

25X1

Approved For Release 2005/01/10 : CIA-RDP86T00608R000500200016-9

Approved For Release 2005/01/10 : CIA-RDP86T00608R000500200016-9

**Confidential**



# Intelligence Report

## *The World Fertilizer Market: A Short-Run View*

**Confidential**

ER IR 75-15  
May 1975

Copy **Nº 100**

25X1

Approved For Release 2005/01/10 : CIA-RDP86T00608R000500200016-9

Approved For Release 2005/01/10 : CIA-RDP86T00608R000500200016-9

Confidential



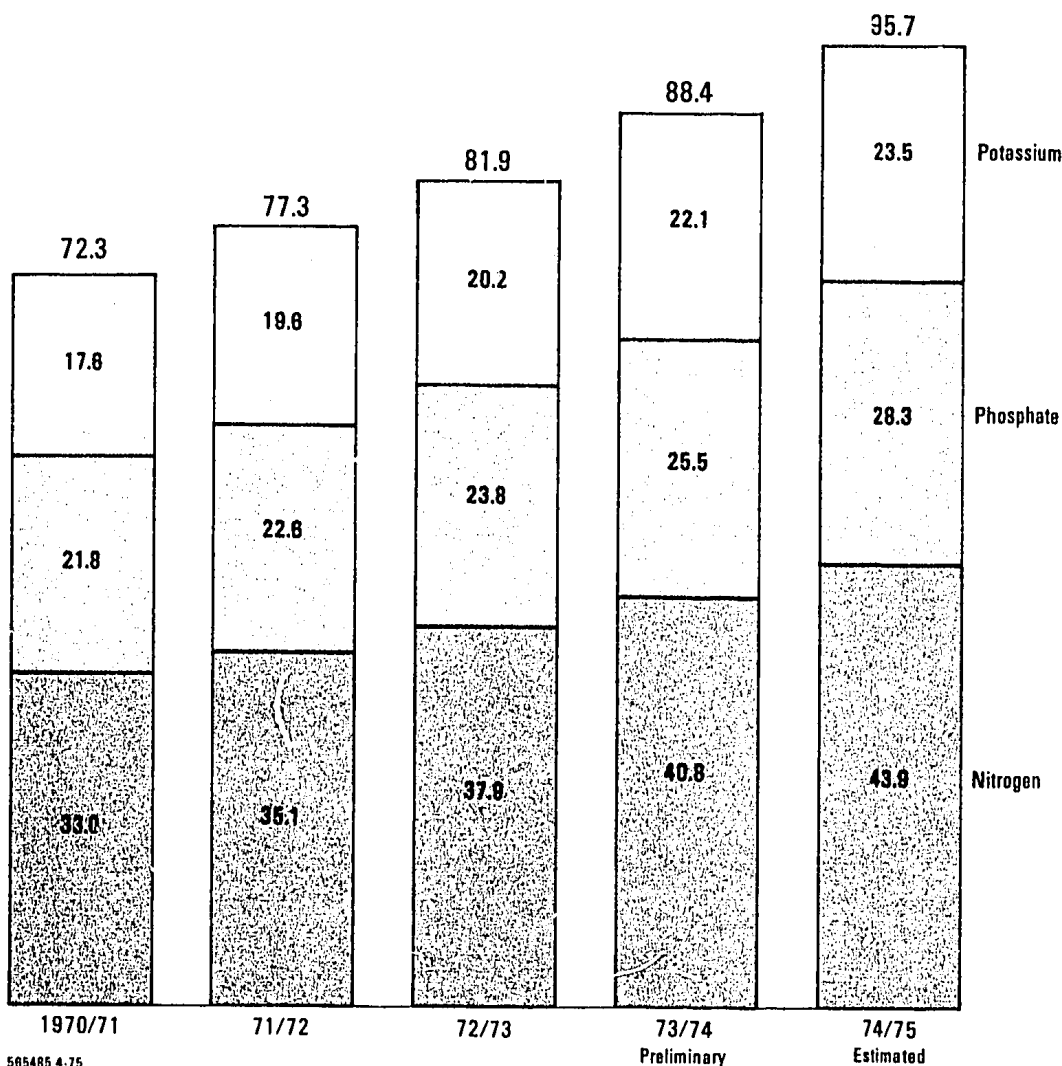
### The World Fertilizer Market: A Short-Run View

World production of chemical fertilizer has moved up steadily in recent years. At the same time, prices in the international market have been extremely volatile, nearly quadrupling between mid-1973 and mid-1974, only to fall back in recent months in the face of world recession and expanding supplies. Global production of chemical fertilizer by type, since 1970, is shown in Figure 1; trends in prices, mid-1973 to the beginning of 1975, are shown in Figure 2.

