

REDUCING DEMAND

for phosphate fertilisers

In the second of a two-part series on peak phosphorus, Sue Cartledge reviews some of the options for reducing demand for phosphate fertiliser so the world's supply is extended for a greater period.

Ninety per cent of phosphorus fertiliser produced is used for food production. Yet, according to Dana Cordell of Sydney's Institute for Sustainable Futures and the Department of Water and Environmental Studies, Linköping University, Sweden,

while the world's population requires only three million tonnes of phosphorus per year, almost 15 million tonnes of phosphorus is mined for fertiliser. Significant losses occur all along the chain from mine to plate, much of it in the growing, harvesting and transporting of food.



For farmers the obvious start is improving agricultural efficiency, but they should also consider the efficiency of the food

The problem of Western Sahara rock phosphate

Western Sahara is located in northern Africa, bordering the North Atlantic Ocean, between Mauritania and Morocco. It is a very arid area but is rich in phosphates in the Bou Craa region. Consequently, Western Sahara is the world's largest supplier of quality phosphate rock, with reserves of around 5700 million tonnes. Even the US, which has reserves of just over 1000 million tonnes, imports rock from Western Sahara, an area controlled by Morocco which has occupied the region since 1975.

The official status of Western Sahara is as "a non-self-governing territory", according to the United Nations. The government in exile, the Sahrawi Arab Democratic Republic, disputes Morocco's control of the territory. Morocco has been repeatedly criticised for its actions in Western Sahara by international human rights organisations such as Amnesty International, Human Rights Watch and the World Organization Against Torture. Many of the nomadic indigenous people, the Sahrawis, fled under bombardment to refugee camps in south-western Algeria, and the government has encouraged Moroccan citizens to relocate to the territory, creating a state-dominated economy with the gov-

ernment as the single biggest employer. The Moroccan state phosphate company, OCP, has a facility at Bou Craa, connected by an enormous conveyor belt which transports the phosphate rock 100 kilometres to El Aaiun harbour.

Trading with Morocco for phosphate rock has been condemned by the UN, and several Scandinavian countries have considered boycotting imports from Morocco. Both IPL and CSBP source some of their phosphate rock from Morocco, and a spokesperson for the Department of Foreign Affairs and Trade (DFAT) says Australia does not ban the importation of phosphates from Western Sahara.

"The UN has not imposed restrictions on the trade (in the form of UN Security Council sanctions) and we are not aware of any country which maintains autonomous sanctions against the trade," she says.

"However, we are conscious of the status of Western Sahara as a non-self-governing territory. DFAT draws companies' attention to the international law considerations involved in importing natural resources sourced from Western Sahara and recommends that companies seek legal advice before importing such material."

IPL says there is currently no alternative source for the high-grade phosphate rock imported from Morocco to manufacture single superphosphate (SSP) to Australian standards. "All Australian SSP producers use some rock from Western Sahara," Neville Heydon says. "Without rock from the region, it is unlikely that Australian manufacturers could produce the one million tonnes of SSP farmers require each year to maintain productivity and international competitiveness. IPL's ability to maintain production at its SSP plants would also be in doubt."

CSBP sources the majority of its phosphate rock from Western Sahara "as its properties enable CSBP to continue manufacturing SSP and meet its rigorous environmental and quality standards," says managing director Ian Hansen.

"Westfarmers and CSBP have engaged in dialogue with opponents of the import of phosphate rock through Moroccan-based suppliers from Western Saharan deposits, including Kamal Fadel, Polisario representative to Australia. We continue to monitor the United Nations' efforts to resolve the dispute over Western Sahara."

The Australian Western Saharan Association says the trade in phosphate