

27 May 2011

MUSTARD SEED REPORT

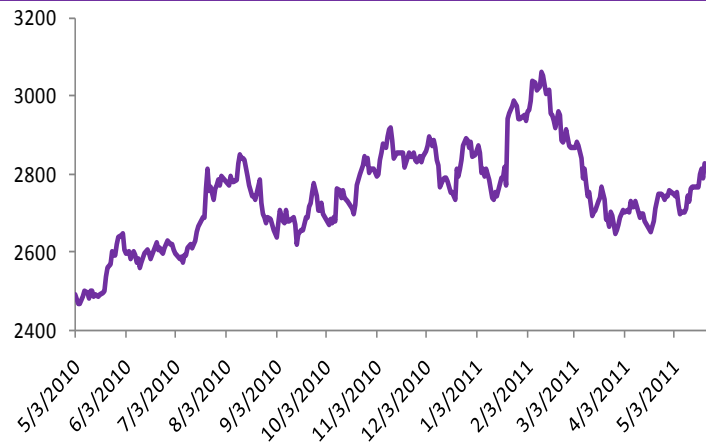


Recommendations:

NCDEX	STRATEGY	RANGE	TARGET	STOP LOSS
June 2011	Buy	2770-2820	3100/3250	2580
July 2011	Buy	2870-2900	3150/3200	2750
Aug 2011	Buy	2900-2930	3200/3250	2700

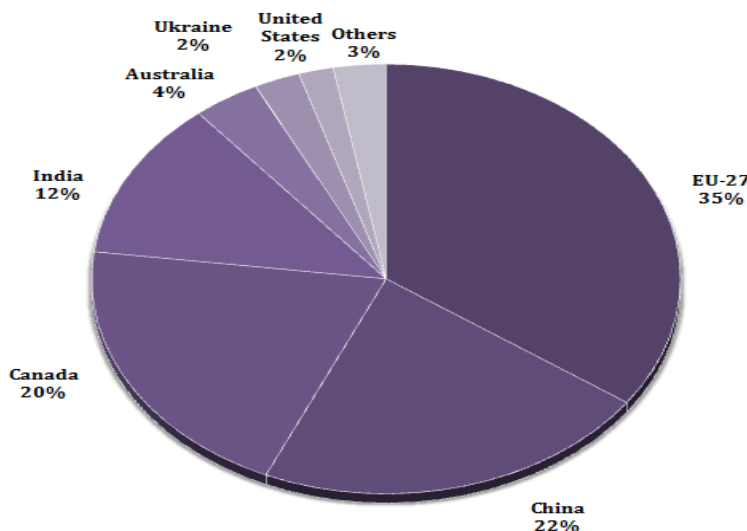
Review: The futures price gradually surged from the month of May as arrivals came to an end across the spot markets. The prices increased till August as the lean season of the commodity was in progress. The occurrence of monsoon during 2010 was beneficial to all the rabi crops as the soil moisture condition that prevailed was sufficient enough for the crop growth. Thus the prices experienced some corrections during September on concerns of the higher acreage under the mustard crop. Mustard acreage increased by 11% across India which prevented the steep upside. The prices went on to touch 3000 levels during the month of January owing to the oil meal export demand, as the exporters were active across the spot markets in signing up the consignments. The shrinking stock levels amidst of the export demand for the meal

Fig 1: Futures price movement (May'10- May'11)



Source: Bloomberg and KCTL Research

Figure 2 : Major producing countries- Rape seed/Mustard



Source: USDA

supported the prices to gain substantially. Later on when the arrivals started hitting the spot markets, the prices corrected steeply as the production estimates hovered around 12% which are higher compared to last year. The trade sources also project the production to prevail around 70-75 lakh bags, which is close to the central agriculture department's estimate of 74.17 million tons.

The major price influencing factors are supply demand scenario which comprises of the domestic supply demand and the international supply demand. The Indian prices are however not much affected by the international prices as the crop

variety in India is different from the one grown across the world. However for the meal export purpose the bird's eye view on the global crop scenario is necessary.

