

World Potash Supply/Demand Situation and Outlook

By C. Howard Cummer

World potash supply/demand was studied to determine whether global production capacity can meet growing demands in China, which should be using about 5 million tonnes of K₂O by the year 2000. If this consumption level is met, China needs to increase imports by 2 million tonnes in the next four years. Saskatchewan has a surplus capacity of 4 million tonnes per year and can supply China's requirements for the foreseeable future.

China poses an interesting question: Does the world have sufficient potash to satisfy China's demand to achieve true balanced fertilization? Best estimates indicate this would require a near doubling of present imports. To answer the question requires a study of projected world supply and demand.

World potash production increased in 1994 after five years of decline. World capacity

Table 1. World potash production and capacity in 1994.

	Production, million tonnes K ₂ O	Capacity, million tonnes K ₂ O	Operating rate, %	Percent world capacity
Canada	8.1	12.2	67	34
CIS	5.1	12.0	43	34
Germany	3.3	3.65	74	11
Others*	5.7	---	80	21

*Europe (excluding Germany), U.S.A., Israel, Jordan.

over the medium term is expected to decline, but only marginally. It is readily apparent from Table 1 that many existing potash facilities are producing at rates well below capacity. The potash industry continues to register surplus capacity, currently 5.9 million tonnes K₂O. This is expected to decrease to approximately 3.8 million tonnes by 1999. Because of production over-capacity, supply is expected

to keep pace with increases in demand. The Canadian potash industry is capable of supplying increases in demand, especially in Asia and particularly in China.

Recently, potash demand increased in most regions of the world, the exception being the Confederation of Independent States (CIS). Statistics published by the International Fertilizer Industry Association (IFA) show that world potash consumption increased to 19.2 million tonnes K₂O in 1994, and is expected to continue increasing in the coming years.

Anticipated long-term growth in world potash demand is in the large populated developing countries such as China and India. Table 2 explains current and future markets and emerging opportunities. Stable markets are notably identified by their low N:K ratio. Growth in emerging/developing markets may be variable as factors such as weather and government policy influence each country's purchasing decisions.

China is the largest potash consumer in Asia...second only to the U.S.A. in the



Good shipment management cuts costs.

world...and with tremendous growth potential. China is also the world's largest fertilizer consumer. Currently, annual potash imports purchased by China fluctuates between 2 and 3 million tonnes KCl. Canada traditionally supplies between 20 and 50 percent of that requirement.

It is clear that China will do everything possible to maintain high levels of crop production. Potash demand is estimated to grow at 10 percent annually. However, it is and will continue to be constrained by internal planning processes, distribution inadequacies, foreign exchange availability and government priorities making annual consumption levels unpredictable.

Agronomic realities indicate that potash consumption will continue to increase as Chinese agronomists and scientists recommend and prove the need for a balanced NPK fertilization ratio of 1:0.50:0.25. China's consumption ratio has steadily improved over the years to about 1:0.35:0.13. However, potash consumption must increase significantly...essentially double current usage levels...to reach the recommended ratio. Most of the increase will come from imports.

By the year 2000, China needs to use 5 million tonnes K_2O , an increase of 2 million tonnes. Saskatchewan, Canada has surplus capacity of about 4 million tonnes and is well placed to supply China's requirements.

As China's potash imports grow, planning and delivery of shipments need efficient management to avoid excessive transportation and handling costs. China presently experiences these problems when purchases exceed 1.5 million tonnes K_2O annually. Expertise and assistance of Canpotex Limited are offered for devising better planning and procurement systems to ensure timely and cost effective delivery of the potash China needs for agricultural development in the 21st century. BCI

Table 2. Major world potash consuming countries.

Country	Consumption, million tonnes K_2O	Rank	Trend	N:K ratio
U.S.A.	---	1	1 - 2%/yr.	---
China	1.2 to 1.8	2	10%/yr.	1:0.13
Brazil	1.6	3	5%	---
India	1.2	5	10%/yr.	1:0.11
Japan	0.6	9	stable	1:0.83
Malaysia	0.5 to 0.6	8	4 - 5%	1:1.67
S. Korea	0.3 to 0.36	15	stable	1:0.56
World 1999	22.00	---		

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