#### World Production of Chemical Fertilizer, by Type

Figure 1

Million Tons of Nutrient Content



25X1

25X1

Note: Comments and queries regarding this report are welcomed. They may be directed to [redacted] of the Office of Economic Research, [redacted]

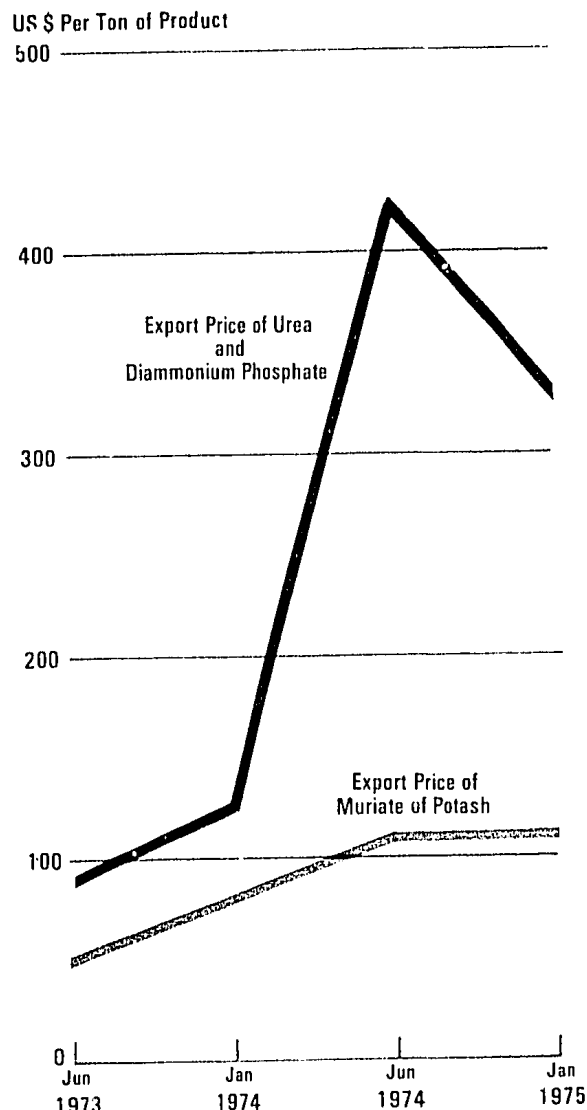
25X1

Figure 2

Production of nitrogen and phosphate fertilizer will increase substantially in the 1975/76 fertilizer year (July 1975 through June 1976) because of the coming on stream of new plants in major producing countries, and the availability of sizable amounts of ammonia and phosphoric acid, being diverted from nonfertilizer uses because of sluggish demand. In contrast, production of potassium fertilizer will not increase much, because Canadian producers are holding up expansion projects pending the resolution of tax disputes with the provincial government of Saskatchewan.

The international prices of nitrogen and phosphate fertilizer thus are expected to continue under downward pressure in 1975/76, while prices of potassium fertilizer will be comparatively firm. Even though down from peak, prices in mid-1975 will be perhaps triple the early 1973 level and will continue to place an extraordinary burden on the non-oil LDCs. Fertilizer application rates in developing countries are so low that farmers cannot reduce inputs of fertilizers without suffering considerable loss in yield. Farmers in the developed countries, where much of the land is already heavily fertilized, continue to increase their use of fertilizer, although not nearly so rapidly as before the price explosion.

### Chemical Fertilizer Prices



## DISCUSSION

### Increased Market Pressure, 1973/74<sup>1</sup>

1. The global statistical results for the 1973/74 fertilizer year show record production and an apparent increase in stocks, and therefore give no indication of the panic that shook the fertilizer market. World production reached 88.4 million tons<sup>2</sup> in 1973/74, 8% above the previous fertilizer year. Impressive gains in output were achieved in the United States, the USSR, Canada, and France, the world's leading producers. World consumption<sup>3</sup> rose 7%, suggesting addition to stocks at all levels of some 4.2 million tons. World exports of chemical fertilizer increased by 9%, paced by huge gains in Canadian shipments of potash and stepped-up shipments of phosphate fertilizer from the United States.<sup>4</sup>

2. In spite of these superficially favorable statistics, export prices for fertilizer nearly quadrupled during 1973/74 as rising demand led to shortages and then to a panicky scrambling for supplies. The apparent inconsistency is explained by the rapid buildup of stocks held in transit, by distributors, and, to some extent, by farmers, as a result of massive precautionary and speculative purchasing. These purchases, in turn, caused producers' stocks to dwindle.

