

Market Shadows, Gray Trade & Uncertainties

World Rice Prices Are More Complicated than
“Supply & Demand”

by

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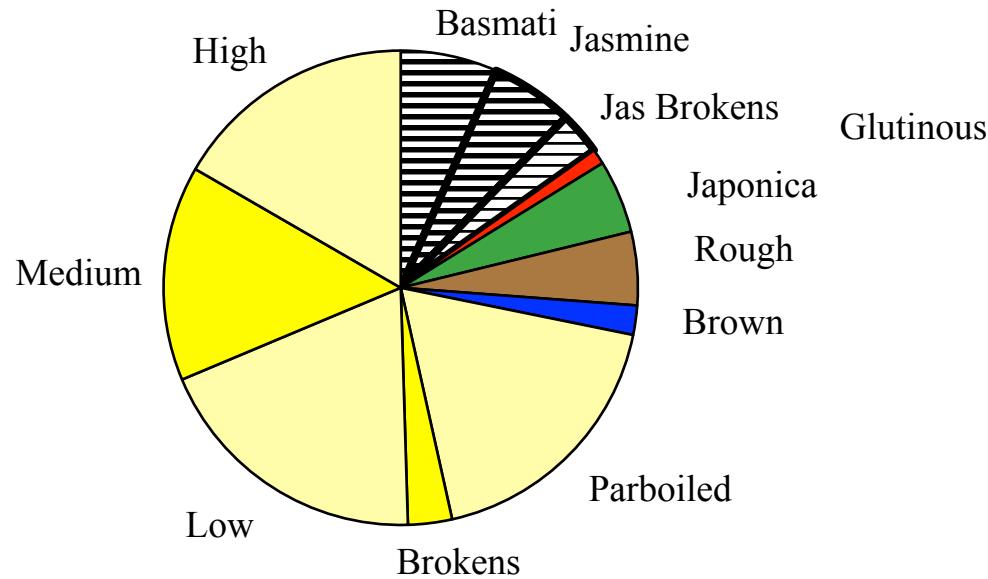
Rice is not...

Rice is not...

- Wheat
- Corn
- Soybeans

Rice is not Rice is not Rice

World Trade by Type and Quality



Rice Supply & Demand

Beginning Stocks + Production + Imports

=

Domestic Use (Seed + Feed + Losses + Consumption)
+ Exports + Ending Stocks

=

Total Supply/Demand  Prices

Milling Rates ?

FX Rates ?

Freight Costs ?

Long Run Price Drivers

| Demand | Supply |
|------------------------|-------------------------|
| – Population (slowing) | – Land |
| – Income growth | – Fertilizer |
| – Dietary Changes | – Seed Technology |
| • Urbanization | – Water Control |
| • “Westernization” | – Mechanization & Scale |
| • Supply | – Government Policies |

Short Run Drivers

- Weather
- Changes in Stocks
- Panicked Buying & Speculation
- Trade Policies
- Foreign Exchange Rates
- Freight Costs

SUPPLY-DEMAND ELEMENTS - RELIABILITY

Stocks – Who or What to Believe?

ENDING STOCKS, 2010/11 (MMT)

| | FAO | USDA | Dif | Comment |
|-------------|-------|------|------|---|
| Global | 141.1 | 98.7 | 42.4 | Skewed by China, 43% (USDA) to 54% (FAO) of total |
| China | 75.4 | 42.6 | 32.8 | State secret; major USDA revisions 2001 & 2006 |
| India | 21.5 | 23.5 | -2.0 | FCI stocks 20.4 MMT |
| Indonesia | 5.3 | 6.2 | -.9 | |
| Philippines | 3.0 | 2.5 | .5 | |
| Thailand | 5.8 | 5.6 | .2 | |
| Vietnam | 2.7 | 1.9 | .8 | |
| Pakistan | .3 | .5 | -.3 | |