Global Scenario

The area and production of mustard seed have been increasing consistently. Being an important source of oil and protein meal, mustard seed is grown across the world. The area of mustard seed has risen from 24.68 million hectares to 30.06 million hectares with a Compounded Annual Growth of 3.02% while the production has increased from 37.32 million tons to 55.97 million tons with a CAGR of 5.70% during the period 2000-11. European Union (27) is the leading producer of mustard

seed in the world accounting for 36% of the world production followed by Canada (24%), China (22%) and India (13%). EU, China and Canada all together accounts for 82% of the world mustard seed production. During the 2011, higher rapeseed production for Canada, Australia, China, and Ukraine more than offsets lower production for EU-27 which was caused by the weather vagaries. The purposes of both the rape seed and mustard seed is similar which makes it important to throw light on the major global producers of these two crops which give a clear idea about the global supplies.

Domestic scenario:

In India, mustard seed is mainly grown in North West parts of India. Rajasthan and Uttar Pradesh are the major producing States in the country. The production from Rajasthan is highly monsoon dependent. The other significant producers are Madhya Pradesh, Haryana, Gujarat, West Bengal and Assam.

Despite moderate decline in area under mustard seed cultivation, there was a drastic fall in the production between 2004-05 and 2007-08 (Figure 1) mainly because of dramatic fall in the yield level from 1059 kg/ha in 2003-04 to 848 kg/ha in 2007-08 due to unfavorable weather condition during critical growth stages of the crop. Severe winter in January month of those years led to pod shrinkage resulting to lower production level. Rajasthan is the largest producer of mustard seed in the country with a contribution of 54% to the country's total mustard seed production followed by Punjab and Haryana together contributes 14%. Other major producers of mustard seed in India are Madhya Pradesh/Chhattisgarh (13%) and Gujarat (7%).

Figure 3: Mustard seed area, production and productivity—World

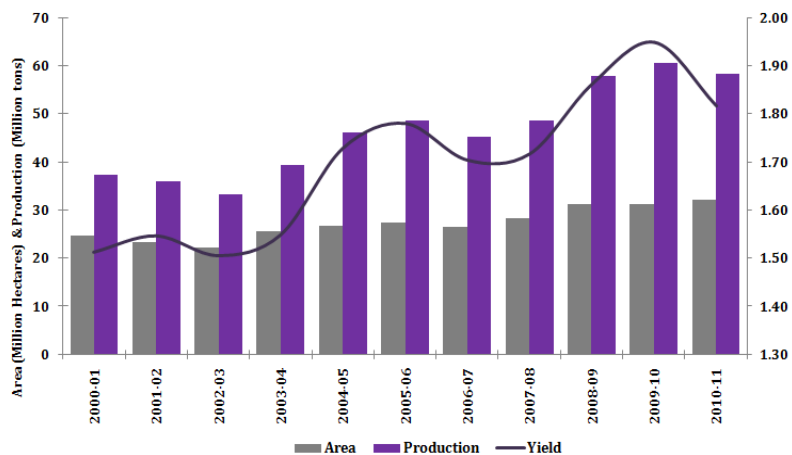
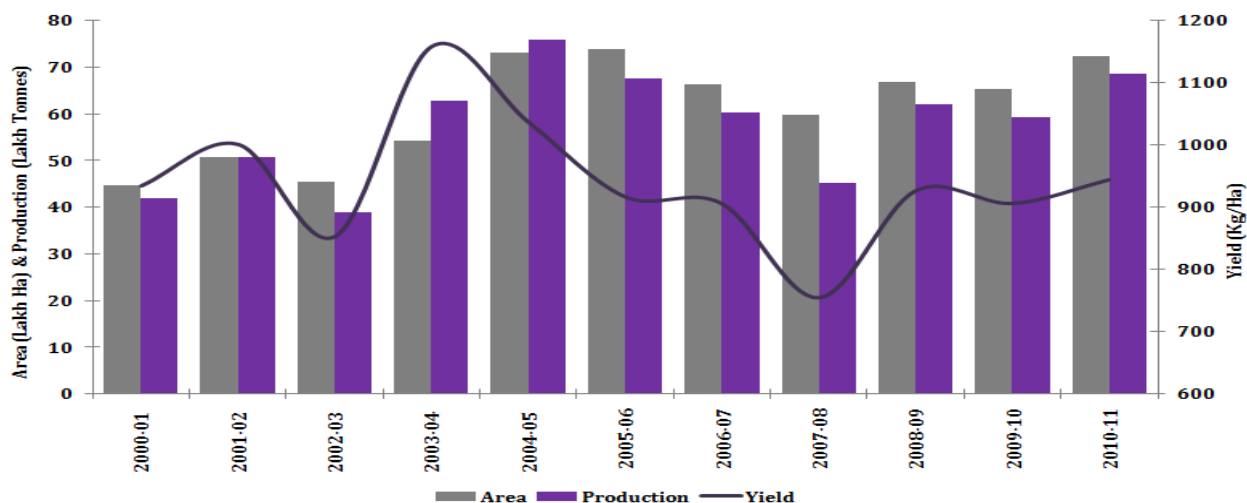