3. The market pressures began in response to the unusually strong world economic boom of 1972-73 and the large rise in grain prices that followed the depletion of US grain reserves. With farm incomes up sharply and more favorable US grain/fertilizer price relations, farmers substantially increased crop acreage and fertilizer application.

4. Prices of chemical fertilizer rose in the second half of 1973 and industry profits soared. Farmers, long accustomed to inexpensive readily available fertilizer, began scrambling for supplies as spot shortages began to appear in the United States and South Asia. US suppliers agreed, when Phase Four price controls were removed in October 1973, to divert 1.5 million tons of fertilizer from the export market

---

1. Data are for fertilizer years, which run from 1 July to 30 June. In some cases, particularly in the case of Communist countries, the governments report on a calendar year basis. Data for these countries, as used in Tables 1-8 in the Appendix, refer to the first year stated -- e.g., 1973 data are listed as 1973/74 data and combined in 1973/74 totals.

2. Metric tons of nitrogen (N), phosphate (P<sub>2</sub>O<sub>5</sub>), and potassium (K<sub>2</sub>O) nutrients.

3. Apparent consumption -- i.e., annual production plus or minus net trade. Comprehensive data are not available on actual use of chemical fertilizer at the farm level.

4. World exports of nitrogen fertilizer, however, remained about the same as in the previous year. Major agricultural countries accounted for about 70% of world imports of chemical fertilizer and the LDCs about 30%, roughly the same shares that have prevailed since the early 1960s. For tables representing world production, consumption, and trade in chemical fertilizer, see the Appendix.

to domestic use in calendar year 1974. An acceleration of fertilizer purchases in the last half of 1973 reduced producers' inventories by 25%-40% in the United States, Western Europe, and Japan.

5. With the fertilizer market already very tight and nervous, three major events created a near panic.

- In late 1973 the OPEC countries quadrupled the price of crude oil, driving up prices of petroleum-based feedstocks, such as naphtha, used to produce nitrogen fertilizer.
- In January 1974, Morocco and the United States, the world's largest exporters of phosphate rock,<sup>5</sup> tripled export prices.
- In February 1974, Japan, the world's largest exporter of nitrogen fertilizer announced that exports would be cut by 40%, a decrease of 700,000 tons. This announcement created turmoil in South Asian countries that depend heavily on Japanese shipments.

6. These events quickly had repercussions on other countries. France, West Germany, and the United Kingdom reported that their exports of nitrogen fertilizer might be cut by about 20%, a decrease of approximately 500,000 tons. Poland, Yugoslavia, Mexico, and Argentina banned exports of nitrogen, and Japan halted foreign sales of phosphoric acid. Domestic pressures mounted on major exporters, including US and Italian exporters, to embargo shipments of all chemical fertilizer. Panicky scrambling for supplies, combined with discriminatory pricing policies of some major suppliers, drove chemical fertilizer prices to an artificially high and unsustainable level, far out of line with cost of production.

7. In the first six months of 1974, world export prices of nitrogen and phosphate fertilizer more than tripled and those of potassium rose by about 50%. The price of urea, a high-nutrient nitrogen fertilizer, skyrocketed from about \$125 per ton<sup>6</sup> in January to about \$425 in June. Ammonia<sup>7</sup> prices increased from about

5. Phosphate rock is the basic raw material used to produce phosphoric acid, an important intermediate product in the production of phosphate fertilizer. The United States and Morocco account for about one-half of world exports of phosphate rock.

6. Unless otherwise indicated, prices in this report are f.o.b. per metric ton of bulk product, not on a nutrient basis.

7. Ammonia is the basic input for the production of nitrogen fertilizers. US companies chiefly use natural gas feedstocks to produce ammonia. West European producers use about 70% natural gas and 30% naphtha. In Japan, naphtha is used exclusively. Smaller producers of nitrogen fertilizer use other feedstocks, such as coal and heavy fuel oil.

\$80 to \$350 during the same period and spot prices exceeded \$500 in Middle Eastern markets. Spurred by Morocco's announcement that export prices of phosphate rock would be increased by an additional 50% in July, price increases of phosphate fertilizer kept pace with those of nitrogen. Highly concentrated phosphate fertilizers, such as diammonium phosphate (DAP) and triple superphosphate, were selling routinely for \$425-\$475 in June, compared with \$125 six months earlier. Prices of potassium fertilizer - which was in relatively good supply - increased steadily in the first half of 1974 but less sharply than prices of nitrogen and phosphate fertilizer. High-nutrient potassium fertilizer, such as muriate of potash (MOP), increased to about \$110 in June, compared with \$75 in January<sup>8</sup> (see Figure 2).