Asian Rice Import Markets (TMT)

| Market | Avg | 2012 | Comment |
|-------------------------|-------|-------|---|
| Total | 8,739 | 9,450 | |
| Japan, S. Korea, Taiwan | 1,194 | 1,445 | Primarily Japonica markets; WTO-mandated imports |
| China | 426 | 1,500 | Mostly 5% & 15%, approx 10% fragrant |
| N. Korea | 86 | 100 | Low quality rice & aid |
| | | | |
| Hong Kong | 389 | 415 | Fragrant & high quality rice |
| Singapore | 316 | 350 | Fragrant & high quality rice |
| | | | |
| Indonesia | 1,499 | 1,500 | Mostly 15%, some 5% & brokens - white & glutinous |
| Malaysia | 1,023 | 1,085 | Mostly 5% but also 15% & fragrant, |
| Philippines | 1,867 | 1,500 | Mostly 25%, but also 15% & 5% |
| Papua New Guinea | 143 | 160 | Prefers Japonica, otherwise 5% |
| | | | |
| Bangladesh | 763 | 400 | Low quality parboiled or white rice |
| Sri Lanka | 81 | 30 | Basmati & low quality rice |

Note: Average is 2009-11; 2012 is forecast as of September

Source: USDA

Trades vs Sales

- Only Thailand, Vietnam & U.S. require sales to be registered with government
- Thai & Viet sales are supposed to be confidential, but...
- Thai registrations usually made just before execution & include bogus details
- Visibility of vessels – break bulk, liner vessels & containers

Just where is that rice going?

| Vietnam's Gray Trade (TMT) | | | | | | | | | |
|----------------------------|------------------|-------|-------|-------------------------------|-------|-------|------------|------|------|
| | Declared Exports | | | Recorded Imports from Vietnam | | | Difference | | |
| | 2009 | 2010 | 2011 | 2009 | 2010 | 2011 | 2009 | 2010 | 2011 |
| Singapore | 334 | 562 | 385 | 40 | 81 | 96 | 293 | 481 | 289 |
| Taiwan | 207 | 351 | 82 | 26 | 24 | 29 | 181 | 327 | 54 |
| China | 20 | 124 | 309 | 3 | 56 | 234 | 17 | 68 | 76 |
| Hong Kong | 44 | 131 | 149 | 21 | 66 | 93 | 23 | 65 | 56 |
| subtotal | | | | | | | 513 | 941 | 474 |
| Indonesia | 18 | 693 | 1,887 | 21 | 467 | 1,775 | -3 | 226 | 112 |
| Malaysia | 614 | 403 | 530 | 861 | 591 | 551 | -247 | -188 | -20 |
| Philippines | 1,701 | 1,466 | 978 | 1,754 | 1,758 | 814 | -53 | -292 | 165 |
| Total | 2,937 | 3,730 | 4,321 | 2,726 | 3,044 | 3,590 | 211 | 686 | 730 |

Source: Vietnam's General Department of Customs & World Trade Atlas

AND THIS RICE?

Market Shadows - India & Pakistan (TMT)

| | 2009 | 2010 | 2011 |
|-----------------|------|------|-------|
| India-U.A.E. | | | |
| Basmati | 572 | 385 | 1,058 |
| Non-Basmati | 11 | 1 | 114 |
| subtotal | 583 | 386 | 1,172 |
| Pakistan-U.A.E. | | | |
| Basmati | 197 | 256 | 219 |
| Non-Basmati | 124 | 174 | 117 |
| subtotal | 321 | 430 | 336 |
| Total | 903 | 816 | 1,508 |

Note: U.A.E. has population of 5.3 million (July 2012 est)

Market shadows in Africa

Market Shadows - Smuggling into Nigeria (TMT)

| via | 2009 | 2009 | 2010 | 2011 | 2012 1/ |
|-----------------------|------|------|------|------|---------|
| Cotonou (Benin) | 766 | 692 | 554 | 197 | 398 |
| Douala (Cameroon) | 44 | 79 | 46 | 39 | 50 |
| Lome (Togo) | 10 | 9 | 2 | 4 | 1 |
| Total | 819 | 781 | 602 | 240 | 448 |
| As % Nigerian imports | 45 | 39 | 27 | 9 | 17 |

1/ Through September

Market Shadows - Interior African Markets

| | |
|-------------|--------------|
| Coastal | Interior |
| Senegal | Mali |
| Ivory Coast | Mali |
| | Burkina Faso |
| Ghana | Burkina Faso |
| | Niger |
| Togo | Burkina Faso |
| | Niger |
| Benin | Niger |

How to gauge border trade?

