of processing facilities and equipment. In the field of potato production, its core specialties include facilities for the production of starch, flakes, granules, French fries and various snacks. Due to their 'field-to-market' approach, each phase in the post-harvest handling process contributes to the quality of the final product.

### **Core competencies**

- Worldwide turnkey design and build
- Field-to-market sustainable solutions
- Professional advice and innovation

### **Contact information**

**Hak&Partners B.V.**  
Woudrichemseweg 36A  
4286 LB Almkerk, The Netherlands  
Phone: +31 (0) 183 403 794  
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[www.hak-partners.nl](http://www.hak-partners.nl)



# Company history & interview with founder

Jan Hak, founder of QuaTerNes, has been familiar with the agri-food chain from an early age. After graduating from Wageningen University he started his professional career in the pickling and dairy sectors in the Middle East, after which he played a significant role in food machinery development (Komen+Kuin) and was responsible for the manufacturing and logistics at his family's food preservation company (HAK). His experiences lead to the start of his own company in 1980.

Today, QuaTerNes integrates a portfolio of companies. Together they manage and advise development and investment projects in the agriculture and food sectors worldwide.

Jan Hak: *"Our mission is to facilitate the development of secure and sustainable agri-food chains, supporting local agri-food systems and nourish partnerships and agri-food related initiatives"*.

## A century of experience...

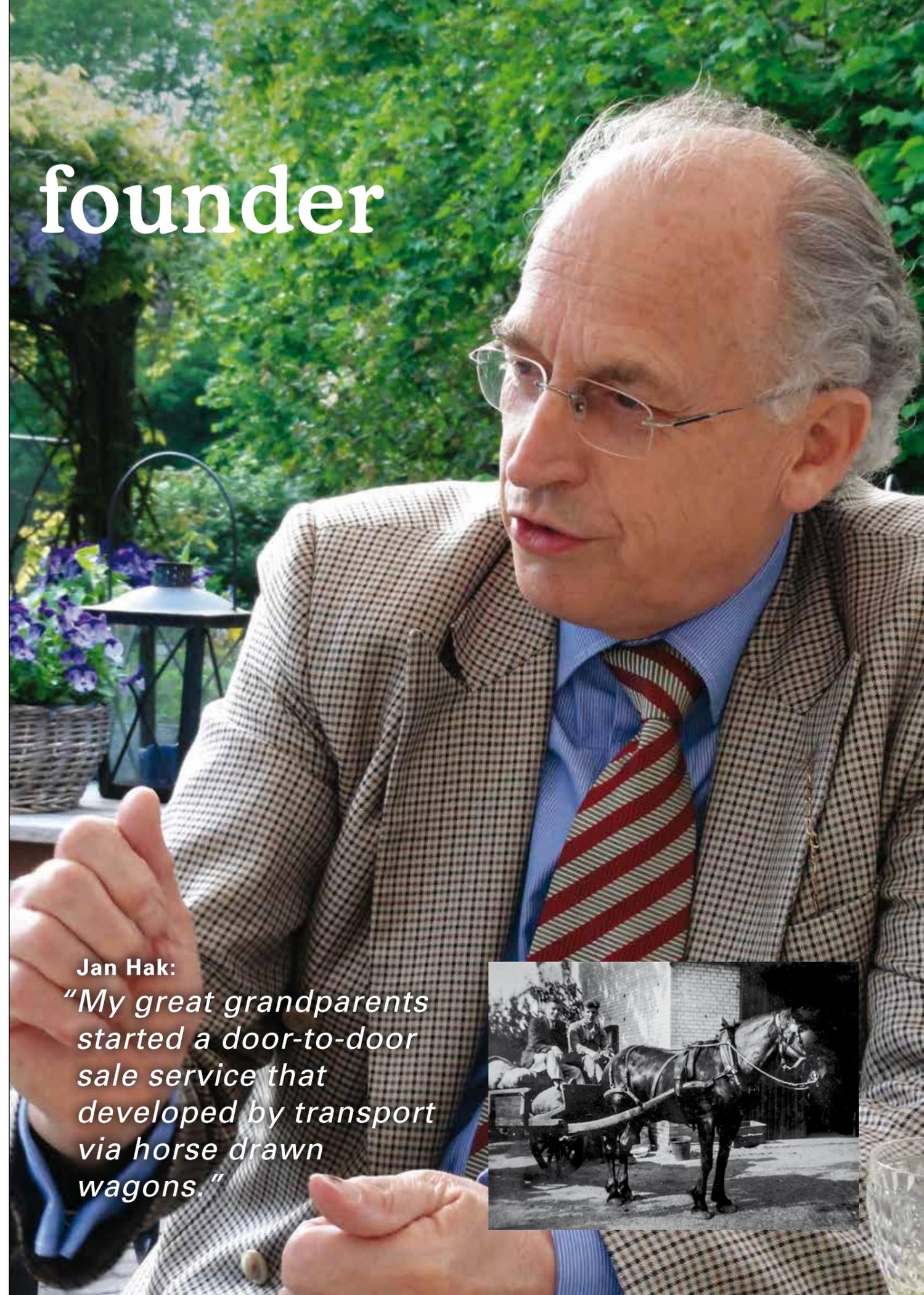
Jan Hak: *"I come from the region of Altena, a longtime isolated region where communities made their living with fishing, osier working, cattle and arable farming. It is here where our history begins and where our roots are still visible today"*.



