THE OUTLOOK FOR FERTILIZER SUPPLY IN VIETNAM

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1. PVFCCO AT A GLANCE
2. VIETNAM AGRICULTURE AND ECONOMY OVERVIEW
3. FERTILIZER MARKET SITUATION
4. OUTLOOK FOR UREA SUPPLY
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**OVERVIEW**

- The biggest producer and trader of fertilizer in Vietnam
- Member of PetroVietnam Oil and Gas Group (PetroVietnam)
- A Blue chip stock listed on Hochiminh Stock Exchange (HoSE). Stock code: **DPM**
- Charter capital (2007): 3,800 billion VND (~238 million USD)
- Total shares: 380,000,000
- Market value: 705 mil USD

Headquarter: Ho Chi Minh city
PVFCCO’S UREA MARKET

- Capacity of production: 800,000 MT prilled urea per year.
- Import - Export quantity (MT):

<table>
<thead>
<tr>
<th>Year</th>
<th>Export</th>
<th>Import</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>30,000</td>
<td>130,000</td>
</tr>
<tr>
<td>2012</td>
<td>180,000</td>
<td>100,000</td>
</tr>
</tbody>
</table>

PVFCCO’S UREA LOCAL MARKET SHARE

Source: PVFCCo
**REVENUE & NET PROFIT (2009-2012)**

<table>
<thead>
<tr>
<th>Year</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>350</td>
</tr>
<tr>
<td>2010</td>
<td>358</td>
</tr>
<tr>
<td>2011</td>
<td>465</td>
</tr>
<tr>
<td>9m/2012</td>
<td>504</td>
</tr>
</tbody>
</table>

- **Revenue**
- **Net Profit**

Unit: million USD

**DISTRIBUTION NETWORK**

- **30 warehouses/storage (250,000MT)**
  - PVFCCo North
    - 2 owned branch, 45 wholesalers
    - 545 retailers
  - PVFCCo Central
    - 2 owned branch, 16 wholesalers
    - 813 retailers
  - PVFCCo South East
    - 6 owned branch, 25 wholesalers
    - 760 retailers
  - PVFCCo South West
    - 2 owned branch, 24 wholesalers
    - 804 retailers
  - Cambodia Branch

End Users
**DISTRIBUTION NETWORK**

- **30 warehouses/storage with capacity: 250,000MT**
  - 12 Branches
  - 110 Wholesalers
  - ~3,000 Retailers located throughout the country

- **Export ports:**
  - Ba Ria – Vung Tau
  - Ho Chi Minh City

- **Method of shipping:**
  - Bags/Container.
  - Bulk.

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KEY ECONOMIC FIGURES

<table>
<thead>
<tr>
<th>Items</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012 (E)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population (mil. persons)</td>
<td>86.03</td>
<td>86.93</td>
<td>87.84</td>
<td>88.60</td>
</tr>
<tr>
<td>GDP Growth rate (%)</td>
<td>5.3</td>
<td>6.8</td>
<td>5.9</td>
<td>5.7</td>
</tr>
<tr>
<td>GDP per capita ($)</td>
<td>1,130</td>
<td>1,224</td>
<td>1,411</td>
<td>1,468</td>
</tr>
<tr>
<td>Share of agriculture (%)</td>
<td>20.9</td>
<td>20.6</td>
<td>20.5</td>
<td>20.5</td>
</tr>
</tbody>
</table>


VIETNAM’S CLIMATE

- Vietnam can be divided into two major climate regions:
  - Northern part: a tropical monsoon climate, with four distinct seasons (Spring-Summer-Autumn-Winter), and high humidity; 10°C to 32°C.
  - Southern part: moderate tropical climate, hot all year round and is divided into two seasons (Dry and Rainy season); 23°C to 32°C.

- The average rainfall each year:
  - Hanoi: 1,763 mm.
  - Hue: 2,867 mm.
  - Ho Chi Minh City: 1,910 mm.