China's Gray Trade, Jan-Aug '12 (TMT)

| | |
|------------------|-------|
| ex-Vietnam | |
| Declared Exports | 1,530 |
| Recorded Imports | 1,156 |
| Difference | 373 |

| | |
|------------------|-----|
| ex-Burma | |
| Border Trade | 175 |
| Declared Exports | 8 |
| Recorded Imports | 1 |
| Difference | 182 |

Cambodia's Gray Trade, 2011/12 (MMT)

| | |
|-----------------------------|---------------|
| Exports to Vietnam | 1.6-1.7 paddy |
| Exports to Thailand | .5-.6 paddy |
| Transit Vietnam to Thailand | .2-.3 rice |
| Transit Vietnam to Thailand | .4-.5 rice |

KEY RICE POLICY CHANGES 2011/12

Thailand Restores paddy pledging 50-67% over market

India Ends export ban on non-Basmati rice

Import duties doubled -> 50% July & again

Nigeria '13?

Philippines Relies primarily on private sector imports

Ivory Coast Import Duties Suspended August-October

Indonesia Delays import purchases

A couple of slight problems...

"Rice is not like either wine or oil. Unlike oil, which does not lose its value when it is not pumped ('produced'), rice is a renewable good... Rice is also not like wine whose vintage improves with age. Hold rice stocks too long and your outlets will be limited to animal feed or starch."

- 2001

"Rice is coming out of the woodwork. Prime Minister Thaksin,...apparently believes that world rice export prices can be elevated by the formation of a rice exporters' cartel. While his government has unsuccessfully pushed this policy for several years now, Thaksin believes he can pull it off if only he devotes enough energy to the project (or finds the right minister to pull it off). We continue to believe that it is a fool's errand given the nature of the world market, quality problems arising from storing the rice for any length of time, and the relatively short cropping cycles... Thailand and Vietnam, however, are 'tigers,' not 'water buffalo' that can pull together. On top of centuries of rivalry, the two rice economies have different price structures and divergent interests. In the world rice market, the low cost producer is in the perennial position of trying to grab market share from the more established, high cost producer."

The Thai Rice Mountain

THAILAND: Production & Quantities Pledged (MMT)

| Crop Year | Crop | Pledged | As % |
|-------------------|------|---------|------|
| Avg '90/91-'94/95 | 19.4 | 1.6 | 8 |
| Avg '95/96-'99/00 | 23.0 | 0.8 | 4 |
| Avg '00/01-'04/05 | 28.0 | 4.4 | 15 |
| Avg '05/06-'09/10 | 31.0 | 5.4 | 17 |
| 2008-09 | 31.7 | 11.5 | 36 |
| 2009-10 1/ | 31.5 | 0.1 | * |
| 2010-11 1/ | 32.5 | * | 0 |
| 2011-12 | 31.6 | 21.5 | 68 |

1/ Years where the mortgage scheme was replaced by the price guarantee scheme. Only 5,547 tons pledged.

THAILAND: Paddy Mortgage Price (Baht/ton)

| | Crop | Pledged | As % | Wet Season | | Dry Season |
|------------|------|---------|------|------------|------------|------------|
| | | | | Fgrt 100% | White 100% | White 100% |
| 2000-01 | | | | 6,495 | 5,280 | 0 |
| 2001-02 | | | | 6,500 | 5,330 | 4,975 |
| 2002-03 | | | | 6,800 | 5,330 | 4,975 |
| 2003-04 | | | | 7,000 | 5,330 | 5,900 |
| 2004-05 | | | | 10,000 | 6,600 | 6,700 |
| 2005-06 | | | | 10,000 | 7,100 | 7,100 |
| 2006-07 | | | | 9,000 | 6,500 | 6,600 |
| 2007-08 | | | | 9,300 | 6,700 | 14,000 |
| 2008-09 | | | | 15,000 | 12,000 | 12,000 |
| 2009-10 1/ | | | | 15,300 | 10,000 | 10,000 |
| 2010-11 1/ | | | | 15,300 | 11,000 | 11,000 |
| 2011-12 | | | | 20,000 | 15,000 | 15,000 |

1/ Years where the mortgage scheme was replaced by the price guarantee scheme.

