



# The Fertilizer Institute

Nourish, Replenish, Grow

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*Vice President*

*Economic Services*

## **MEMORANDUM**

**TO:** Recipients, Fertilizer RECORD

**FROM:** Harry Vroomen

**SUBJECT:** Semiannual Production Survey (July-December 2005)

**DATE:** April 17, 2006

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Attached is the completed Production Survey for the period July-December 2005. It reports:

1. **Operating rates**, expressing production in July-December 2005 as a percent of capacity. Also included is a copy of the definitions of "annual production capacity."
2. **Historical operating rates**, January-June for the years 1995-2005 and July-December for the years 1995-2005.

The Fertilizer Institute (TFI) would like to express its special appreciation to the participating companies and to the Potash and Phosphate Institute for providing information for this report. Please feel free to contact me by telephone at (202) 515-2702 or via e-mail at [hvroomen@tfi.org](mailto:hvroomen@tfi.org) if you have any questions or comments.

THE FERTILIZER INSTITUTE  
SEMI-ANNUAL OPERATING RATES

JULY - DECEMBER  
2005

---- U.S. OPERATING RATES ----

	SHORT TONS - (1000)		Percent of Capacity
	Annual Capacity *	Six Months' Production	
<b>NITROGEN PRODUCTS</b>			
101. Anhydrous Ammonia	10,895	3,956	72.6
102. UAN Solutions (28%)	10,078	3,862	76.6
103. Ammonium Nitrate, Solid	3,218	1,104	68.6
105. Ammonium Sulfate	3,217	1,478	91.9
106. Urea, Solid	4,361	1,126	51.6
<b>PHOSPHATE PRODUCTS</b>			
201. Phosphate Rock, Total	46,713	19,661	84.2
<b>PROCESSED PHOSPHATES</b>			
301. Phosphoric Acid, Super (P <sub>2</sub> O <sub>5</sub> ) **	1,310	378	57.7
302. Phos Acid, Wet Process (P <sub>2</sub> O <sub>5</sub> )	12,521	5,618	89.7
304. Concentrated Super, All Forms (P <sub>2</sub> O <sub>5</sub> )	***	***	***
306. Diammonium Phosphate		5,520	
307. Monoammonium Phosphate		2,242	
306.-307. Combined DAP & MAP	20,781	7,762	74.7

---- NORTH AMERICA OPERATING RATES ----

**POTASH PRODUCTS \*\*\*\***

401. Potassium Chloride (K <sub>2</sub> O)	15,808	5,905	74.7
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---- CANADA OPERATING RATES ----

	METRIC TONS - (1000)		Percent of Capacity
	Annual Capacity *	Six Months' Production	
<b>NITROGEN PRODUCTS</b>			
101. Anhydrous Ammonia	5,240	2,182	83.3
102. UAN Solutions, 28-32% N	***	***	***
103. Ammonium Nitrate, Solid	***	***	***
105. Ammonium Sulfate	708	320	90.5
106. Urea, Solid	3,658	1,601	87.5
<b>PROCESSED PHOSPHATES</b>			
302. Phos Acid, Wet Process (P <sub>2</sub> O <sub>5</sub> )	***	***	***
306.-307. Combined DAP & MAP	***	***	***

\* Capacity is for participants in survey -- not for entire industry.

\*\* Superphosphoric acid for agricultural use only beginning in calendar year 2004.

\*\*\* Data withheld to avoid disclosure.

\*\*\*\* Potassium chloride production data is supplied by the Potash & Phosphate Institute only for North America.

## DEFINITIONS FOR "ANNUAL CAPACITY"

### UNITS

Thousand short tons of product except for phosphoric acid (super and wet process) which is as  $P_2O_5$ . Use 340 days of operation per year.

### PRODUCT

### DEFINITION

#### NITROGEN PRODUCTS

101. Anhydrous Ammonia

Maximum annual sustainable capacity of ammonia containing 82% N (product basis).

102. UAN Solutions

Maximum annual sustainable capacity of all UAN solutions (product basis containing 28%-32%), at sustained operating rates of production, with nitric acid and urea supply governing.

103. Ammonium Nitrate, Solid

Maximum annual sustainable capacity. Includes both fertilizer and industrial grades. Reported as **100% AN** (product basis). Solid AN usually contains 33.5%-34% N.

105. Ammonium Sulfate

Maximum annual sustainable capacity (product basis) when feedstock units are at capacity. AS usually contains 21% N.

106. Urea, Solid

Maximum annual sustainable capacity with  $CO_2$  supply usually governing. Reported as **100% urea** (product basis).