In the 1920's, his great grandparents were active in growing and trade of fruit and potato. Jan: *"They started a door-to-door service that developed into transport via horse drawn wagons. Later on, they also opened fixed stores. Many products were homemade such as liquors and applesauce. All of this occurred before World War II."*

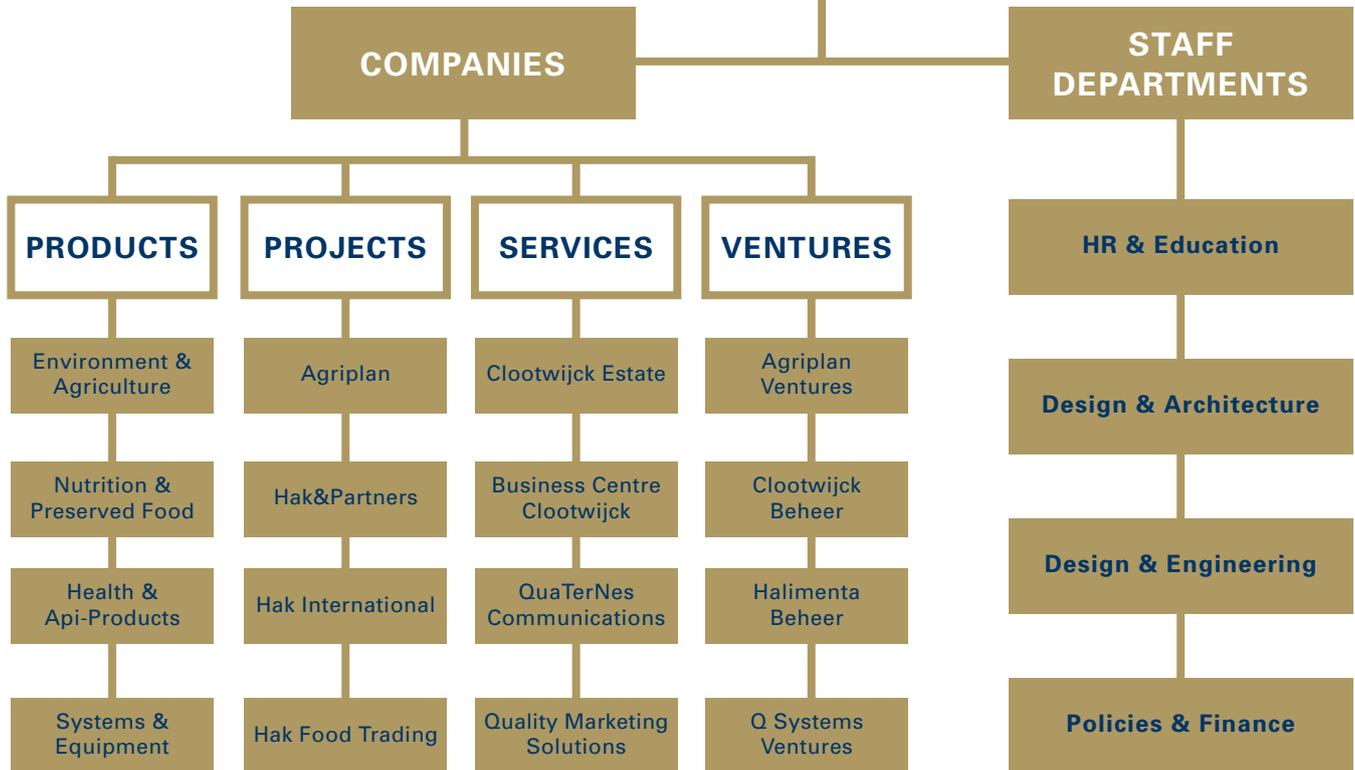
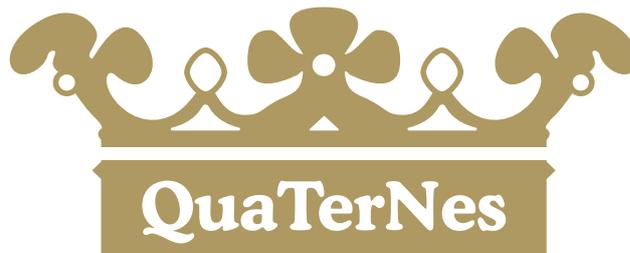
In 1952 the food rationing finally ended and the HAK family was able to expand its production. This led to the opening of their first canning factory in Giessen, a small village with only 900 inhabitants. The company continued to grow as more and more shops, groceries and butchers started selling HAK glass preserved vegetables. Presently, HAK is one of the largest producers of high quality fruit and vegetable glass preserves worldwide.

Jan: *"My education contributed directly to the expanding of knowledge within the family company. As part of my studies 'Food Technology' and 'Business Administration' at Wageningen University in The Netherlands, I have also spent time studying abroad under renowned professors in the USA and the Middle East. Later on, I gained practical experience by realizing turnkey processing facilities and innovative technologies such as steam peeling, dry de-skinning, osmotic drying, vacuum frying and cold-infusion. Many references worldwide are a direct proof of success"*.



Jan Hak:  
*"My great grandparents started a door-to-door sale service that developed by transport via horse drawn wagons."*





**QuaTerNes BV**

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QuaTerNes Headquarters are situated in The Netherlands (Almkerk). Our operations in China are coordinated from facilities in Beijing - Tianjin and Xi'An. For more information also visit our website: www.quaternes.nl