Two Tier Market

January-June Exports (TMT)

| | 2011 | 2012 | Dif |
|-----------------|--------------|---------------|---------------|
| Thailand | 6,316 | 3,440 | -2,877 |
| Argentina | 301 | 228 | -73 |
| Brazil | 132 | 271 | 139 |
| Paraguay | 104 | 136 | 32 |
| Uruguay | 344 | 449 | 104 |
| U.S. | 1,743 | 1,765 | 22 |
| Subtotal | 8,941 | 6,289 | -2,652 |
| | | | |
| Burma | 419 | 329 | -90 |
| China | 259 | 198 | -61 |
| India | 1,380 | 5,514 | 4,134 |
| Pakistan | 1,894 | 1,862 | -32 |
| Vietnam | 3,915 | 3,414 | -501 |
| Subtotal | 7,867 | 11,317 | 3,450 |

January-September Exports (TMT)

| | 2011 | 2012 | Dif |
|----------|-------|-------|--------|
| Thailand | 9,071 | 5,017 | -4,054 |
| India | 2,190 | 7,774 | 5,584 |
| Vietnam | 5,879 | 5,857 | -22 |

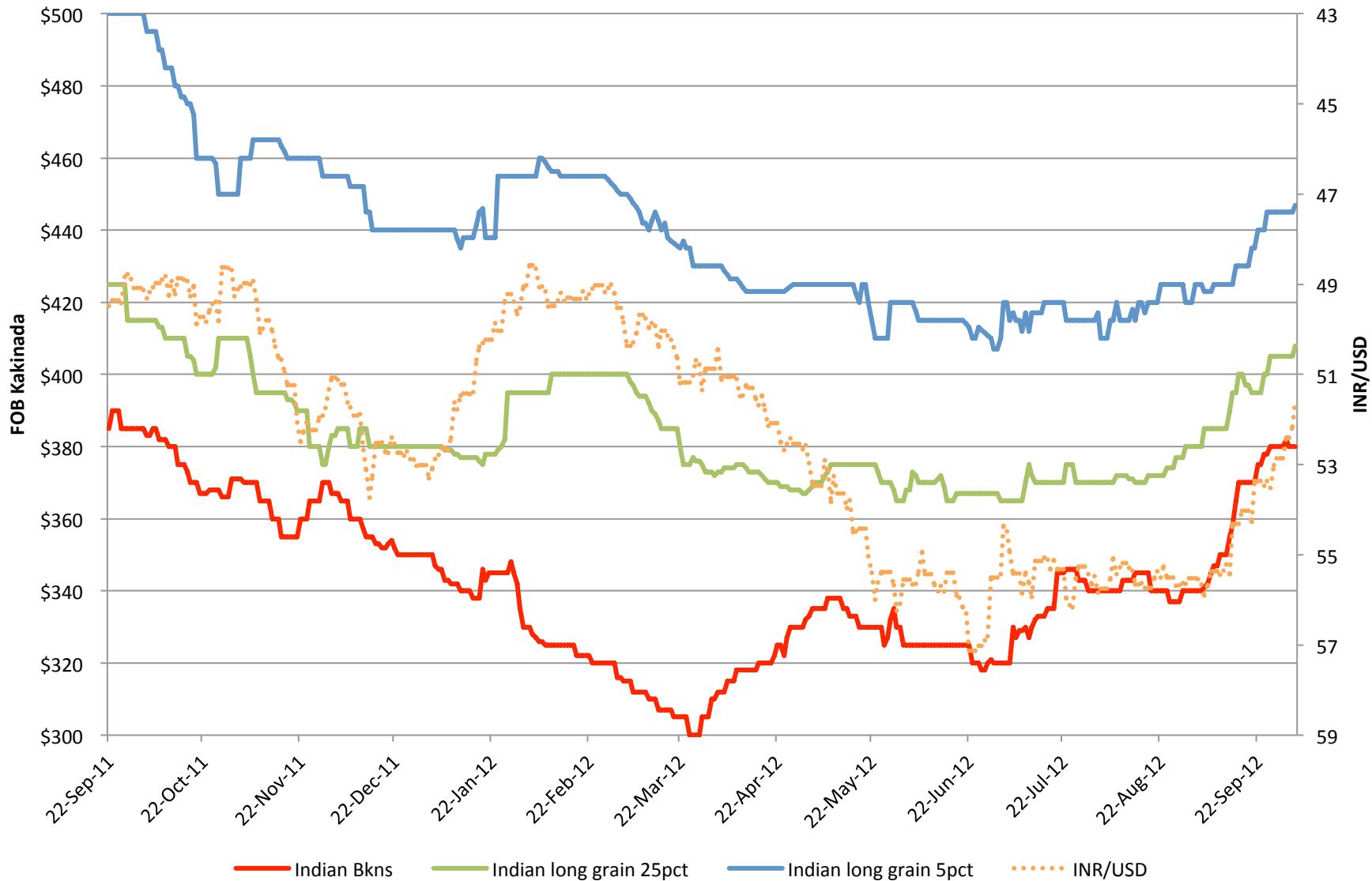
Export Prices, FOB (\$/ton)