- The average air humidity is over 80%, even 90% in rainy season and in drizzly weather.

Source: www.chinhphu.vn
AGRICULTURE ARABLE LAND 2011

- Soybeans: 182
- Cashew: 360
- Rubber: 834
- Coffee: 571
- Tea: 126
- Pepper: 55
- Fruits: 833
- Rice: 7651
- Corn: 1117
- Sugarcane: 281
- Cotton: 9
- Peanut: 224

Unit: Thousand Hectare
Source: General Statistics Office

AGRICULTURE PRODUCTIVITY

- Rice
- Corn
- Sugarcane
- Cotton
- Peanut
- Soybeans
- Fruits
- Cashew
- Rubber
- Coffee
- Tea
- Pepper

Unit: Metric ton per Hectare
Source: General Statistics Office
AGRICULTURE PRODUCTION

Unit: Thousand Metric Ton
Source: General Statistics Office

FERTILIZER SUPPLY AND DEMAND 2011

Unit: Thousand MT
Source: Agroviet
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FERTILIZER DEMAND BY CROPS

- Winter-spring; 4580
- Summer-Autumn; 2760
- Autumn-winter; 1760

Unit: Thousand MT
Source: MARD
FERTILIZER DEMAND BY AREA

North: 2960
Central: 1570
South: 4570

Unit: Thousand MT
Source: MARD

FERTILIZER IMPORT IN 2011

Quantity
Unit: thousand MT

Urea, 1,126
SA, 890
MOP, 886
DAP, 618
Others, 814
Total: 4,334

Value
Unit: million USD

Urea, 440
SA, 201
MOP, 423
DAP, 380
Other, 266
Total: 1,710

Source: PVFCCo
FERTILIZER USE HABITS IN VIETNAM

- Urea: Use only prilled urea for farming.
- Most farmers are now overusing urea.
- NPK is mainly “blended” one.
- DAP is used in the South of Vietnam only.
- The urea use efficiency only reached 30-45%, phosphate 40-45% and potash 40-50%.

Source: PVFCCo

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**CAPACITY AND PRODUCTION**

- **PETROVIETNAM GROUP**
- **VINACHEM GROUP**

Demand in northern area – 600k Tpa

Expansion of Ha Bac Fertilizer (2014) – 320k Tpa

Ninh Binh Fertilizer (2012) – 560k Tpa

Supply – 1,060k Tpa

Demand in central area – 400k Tpa

Demand in southern area – 1,000k Tpa

Phu My Fertilizer – 800k Tpa

Ca Mau Fertilizer (2012) – 800k Tpa

Supply – 1,600k Tpa

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**VIETNAM SUPPLY OUTLOOK TO 2015**

**Q’ty**

<table>
<thead>
<tr>
<th>Year</th>
<th>Ha Bac</th>
<th>Phu My</th>
<th>Ca Mau</th>
<th>Ninh Binh</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>147</td>
<td>807</td>
<td>194</td>
<td>801</td>
</tr>
<tr>
<td>2011</td>
<td>190</td>
<td>800</td>
<td>190</td>
<td>800</td>
</tr>
<tr>
<td>2012</td>
<td>392</td>
<td>560</td>
<td>190</td>
<td>800</td>
</tr>
<tr>
<td>2013</td>
<td>560</td>
<td>800</td>
<td>190</td>
<td>800</td>
</tr>
<tr>
<td>2014</td>
<td>560</td>
<td>800</td>
<td>414</td>
<td>800</td>
</tr>
<tr>
<td>2015</td>
<td>560</td>
<td>800</td>
<td>500</td>
<td>800</td>
</tr>
</tbody>
</table>

Unit: Thousand MT

Source: VCSC, PVFCCo
From 2012, Vietnam becomes one of the fertilizers exporter.

PVFCCo is the biggest exporter in Vietnam with the estimate export quantity from 200,000 – 400,000 MT/year.

All potash and SA fertilizer for local demand has been imported 100% from overseas.

Phosphate is supplied 100% from local factories.