8. Industry and trade reports asserted that the world faced a severe, long-term shortage of chemical fertilizer, which would undercut efforts to increase grain production in developed countries. In the less developed countries (LDCs), the impact of shortages of chemical fertilizer was seen as especially severe. Not only were these countries financially strapped but also a considerable number had emphasized the use of high yielding grains - the so-called miracle grains - that must have heavy application of fertilizer to respond well. Any reduction in fertilizer application would be apt to result in an even greater reduction in yields. For the same amount of fertilizer imported in 1972/73, however, the LDCs would (according to estimates by the UN Food and Agriculture Organization), at the new 1974/75 prices, have to pay an additional \$3.3 billion - a severe burden for countries already faced with staggering increases in the price of imported food and oil.

#### Easing of World Demand, 1974/75

9. Demand for chemical fertilizer weakened noticeably in the last half of 1974 as the worldwide recession spread, prices of many commodities declined, and consumers in both developed and less developed countries began to resist high fertilizer prices. Falling grain prices in particular made traditionally cautious farmers reluctant to purchase large amounts of chemical fertilizer. US farmers cut fertilizer purchases by 14% in the second half of 1974, compared with the same period one year earlier, a time of heavy buying. Farmers in Australia and the United Kingdom reduced fertilizer consumption by 3% in the second half of 1974. In January 1975, Japanese consumption of various types of multinutrient fertilizer

---

8. Prices paid by farmers for fertilizer in most countries increased considerably less than export prices during this period because of lags and government subsidies.



was reported to be 13%-30% below the level of one year before. The People's Republic of China cut its imports of nitrogen from Japan to slightly less than two-thirds of the previous year's level and canceled a contract for 1 million tons of phosphate rock from Morocco. The LDCs toughened their stance in the marketplace, many of them ordering their agents to pay no more than a fixed price for any type of fertilizer. A number of factors on the supply side convinced consumers that prices were more likely to decline than to continue to rise. Consequently, they stopped anticipatory buying.

10. Some factors causing consumers to doubt predictions of long-term shortages of fertilizer and continued price rises follow.

- Fertilizer production continued at full capacity in developed countries.
- In the first half of 1974, many projects for expanding production capacity were announced.
- There was growing evidence that fears concerning possible shortages of petroleum-based feedstocks and phosphate rock were groundless.
- The cost of naphtha in world markets declined from \$160 per ton in June to \$90 in December. This drop resulted from oversupply, attributable to the high priority given by the Indian and several West European governments to naphtha production.
- Sizable amounts of ammonia and phosphoric acid were diverted from nonfertilizer to fertilizer production because the recession lowered the demand arising from the competing uses.<sup>9</sup> Nonfertilizer demand for ammonia dropped by 5%-8% in the United States, Western Europe, and Japan, a reduction that would make 600,000-900,000 tons of additional ammonia available annually for production of nitrogen fertilizer. This amount of ammonia is sufficient to produce 1-1.5 million tons of urea.
- A 15%-20% decline in freight rates reduced the cost of delivered fertilizers.

11. As a result of the changing supply and demand situation, producers' inventories – which had been seriously depleted by the wave of panic buying in

9. About 15%-20% of annual production of ammonia and phosphoric acid is used for nonfertilizer applications, such as synthetic fibers, detergents, and explosives.

late 1973 and early 1974 -- began to rebuild, and prices began to fall. World export prices of nitrogen and phosphate fertilizer dropped more than 20% in the second half of 1974. Prices of urea and highly concentrated phosphate fertilizer fell from about \$425 per ton in June to \$330 in December. Spot prices for these fertilizers dropped below \$300 in early 1975.<sup>10</sup> However, prices of potassium fertilizer remained steady as producers and consumers marked time pending resolution of tax disputes between Canadian producers and the provincial government of Saskatchewan.

12. In January 1975, Japan reduced its export price of urea to \$240, nearly 30% less than export prices prevailing one month earlier. West European and Arab suppliers, who have been closely coordinating their export prices with the Japanese, almost certainly will follow suit, at least part way. Nitrex (Zurich), a major West European supplier, recently cut the price of highly concentrated phosphate fertilizer. French and Arab suppliers have offered to sell nitrogen and phosphate fertilizer at prices 40% below mid-1974 peaks. Poland recently offered to sell urea to the United States at 75% of the price it had been asking, but purchasers have not responded, as the Polish export price still considerably exceeds the US domestic price.