#### PHOSPHATE PRODUCTS

201. Phosphate Rock, Total

Maximum annual sustainable capacity in product tons of various  $P_2O_5$  grades after beneficiation (often referred to as phosphate concentrate).

#### PROCESSED PHOSPHATES

301. Phosphoric Acid, Super ( $P_2O_5$ )

Maximum annual sustainable capacity. Includes only phosphoric acid typically containing 66%-76%  $P_2O_5$  and reported as **100%  $P_2O_5$** . Includes superphosphoric acid for agricultural use only beginning in calendar year 2004. Also included with wet-process phosphoric acid capacity.

302. Phos Acid, Wet Process ( $P_2O_5$ )

Maximum annual sustainable capacity reported as **100%  $P_2O_5$** . Includes all wet-process phosphoric acid, even if it is concentrated into superphosphoric acid or purified. Includes filter grade of 30%-32%  $P_2O_5$ , merchant grade of 54%  $P_2O_5$ , and superphosphoric acid of 66%-76%  $P_2O_5$  (typical).

304. Concentrated Super, All Forms

Maximum annual sustainable capacity. Reported as **100%  $P_2O_5$** . Usually referred to as TSP.

306.-307. Ammonium Phosphates ( $P_2O_5$ )

Maximum annual sustainable capacity. Reported as **100%  $P_2O_5$** . Most commonly DAP and MAP.

#### POTASH PRODUCTS

401. Potassium Chloride ( $K_2O$ )

Maximum annual sustainable capacity. Reported as **100%  $K_2O$** .

**HISTORICAL SUMMARY**  
**U.S. OPERATING RATES -- PERCENT OF CAPACITY \***

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
<b>NITROGEN PRODUCTS</b>											
<b>Anhydrous Ammonia</b>											
January - June	99.8	103.4	97.7	95.5	88.0	87.6	63.1	93.1	80.6	82.6	87.5
July - December	96.0	99.6	95.6	89.2	82.0	71.3	75.1	97.4	77.2	86.2	72.6
<b>UAN Solutions (28%)</b>											
January - June	92.1	92.3	84.4	84.0	84.7	90.8	80.0	73.4	75.0	92.7	98.0
July - December	81.9	84.9	82.5	91.5	75.6	84.2	74.2	94.0	81.1	93.0	76.6
<b>Ammonium Nitrate, Solid</b>											
January - June	88.9	80.2	87.0	96.9	91.1	91.5	83.0	87.6	77.2	80.6	80.8
July - December	69.1	75.4	85.7	88.0	81.7	71.3	75.1	79.6	76.9	74.7	68.6
<b>Ammonium Sulfate</b>											
January - June	104.5	98.2	98.8	102.4	102.7	99.0	81.4	91.0	91.2	97.6	93.5
July - December	102.5	99.8	96.2	99.3	101.9	91.8	81.5	94.9	87.2	89.9	91.9
<b>Urea, Solid</b>											
January - June	103.8	105.9	95.5	86.0	85.6	80.9	59.3	82.8	72.4	67.0	77.7
July - December	92.7	100.2	87.1	82.5	76.8	68.2	72.0	82.1	59.9	78.3	51.6
<b>PHOSPHATE PRODUCTS</b>											
<b>Phosphate Rock, Total</b>											
January - June	84.1	88.2	86.8	88.6	80.1	75.0	79.2	78.7	72.9	87.1	87.9
July - December	79.0	85.2	74.9	90.5	69.9	70.3	59.3	79.5	82.6	79.8	84.2
<b>PROCESSED PHOSPHATES</b>											
<b>Phosphoric Acid, Super (P<sub>2</sub>O<sub>5</sub>) **</b>											
January - June	80.6	75.9	85.5	83.8	79.4	74.8	79.5	71.0	75.5	43.9	51.3
July - December	85.0	90.7	86.1	90.5	73.7	80.9	70.2	81.1	78.7	53.8	57.7
<b>Phos Acid, WP (P<sub>2</sub>O<sub>5</sub>)</b>											
January - June	100.2	95.7	96.9	95.5	92.6	86.7	75.0	89.1	88.8	91.0	92.3
July - December	98.7	102.4	96.6	96.7	89.9	81.1	83.9	89.4	92.0	92.0	89.7
<b>Concentrated Super, All Form</b>											
January - June	80.3	80.7	71.2	71.4	59.5	91.4	85.8	83.3	76.8	72.0	***
July - December	83.7	83.7	75.7	56.8	62.3	90.4	87.8	82.3	64.8	***	***
<b>Combined DAP &amp; MAP</b>											
January - June	94.8	86.5	87.5	92.0	89.3	80.8	69.2	82.8	81.5	87.8	80.4
July - December	94.1	93.5	91.1	91.9	87.2	76.4	78.9	81.4	86.3	85.3	74.7
<b>POTASH PRODUCTS (July 2005 forward, data included in North America)</b>											
<b>Potassium Chloride (K<sub>2</sub>O)</b>											
January - June	96.0	84.0	85.6	89.9	99.0	82.1	80.1	81.3	80.8	97.6	84.7
July - December	97.2	85.0	84.6	84.2	85.6	59.7	76.4	86.8	64.8	82.3	-