| Year | Month | 5% | | | | | | | | | | | | Brokens | | |
|------|-----------|------|------|-------|--------------|-------|-------|------|------|-------|--------------|-------|-------|---------|-------|--|
| | | Thai | Viet | India | Price Spread | | | Thai | Viet | India | Price Spread | | | Thai: | Viet: | |
| | | | | | IR 64 | Thai: | Viet: | | | | Thai: | Viet: | India | | | |
| | | | | | Viet | India | India | | | | Viet | India | India | | | |
| 2011 | June | 515 | 465 | NA | 50 | NA | NA | 430 | 420 | NA | 10 | NA | NA | | | |
| | September | 600 | 568 | 480 | 32 | 120 | 88 | 490 | 465 | 385 | 25 | 105 | 80 | | | |
| | December | 555 | 460 | 440 | 20 | 115 | 20 | 530 | 390 | 350 | 40 | 180 | 40 | | | |
| 2012 | March | 535 | 436 | 430 | 6 | 105 | 6 | 535 | 340 | 305 | 35 | 230 | 35 | | | |
| | June | 590 | 408 | 430 | -22 | 160 | -22 | 530 | 345 | 320 | 25 | 210 | 25 | | | |
| | September | 550 | 449 | 445 | 4 | 105 | 4 | 535 | 395 | 380 | 15 | 155 | 15 | | | |

Note: End of month

Source: LiveRiceIndex ,except Indian brokens which are exporter quotes

INDIA: White Rice Prices vs Rupee, Sep 2011-Oct 2012



India's Rice Mountain

Trying to Satisfy 2 Constituencies

INDIA: Government's Rice Procurement & PDS Operation (per ton)