13. Despite the downward trend in prices, inventories continued to grow. By January 1975, US producers' inventories of nitrogen fertilizer were 19% higher than a year earlier, those of highly concentrated phosphate fertilizer were 10% higher, and those of potash about 33% higher. Japanese and West European producers' inventories of nitrogen and multinutrient fertilizer were at high levels, and Japan also found itself overstocked with ammonia and phosphoric acid. Fertilizer inventories were reported to be at or above normal levels in Brazil, Indonesia, India, and Pakistan. The Philippines and Nicaragua banned further imports of nitrogen fertilizer because of excess inventories, and Sri Lanka reportedly was attempting to sell surplus stocks of phosphate fertilizer through Japanese exporters.

14. By the first quarter of 1975, the world fertilizer market had turned around from a situation of soaring demand, tight supplies, and rising prices to one of weak demand, rising inventories, and falling prices. A recent Pakistani tender for 200,000 tons of nitrogen and phosphate fertilizer brought bids offering almost 950,000 tons. A Chilean tender for 25,000 tons of multinutrient fertilizer brought bids totaling almost 300,000 tons. In contrast, in mid-1974, most tenders brought bids for only one-third of the amount requested.

---

10. These price declines probably have not yet been felt at the farm level.

## Prospects

### *Supply*

15. World production of chemical fertilizer will increase by an estimated 8% in 1974/75 and grow even faster in 1975/76. Ten large ammonia plants that will be commissioned in 1975 in the United States, the USSR, and Mexico, with a combined annual capacity of 3 million tons of ammonia, will support production of more than 5 million tons of urea. Smaller increases in capacity are due in India, Indonesia, and Bangladesh. An additional 4-5 million tons of ammonia capacity is expected to be commissioned in 1976, paced by huge increases in Chinese capacity. Although spot shortages of natural gas could limit increases in output, especially in the United States, the world supply of nitrogen fertilizer will continue to outpace demand in 1975/76, resulting in further downward pressure on prices.<sup>11</sup>

16. The world supply of phosphate fertilizer will increase substantially in both 1974/75 and 1975/76 because of the greater availability of phosphoric acid. At least 3.6 million tons of new phosphoric acid capacity, equal to 18% of total installed capacity in 1974, will come on stream by December 1975. The United States will add about 1.5 million tons, Western Europe 900,000 tons, and Morocco 500,000 tons. Smaller increases are due in at least half a dozen other countries.

17. Spot shortages of phosphate rock will not appreciably limit production of phosphate fertilizer. Rapid gains in rock production are expected in 1975 in both the United States and Morocco. Jordan plans to triple production of phosphate rock by 1976, and like increases probably will be achieved in Spanish Sahara, Togo, Senegal, and Israel.

18. Potash, however, probably will remain in tight supply, and prices of potassium fertilizer almost certainly will remain high during this fertilizer year and next. Much of the uncertainty hanging over world potash markets involves the decision by Canadian producers in late 1974 to postpone eight major potash expansion projects, valued at \$250 million, pending resolution of tax disputes with the provincial government of Saskatchewan. Tight supplies and high prices will probably characterize the potash market until huge increases in Soviet capacity come into play in the late 1970s.

---

11. As world fertilizer prices weaken, some longer range plans for construction of additional production capacity after 1976/77 undoubtedly will be shelved. Between November 1973 and June 1974, in response to high prices then prevailing, plans were announced for building, by 1980, plants with capacity to produce 18 million tons of ammonia and 2.6 million tons of phosphoric acid annually.

### *Demand*

19. World consumption of chemical fertilizer probably will increase during 1974/75 at a lower rate than the 7% average in the early 1970s. In 1975/76, despite greatly improved supply conditions and lower fertilizer prices, gains in consumption of fertilizer hinge to a large extent on future grain prices. If grain prices are low relative to fertilizer prices, increases in fertilizer consumption - especially in developed countries - probably will be small.

20. Changes in fertilizer consumption in this fertilizer year and next will vary widely from country to country. A lower rate of growth is most likely in those major agricultural countries where the price of fertilizer has increased sharply relative to the price of grain. This is especially true in the case of France and the United States, where fertilizer prices in 1974 increased two to three times faster than prices of major crops, such as corn and wheat, thus reducing the profitability of fertilizer use.<sup>12</sup> The relationship between prices of fertilizer and grain in Australia, West Germany, and Italy changed little during the same period. Uncertainty concerning future grain prices probably will cause farmers to adopt a wait-and-see attitude toward making large purchases of chemical fertilizer.