Figure 4: Area, production and productivity—India

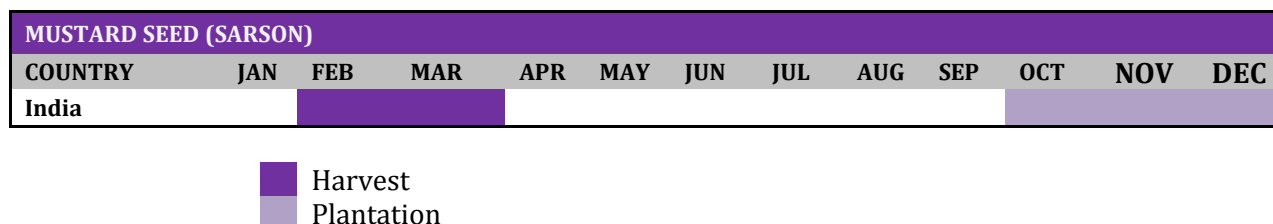


Source: SEA of India

Mustard seed is primarily used as a source of edible oil and protein meal while it is also used as a condiment. The oil recovery from mustard seed ranges between 38-44% depending upon varieties and crushing processes. The remnant after oil extraction is used as meal for livestock feed. The consumption of Mustard seed as a condiment is higher in India compared to that of the world. In India, mustard oil is consumed largely in Northern States as cooking oil and in Southern India it is used for preservation of food products.

Seasonality:

The Indian mustard seed crop is sown during the Rabi season in India in the months of October to December. The soil moisture conditions after the monsoon season determines the acreage and production for the year. During the last year the above normal monsoon and resulted in higher soil moisture levels, as a result, the acreage and production under mustard increased by around 11-12% during the crop year 2010-11.



Source: USDA

Spread Analysis:

The mustard seed prices are in contango during the months of June, July and August contracts in the last three years which indicates that the demand for the commodity is increasing during this period. The demand for the edible oil ahead of the festive season which starts off from August supports the contango effect of the prices. The market usually returns to backwardation during the month of September as the monsoon season comes to end and becomes the deciding factor for the acreage under Mustard. Normal monsoon results compiled with good sowing prospectus creates concerns about the higher production also. Even before the actual figure about the productions are out the effect on the prices are factored in. The contango effect is expected to follow the previous year's trend during the current year also.