| Oct-Sep | Support Price 1/ Rp | Gov't Economic Cost | | | PDS Issue Price 2/ Rs | | | Food Subsidy 3/ (Billion) Rp \$ | |
|------------|---------------------------|---------------------|-----|-------|--------------------------|-------|-----|--|--|
| | | Rp | \$ | APL | BPL | AAY | Rp | \$ | |
| 2005-06 | 5,700 | 13,397 | 304 | 7,950 | 5,650 | 2,000 | 231 | 5.2 | |
| 2006-07 | 6,200 | 13,912 | 308 | 7,950 | 5,650 | 2,000 | 240 | 5.3 | |
| 2007-08 | 7,450 | 15,499 | 385 | 7,950 | 5,650 | 2,000 | 313 | 7.8 | |
| 2008-09 | 9,000 | 17,407 | 377 | 7,950 | 5,650 | 2,000 | 438 | 9.5 | |
| 2009-10 | 10,000 | 18,201 | 384 | 7,950 | 5,650 | 2,000 | 582 | 12.3 | |
| 2010-11 | 10,000 | 19,831 | 435 | 7,950 | 5,650 | 2,000 | 638 | 14.0 | |
| 2011-12 4/ | 10,800 | 21,842 | 454 | 7,950 | 5,650 | 2,000 | 728 | 15.1 | |
| 2012-13 4/ | 12,500 | 25,500 | 507 | 7,950 | 5,650 | 2,000 | 750 | 14.9 | |

PDS - Public Distribution System

APL - Above Poverty Line

BPL - Below Poverty Line

AAY- Antyodaya Anna Yojana (Poorest of the Poor)

1/ Common Rice

2/ Unchanged since 2002

3/ Includes other foodstuffs; Apr-Mar

4/ Food Subsidy from official budget estimate. Economic costs 2011/12 from FIC & 2012/13 from USDA

India's Rice Mountain (cont'd)

India: Government Rice Supply & Demand (MMT)

| | 1-Oct | Procurement | Releases | End | Min. |
|-------------------|--------|-------------|----------|--------|------|
| | Stocks | | | Stocks | Norm |
| Avg '04/05-'08/09 | 6.1 | 28.0 | 25.6 | 7.9 | 5.6 |
| 2007-08 | 5.5 | 28.7 | 18.9 | 7.9 | 5.2 |
| 2008-09 | 7.9 | 34.1 | 34.1 | 15.3 | 7.2 |
| 2009-10 | 15.3 | 32.0 | 42.5 | 18.4 | 7.2 |
| 2010-11 | 18.4 | 34.2 | 46.7 | 20.4 | 7.2 |
| 2011-12 1/ | 20.4 | 37.0 | 34.0 | 23.4 | 7.2 |
| 2012-13 2/ | 23.4 | 40.0 | | | |

1/ Procurement is USDA estimate

2/ Procurement is official target

VIETNAM'S "DIRECTED RICE ECONOMY"

- Minimum Export Prices
- "Reserving" Markets
- Price Support Buying
- Periodic Bans on New Sales

China's Prices Reach Tipping Point

| CHINA: Early Rice Support Price (per ton) | | |
|---|-----|-------|
| | \$ | Rmb |
| 2009 | 264 | 1,800 |
| 2010 | 275 | 1,860 |
| 2011 | 319 | 2,040 |
| 2012 | 380 | 2,400 |
| 2013 | 443 | 2,800 |

| CHINA: Imports (TMT) | |
|----------------------|-------|
| Avg '05-09 | 474 |
| 2009 | 333 |
| 2010 | 364 |
| 2011 | 578 |
| 2012 January-August | 1,156 |

PHILIPPINES: Imports - Theory vs Reality

Government Announces 500 TMT Imports

| Date | Qty | |
|--------|-----|--|
| | TMT | |
| 19-Mar | 190 | Tender for importers, max 10 TMT ea. |
| 20-Mar | | NFA announces 19 sellers |
| | | |
| 26-Mar | 190 | Tender for farmer organizations & coops, max 2 TMT ea. |
| 28-Mar | | NFA announces 95 groups to be awarded |
| | | |
| 28-May | 100 | NFA tender |
| 30-May | 20 | NFA tender |
| | | |
| Total | 500 | |

| Date | Qty | |
|--|-----|-------------------------------------|
| | TMT | |
| | | |
| | | |
| 21-Mar | 500 | Reported single contract negotiated |
| | | |
| | | |
| April | 80 | Second contract negotiated |
| | | |
| | | |
| July | 100 | Third contract negotiated |
| Sept | 175 | Fourth contract negotiated |
| Total | 855 | |
| Note: Vietnam exported 864,598 tons January-August; likely includes 187,000 tons MAV (minimum access volume) | | |