21. In major agricultural countries, where much of the land already is heavily fertilized, farmers can shift to crops that require less fertilizer or can postpone additional application for a short time without suffering substantial loss in yields. Opportunity for reduced application is greatest in the case of phosphate and potassium fertilizers, the nutrients of which remain active in the soil beyond one crop season. For example, Japan plans to reduce consumption of phosphate fertilizer 10%-15% in 1975 because of the high cost of imported phosphate rock. Australian fertilizer producers expect to encounter weak demand because of the anticipated unfavorable market conditions for wheat. One producer is estimating that domestic purchases of chemical fertilizer may fall by as much as 30% in 1975 if wheat prices continue to decline.

22. The LDCs are unlikely to reduce fertilizer consumption. Fertilizer application rates in the LDCs are low, and farmers face substantial loss in yields if fertilizer application is delayed. The potential loss in grain output is suggested by the high response ratios for fertilizer that are obtainable when fertilizer is used effectively with adequate amounts of water and chemical pesticides. In developed

---

12. Fertilizer costs increased from about 4% of total farm cost in the United States in 1972/73 to 8%-10% in 1973/74. In Western Europe, farm costs (excluding labor) were 33% higher in 1974 than two years earlier, largely as a result of increased fertilizer prices.

Confidential

countries, at current levels of application, each ton of plant nutrient applied to grain results in 4-5 tons of additional output. In the LDCs, response ratios of 8-12 tons of additional grain per ton of plant nutrient are commonly achieved with high yielding variety grains. Fertilizer has accounted for an estimated 33% of the increase in yields in Taiwan in recent years and about 60% in India. Increased availability and application of fertilizer can make a great difference to the food situation in the LDCs.

23. On the other hand, significant increases in fertilizer use in most LDCs seem unlikely this fertilizer year. In Brazil, India, and Pakistan, by far the largest non-Communist LDC consumers of fertilizer, production continues to rise and stocks are accumulating. Farmers in these countries are financially strapped and are faced with worsening relationships between fertilizer and grain prices. The huge rise in world market prices in 1973/74 forced the LDCs, especially India and Brazil, to increase dramatically the prices farmers pay for chemical fertilizer. Desire to hold down food prices and to combat inflation militated against a proportionate increase in grain prices. In Brazil, government-controlled prices of chemical fertilizer soared by 230% in 1974, whereas prices farmers received for wheat and corn rose by only 29% and 11%, respectively. Government-ordered increases in domestic fertilizer prices also outran increases in grain prices by a wide margin in India and Pakistan.

24. The turnaround in the fertilizer market and the prospects for substantially higher production and slower growth in demand in developed countries will mean that more fertilizer will be available to the LDCs at lower prices. This should enable them to reduce fertilizer prices at the farm level. Indonesia, for example, which is well stocked with chemical fertilizer, recently established more favorable relationships between the prices of fertilizer and rice in order to stimulate sluggish fertilizer consumption. If fertilizer and grain price relationships improve in other LDCs, fertilizer consumption probably will rebound in 1975/76.

25. Given the expected world supply and demand conditions, export prices of chemical fertilizer should fall sharply in 1975/76. It is uncertain, however, how far prices will need to fall in order to stimulate consumer demand sufficiently to clear the market. Most suppliers appear to be trimming the export price of urea to about \$240, the price set by Japan. This price, although down sharply from mid-1974 peaks, probably will come under further downward pressure. Farmers in importing countries, such as India and Pakistan, currently are resisting domestic prices that are 25%-50% lower than the Japanese export price.

APPENDIX

STATISTICAL TABLES

Table 1

World Production of Chemical Fertilizer

	Thousand Metric Tons of Nutrients			
	1970/71	1971/72	1972/73	1973/74 <sup>1</sup>
<b>Total</b>	<b>72,335</b>	<b>77,314</b>	<b>81,932</b>	<b>88,435</b>
United States	15,624	16,126	16,662	17,511
USSR	13,095	14,664	15,924	17,561
Canada	4,465	5,446	5,340	6,620
France	4,644	4,821	4,756	5,424
China	2,781	3,339	3,951	4,906
West Germany	4,744	4,784	4,954	4,977
East Germany	3,244	3,247	3,295	3,352
Japan	2,770	2,811	3,183	3,167
Poland	1,629	1,787	1,910	2,180
Netherlands	1,206	1,334	1,544	1,874
Other	18,133	18,755	20,413	20,863