**The reference contracts taken quotes the prices as per the previous contract specifications. However the movement of the prices remains the same despite of the changed contract size.*

Price outlook:

The prices of mustard seed is expected to move northwards during the next 4-6 months time. The fundamental factors are supporting KCTL'S outlook. The arrivals of mustard seed across the Indian spot markets gradually declines from the month of June. The stockist and crushers are aggressively

buying across the spot markets as the prices have decreased noticeably during the peak arrival season. In the current year crop is projected to be around 70-75 lakh tones. The stockists are expected to have accumulated 25% of the produce on anticipation of the tight supply situation of the edible oils in the international markets. Though the statistical relation doesn't exist between soybean and mustard the prices of soybean generally has a sentimental impact. The tight supplies of the soy complex might support the demand for the mustard seed for oil extraction purposes. The global edible oil demand is expected to increase amidst concerns of lower soy planting in U.S. Thus the buyers are attracted towards mustard for oil purpose as this is lean season for soy bean while arrivals of mustard seed are still prevailing across the spot markets. The mustard meal exports during the month of April surged by 39% on good export demand from the south East Asian countries this trend is likely to continue during this quarter. The export consignments signed during the peak arrival season, due to be despatched in the short run also prompts the crushers buying across the spot markets. The crushing margin is also reported to gradually increase owing to the good export demand for the commodity which supports the prices. The projected global meal consumption is expected to increase by 3.6 percent; which might also drive the demand for the mustard meal. The reason being its one of the major oil seed crop which comes second only soybean for meal purpose. KCTL research sees a northward price movement in the mustard prices fro the 4-6 months time till the sowing of the next season crop starts from October.

Statistical Analysis:

Regression with related commodities:

The recovery of oil in the mustard seed is 40% and the palm is 45%. These two commodities are correlated as the oil recovery and the meal recovery are almost similar. The net profits for the crusher or the oil refiner in these to commodities would be a major factor as why these two prices are related. The difference in the oil recovery percentage is the reason behind the lower correlation with the soy oil. The prices express correlation as the usage of the end products like meal and oil are same under the oil complex. Indian mustard seed futures prices move based on its independent fundamentals during the sowing and arrival season despite the statistical correlation and regression with the prices of oil complex.

In the Regression analysis we have taken 500 data points to see the impact of Soybean, Soy oil and Palm oil prices on RM seed. The Regression Equation thus came out considering RM seed as dependent variable, is:

$$(RMS)_p = 908.0242 + 0.3545 \times (POIL)_p + 0.4205 \times (SOIL)_p - 0.5602 \times (SBEAN)_p$$

<i>Correlation</i>	<i>RM Seed</i>	<i>Soy bean</i>	<i>Soy oil</i>	<i>Palm oil</i>
RM Seed	1			
Soy bean	-0.44448	1		
Soy oil	0.497972	0.340712323	1	
Palm oil	0.768787	0.141227349	0.780235	1

This equation indicates that RMSEED price is positively impacted by the Soy oil and Palm oil price movement while Soy bean price is having no impact upon RM seed. This result

can be traced out from the Correlation table given above. The strong correlation between Palm oil and RM seed is being statistically significant also at 95% significance level by the test of “t-statistics”. This statistic is a measure of the likelihood that the actual value of the parameter is not zero. The larger the absolute value of t, the less likely that the actual value of the parameter could be zero. The computed probability of t-statistic being very low satisfies the less likelihood of the parameter could be zero.

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	908.0242	40.34209895	22.50811	8.77E-78	828.7613739	987.2870966
Soy bean	-0.56028	0.014427292	-38.8348	2.3E-152	-0.5886266	-0.531934041
Soy oil	0.420582	0.11953432	3.518503	0.000474	0.185724625	0.655439016
Palm oil	0.354571	0.010197856	34.76917	5.8E-135	0.334534603	0.374607443

<i>Regression Statistics</i>	
Multiple R	0.951574
R Square	0.905493
Adjusted R Square	0.90492
Standard Error	61.22066
Observations	499

The proportion of variance in the RM seed price is better explained by the R^2 , which indicates how much better the independent variables predict the dependent variable. In our model this comes out to be 0.90, implying the 90% price move of RM seed is being

explained by these variable.

