Risk Management Challenges In A Changing Crop Nutrients Industry

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Crop Nutrients

- Crop Nutrients marketplace defined
- Changes in crop nutrients industry landscape
- Crop nutrients hedging strategies
Who we are

CHS is a diversified Fortune 200 company providing essential grain, food and energy resources to businesses and consumers around the world.
About CHS

Serves producers in 26 states and consumers in 50 states
Supplies grain in 60 countries worldwide
7,000 employees
CHS Inc.

Member-owners Co-ops/Individuals (voting)

Preferred Stockholders (non-voting)

CHS Inc.

- Ventura Foods 50%
- United Harvest 50%
- NCRA 74.5%
- Temco 50%
- Multigrain S.A. 39.4%
- CHS/Local Partnerships vary
- Horizon Milling 24%
- VeraSun 8%

Wholly owned businesses
- Energy/Renewables Mktg.
- Grain Marketing
- **Crop Nutrients**
- Oilseed Processing
- Country Operations
- Ag States Group
- Country Hedging
- Cofina Financial
CHS Crop Nutrients

- Distribution system serving North America’s largest dealer network with more than 7 million tons sold annually.
- Global product sourcing, including a deep water port at Galveston, Texas, and river facilities at Memphis, Tenn.; Little Rock, Ark.; Muscatine, Iowa; Winona and St. Paul, Minn.
- Owns/leases 90 crop nutrients terminals. Backed by CHS expertise in risk management, global markets, logistics and distribution complementary to crop nutrients business.
Crop Nutrients Marketplace

Nitrogen
- Ammonia (NH3)
- Urea (Dry)
- UAN (Liquid)

Potash

Phosphates

Others - Micronutrients
Changes In Crop Nutrients
Marketplace Landscape
Natural Gas

U.S. CN manufacturers hit with margin squeeze-leaving them globally noncompetitive
Global Natural Gas Prices
U.S. manufacturers hit with margin squeeze leaving them globally non-competitive.

World's largest natural gas reserves with limited local markets

North America prices are among the highest in the world

North Africa: $0.80
Kuwait: $1.25
Qatar: $0.70
Oman: $1.00
Saudi Arabia: $0.75

USA: $6.13-$13.42
Canada: $6.89-$10.98
Mexico: $5.86-$7.65
Trinidad: $1.60

Significant gas reserves gas accessed during oil production

Japan: $5.10-$5.73
Singapore: $3.30
China: $4.85
Russia: $1.25
North Africa: $0.80

Average transportation cost per MMBtu (after conversion to CN)

$1.50-2.10
$1.95-2.08
$1.95-2.10
$1.50-2.08

*Single values represent price in Sept 2005.
Source: American Chemistry Council; The Fertilizer Institute.
Agway
Arcadian
Borden
Chevron
Coastal Chem
Farmland
First Miss
Freeport
IMC Global
Kalium
LaRoche
Miss Chem
Mobil
Mulberry
Nu-West
Occidental
Royster Clark
Texasgulf
Unocal
US Chem
Viridian
Vigoro

1. Mosaic 30%
2. PCS 26%
3. Agrium 13%
4. CF 8%
5. Terra 6%
6. Koch +6%

**Urea**
1. CF 22%
2. Agrium 16%
3. Terra 13%
4. Mosaic 13%
5. PCS 12%
6. Yara 7%

**UAN**
1. Terra 27%
2. CF 22%
3. PCS 14%
4. Koch 12%

**Phosphates**
1. Mosaic 50%
2. PCS 21%

**Potash**
1. PCS 48%
2. Mosaic 39%

Abu Qir
Achema
Acron
Agrolinz Melamin
Amonil
Asmidal
Asen Bintilu
Cherepovets
Cherkassy
Eurochem
Fertilizantes
Nitrogenados
Grodnos
Novomoskovsk Azot
PIC
Profertil S.A.
Pulway
QAFCO
SABIC
Sichuan Chemical
Togliatti

Source: TFI
Imports now account for almost 70% of total U.S. dry urea supply.

Source: USDOC
Imports now account for over half of total U.S. nitrogen supply.
DEPLETED U.S. CN INDUSTRY WAS NOT PREPARED TO SATISFY FUTURE DEMAND SURGE
Global Urea Price Correlation

- NOLA Urea
- Arab Gulf Urea grn
- Black Sea Urea grn
Current Wholesale / Retail CN Conundrum

- Retail level selling is just in time however retail buying activities are as much as 6 to 9 months ahead of time – bulk commodity logistics
- Wholesale prices collapsed after retailers accumulated inventories
- Currently, in many instances wholesale prices are below retail values
Crop Nutrients Hedging Strategies
Crop Nutrients Industry Shortcomings

• Fertilizer industry not experienced in commodity merchandising techniques
  – Crop nutrients industry participants need overnight hedging education
• Sophisticated CN hedging strategies are needed given the lack of a viable traditional derivative market
• Marketplace volatility calling for hedging skills
• Industry transparency lacking without a traditional price discovery mechanism
Crop Nutrients Risk Spectrum

ZERO RISK  INCREASING MARKET RISK  100% RISK

HEDGERS
Back to Back

SPECULATORS
Dollar Cost Averaging “Layering”
Hedging As Risk Management

Develop Crop Nutrients Risk Management Policy

Develop Daily Position Report (DPR)
Assess Crop Nutrients Risk

The next step in risk management is an ongoing assessment of what current market place risks are (risk profile) broken down by:

- Price risk
- Supply risk
- Demand risk
Crop Nutrients Hedging Strategies

Where/ when possible:

- Establish short (long) OTC swap position
- Establish short (long) cash forward position
  - Work with farmer in deferred “acre margin” lock
- Source “un-priced” product for owned warehouse space
Thank you

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