1. Preliminary.

Table 2

World Production of Nitrogen Fertilizer

	Thousand Metric Tons of N				Percent Change over Pre- vious Year
	1970/71	1971/72	1972/73	1973/74 <sup>1</sup>	
<b>Total</b>	<b>32,987</b>	<b>35,105</b>	<b>37,878</b>	<b>40,800</b>	<b>7.7</b>
United States	8,161	8,318	8,433	9,152	8.5
USSR	5,423	6,055	6,551	7,150	9.1
China	1,562	1,900	2,360	2,880	22.0
Japan	2,105	2,125	2,454	2,431	-1.0
France	1,351	1,417	1,472	1,694	15.1
Netherlands	929	1,038	1,189	1,500	26.2
West Germany	1,505	1,321	1,471	1,473	Negl.
Poland	1,030	1,081	1,147	1,366	19.1
India	846	946	1,054	1,050	Negl.
Italy	900	1,028	1,045	1,050	Negl.
Other	9,175	9,876	10,702	11,054	

1. Preliminary.

Table 3

World Production of Phosphate Fertilizer

	1970/71	1971/72	1972/73	1973/74 <sup>1</sup>	Percent Change over Pre- vious Year
Thousand Metric Tons of P <sub>2</sub> O <sub>5</sub>					
<b>Total</b>	<b>21,754</b>	<b>22,561</b>	<b>23,850</b>	<b>25,500</b>	6.9
United States	5,204	5,601	5,797	6,013	3.7
USSR	3,585	3,802	3,940	4,261	8.2
China	1,103	1,299	1,439	1,858	29.1
France	1,451	1,577	1,611	1,650	2.4
Australia	695	762	1,082	1,169	8.0
West Germany	946	976	986	965	-2.0
Belgium	745	739	788	830	5.3
Poland	599	706	763	814	6.7
Japan	665	685	729	736	Negl.
Canada	726	721	720	740	2.8
Other	6,035	5,693	5,995	6,464	

1. Preliminary.

Table 4

World Production of Potassium Fertilizer

	1970/71	1971/72	1972/73	1973/74 <sup>1</sup>	Percent Change over Pre- vious Year
Thousand Metric Tons of K <sub>2</sub> O					
<b>Total</b>	<b>17,594</b>	<b>19,648</b>	<b>20,204</b>	<b>22,135</b>	9.6
USSR	4,087	4,807	5,433	6,150	13.2
Canada	3,179	3,920	3,820	5,060	32.5
East Germany	2,419	2,445	2,458	2,678	9.0
West Germany	2,293	2,487	2,497	2,539	1.7
United States	2,259	2,207	2,432	2,346	-3.6
France	1,842	1,827	1,673	2,080	24.3
Israel	576	552	622	515	-17.2
Other	939	1,403	1,269	767	

1. Preliminary.

Table 5

World Production of Chemical Fertilizer, by Region

	Thousand Metric Tons of Nutrients			
	1970/71	1971/72	1972/73	1973/74 <sup>1</sup>
<b>Total</b>	<b>72,335</b>	<b>77,314</b>	<b>81,932</b>	<b>88,435</b>
<b>Developed countries</b>	<b>64,522</b>	<b>68,184</b>	<b>71,886</b>	<b>76,777</b>
Nitrogen	28,553	29,657	31,619	33,907
Phosphate	18,526	19,636	20,663	21,427
Potassium	17,443	18,891	19,604	21,443
<b>Less developed countries</b>	<b>7,813</b>	<b>9,130</b>	<b>10,046</b>	<b>11,658</b>
Nitrogen	4,434	5,448	6,259	6,893
Phosphate	3,228	2,925	3,187	4,073
Potassium	151	757	600	692

1. Preliminary.

Table 6

World Consumption of Chemical Fertilizer, by Region

	Thousand Metric Tons of Nutrients			
	1970/71	1971/72	1972/73	1973/74 <sup>1</sup>
<b>Total</b>	<b>68,269</b>	<b>72,824</b>	<b>78,613</b>	<b>84,221</b>
<b>Developed countries</b>	<b>54,800</b>	<b>57,179</b>	<b>61,741</b>	<b>65,826</b>
Nitrogen	23,203	24,039	25,765	27,728
Phosphate	16,606	17,360	19,275	19,992
Potassium	14,991	15,780	16,701	18,106
<b>Less developed countries</b>	<b>13,469</b>	<b>15,645</b>	<b>16,872</b>	<b>18,395</b>
Nitrogen	8,560	10,051	10,300	11,083
Phosphate	3,218	3,774	4,436	4,906
Potassium	1,691	1,820	2,136	2,406

