

Firms in S'pore jump on biofuel wagon, pick up farming skills

By **MATTHEW PHAN**

AS Singapore-based companies hop onto the biofuel wagon, they are having to learn skills that have not occurred to many Singaporeans: agricultural and farming practices.

This was evident at a public seminar on biodiesel production at the Institute for Southeast Asian Studies yesterday, where Peter Cheng, chief executive of the Van Der Horst (VDH) Group (Singapore), shared details of his firm's investments in *jatropha curcas* plantations and oil processing plants.

A poisonous shrub that grows in semi-arid land, *jatropha curcas* produces oil-rich seeds and yields about 3 tonnes of crude oil per hectare yearly, less than palm oil but much more than other popular crops like soya bean.

Speaking to a mixed bag of investors and energy sector professionals, Mr Cheng described the various stages in the production chain - from tissue culture laboratory, to nursery, plantation and processing plant.

Tissue culture is a process used to produce several plant copies by slicing off shoots and growing them in solid or liquid media into



Green thumb: Van Der Horst Group chief executive Peter Cheng says he'll likely employ foreigners to run the 70,000 ha plantation

plantlets, which are then transferred to soil. To learn how to obtain a sufficient number of plants for VDH's planned 70,000 ha of plantation land - a land area slightly larger than Singapore - Mr Cheng visited a few such centres, in Singapore, China and India. "After a while you start to understand their language," he told BT.

The young plantlets will be transferred to plastic

bags and kept in an incubator sheltered from excess sun and humidity by sackcloth. When they reach a height of 30cm, they are moved to the field.

VDH is also designing a harvester, with a mechanical arm to shake the plants so the seeds fall, and a net to catch the falling seeds, said Mr Cheng. But to use the harvester, the plants cannot be planted too closely together, even though

this could increase the yield, as they cannot be harvested by machine.

The group's background in marine engineering and repair means the basic mechanical engineering comes easily, said Mr Cheng.

But "the intricate part is how to make the plant survive under different ground conditions", he said. For example, though *jatropha* is a hardy crop that can grow in conditions too harsh for

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food crops, it cannot grow on poorly drained land as the collected water will rot the plant roots.

Mr Cheng also said he will likely employ Caucasians to run the plantations, as "they have experience for rapeseed or soya bean". Workers could come from countries like China or Cambodia, where there are universities that teach agricultural subjects.

VDH is completing transactions with Sesdaq-listed GKE International, which will see GKE own the the biodiesel operation by end-September 2007.

It will subsequently place shares with environment-themed funds in the US and Europe to raise between \$200 million and \$300 million, which it will invest in plantations and processing plants in China and South-east Asia.