**HISTORICAL SUMMARY**  
**NORTH AMERICA OPERATING RATES -- PERCENT OF CAPACITY \***

<b>POTASH PRODUCTS</b>											
<b>Potassium Chloride (K<sub>2</sub>O)</b>											
January - June	-	-	-	-	-	-	-	-	-	-	-
July - December	-	-	-	-	-	-	-	-	-	-	74.7

\* Operating rates are based on participating companies' production and capacity.

\*\* Superphosphoric acid for agricultural use only beginning in calendar year 2004.

\*\*\* Data withheld to avoid disclosure.

**HISTORICAL SUMMARY**  
**CANADA OPERATING RATES -- PERCENT OF CAPACITY\***

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
<b>NITROGEN PRODUCTS</b>											
<b>Anhydrous Ammonia</b>											
January - June	107.1	96.5	99.4	87.9	96.5	93.3	80.6	81.2	88.8	93.5	87.5
July - December	98.7	96.1	93.7	89.1	86.9	88.9	77.7	92.5	84.8	90.7	83.3
<b>UAN Solutions (28%)</b>											
January - June	**	**	**	**	**	**	**	**	**	**	**
July - December	**	**	**	**	**	**	**	**	**	**	**
<b>Ammonium Nitrate, Solid</b>											
January - June	88.1	82.5	95.8	77.3	68.7	71.5	71.0	65.8	67.3	80.8	72.0
July - December	77.0	90.2	78.6	73.8	65.9	60.5	72.2	75.9	63.6	71.5	**
<b>Ammonium Sulfate</b>											
January - June	**	**	**	**	**	**	**	**	**	**	111.6
July - December	**	**	**	111.4	**	**	**	**	**	**	90.5
<b>Urea, Solid</b>											
January - June	103.9	96.6	91.8	96.6	98.4	96.7	87.7	79.0	86.4	93.1	90.4
July - December	96.4	90.2	89.9	97.7	90.1	98.5	75.8	90.5	81.1	92.1	87.5
<b>PROCESSED PHOSPHATES</b>											
<b>Phos Acid, WP (P<sub>2</sub>O<sub>5</sub>)</b>											
January - June	**	**	**	**	**	**	**	**	**	**	**
July - December	**	**	**	**	**	**	**	**	**	**	**
<b>Combined DAP &amp; MAP</b>											
January - June	**	**	**	**	**	**	**	**	**	**	**
July - December	**	**	**	**	**	**	**	**	**	**	**
<b>POTASH PRODUCTS (July 2005 forward, data included in North America)</b>											
<b>Potassium Chloride (K<sub>2</sub>O)</b>											
January - June	87.0	69.4	70.3	83.1	72.8	84.8	75.1	76.9	74.5	82.9	85.0
July - December	78.6	56.0	69.1	64.3	57.2	61.5	54.8	54.1	65.7	71.5	-

\* Operating rates are based on participating companies' production and capacity.

\*\* Data withheld to avoid disclosure.

THE FERTILIZER INSTITUTE  
PARTICIPATING COMPANIES -- PRODUCTION SURVEY  
July - December 2005

United States

Agrifos Fertilizer L.P.	Green Valley Chemical Corporation
Agrium U.S. Inc.	Honeywell Intermediates
Air Products & Chemicals, Inc.	Intrepid Mining, LLC *
BASF Corporation	J.R. Simplot Company
CF Industries, Inc.	Martin Resources
Cherokee Nitrogen Company	Mississippi Phosphates Corporation
Coffeyville Resources, LLC	PotashCorp
Dakota Gasification Company	Royster-Clark, Inc.
DSM Chemicals North America, Inc.	Terra Industries, Inc. (U.S. only)
Dyno Nobel, Inc.	The Mosaic Company *
El Dorado Chemical Company	U.S. Agri-Chemicals Corporation

Canada

Agrium, Inc. *	Saskferco Products, Inc.
Canadian Fertilizers Ltd.	Sherritt International
Canpotex *	Simplot Canada Limited
Cominco Ltd.	Terra International (Canada), Inc.
Nitrochem Corporation	The Mosaic Company *
Potash Corporation of Saskatchewan Inc. *	

\* Potash Information Supplied by Potash & Phosphate Institute