1. Preliminary.



Table 7

World Exports of Chemical Fertilizer<sup>1</sup>

Thousand Metric Tons of Nutrients

Exporter	1970/71				1971/72			
	Nitrogen	Phosphate	Potassium	Total	Nitrogen	Phosphate	Potassium	Total
<b>Total</b>	<b>6,823</b>	<b>2,867</b>	<b>6,652</b>	<b>18,342</b>	<b>6,954</b>	<b>3,365</b>	<b>9,674</b>	<b>19,993</b>
Canada	434	260	2,959	3,653	438	330	3,868	4,636
United States	977 <sup>2</sup>	815	563	2,355	935 <sup>2</sup>	1,330	596	2,861
USSR	307	132	1,309	1,748	319	109	1,622	2,050
West Germany	483	142	1,176	1,801	370	144	1,088	1,602
East Germany	2	....	1,739	1,741	13	....	1,757	1,770
Japan	1,410	28	....	1,438	1,274	48	....	1,332
Netherlands	595	210	....	805	652	255	....	907
France	192	97	859	1,148	163	89	722	974
Belgium	442	448	....	890	482	493	....	975
Italy	442	70	47	559	442	67	21	530
Other	1,539	665	....	2,204	1,866	500	....	2,366
	1972/73				1973/74			
<b>Total</b>	<b>7,915</b>	<b>4,108</b>	<b>11,616</b>	<b>23,639</b>	<b>7,900</b>	<b>4,600</b>	<b>13,200</b>	<b>25,700</b>
Of which:								
Canada	377	340	3,640	4,357	256	350	5,042	5,648
United States	1,231 <sup>2</sup>	1,291	836	3,358	1,070 <sup>2</sup>	1,403	859	3,332
USSR	405	95	1,706	2,206	362	92	1,997	2,451
West Germany	507	144	1,400	2,051	578	173	1,214	1,965
East Germany	....	2	1,820	1,822	Negl.	Negl.	1,880	1,880
Japan	1,585	60	9	1,654	1,386	50	10	1,456
Netherlands	794	330	102	1,226	1,110	340	....	1,450
France	223	90	795	1,108	162	307	733	1,202
Belgium	515	655	131	1,301	N.A.	N.A.	170	N.A.
Italy	265	35	23	323	410	30	20	460
Other	2,013	1,066	1,154	4,233	N.A.	N.A.	N.A.	N.A.

1. Because of transportation delays and differences in tabulation methods of the reporting countries, totals in Table 7 do not agree with those in Table 8.  
 2. Including anhydrous ammonia.

Table 8  
World Imports of Chemical Fertilizer

Importer	Thousand Metric Tons of Nutrients							
	1970/71				1971/72			
	Nitrogen	Phosphate	Potassium	Total	Nitrogen	Phosphate	Potassium	Total
<b>Total</b>	<b>6,681</b>	<b>3,106</b>	<b>9,664</b>	<b>19,451</b>	<b>6,964</b>	<b>3,076</b>	<b>10,114</b>	<b>20,154</b>
United States	842	257	2,278	3,377	766	297	2,802	3,865
Brazil	255	215	306	776	209	216	351	776
China	1,480	....	5	1,485	1,526	....	5	1,531
France	208	340	183	731	226	366	212	804
Poland	....	12	1,144	1,156	....	29	1,173	1,202
India	491	37	183	711	470	242	284	996
United Kingdom	131	63	531	725	170	82	492	744
Czechoslovakia	98	24	526	648	79	24	569	672
Japan	....	22	632	654	....	21	487	508
Denmark	227	42	188	457	221	36	177	434
Other	2,949	2,094	3,688	8,731	3,297	1,763	3,562	8,622
<b>Total</b>	<b>7,742</b>	<b>3,507</b>	<b>11,058</b>	<b>22,307</b>	<b>N.A.</b>	<b>N.A.</b>	<b>N.A.</b>	<b>N.A.</b>
Of which:								
United States	800	282	2,896	3,978	958	285	3,742	4,985
Brazil	324	586	456	1,366	N.A.	N.A.	460	1,700
China	1,535	15	10	1,560	1,366	1,240	75	1,524
France	426	629	378	1,433	N.A.	83	500	N.A.
Poland	37	12	1,232	1,281	N.A.	N.A.	N.A.	N.A.
India	691	211	316	1,218	N.A.	N.A.	N.A.	N.A.
United Kingdom	155	75	512	742	658	208	381	1,247
Czechoslovakia	99	19	590	708	N.A.	54	473	N.A.
Japan	....	48	537	585	66	34	600	700
Denmark	271	50	210	531	....	38	620	658
Other	3,404	1,580	531	5,515	305	55	212	572
					N.A.	N.A.	N.A.	N.A.

Confidential  
13

Confidential