Model’s significance test: The "F value" and "Probability (F)" statistics test the overall significance of the regression model. So, to test the null hypothesis

H_0 : all of the regression coefficients are equal to zero

Against, alternative hypothesis **H_1 : all of the regression coefficients are not equal to zero**

The F value is the ratio of the mean regression sum of squares divided by the mean error sum of squares. Its value will range from zero to an arbitrarily large number. The significance F has shown the acceptance of the null hypothesis. Hence the overall fit of the model is statistically significant.

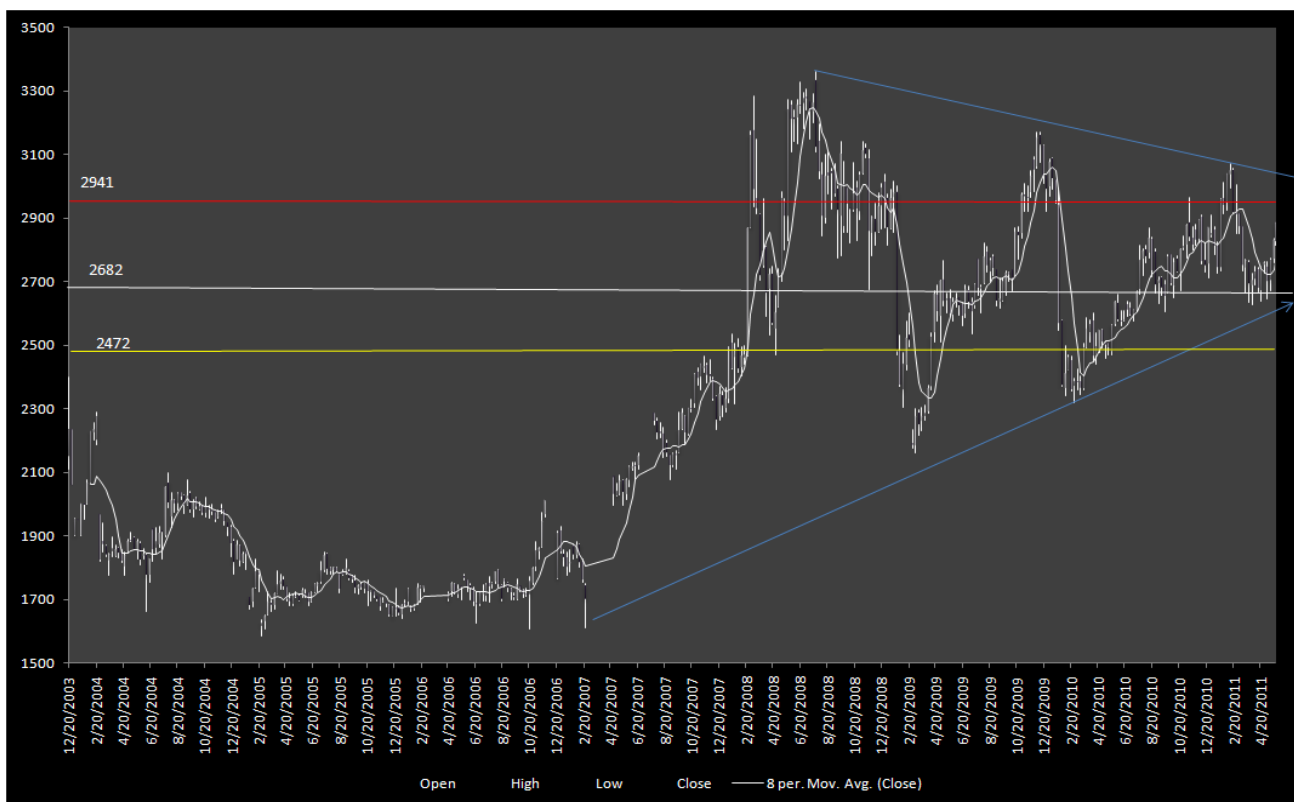
ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	3	17775562.03	5925187	1580.906	4.524E-253
Residual	495	1855244.466	3747.969		
Total	498	19630806.5			

Technical Analysis:

Prices are witnessing uptrend for the third consecutive weeks. The moving average principle suggesting prices to trade on the higher side as 8 Week EMA is pushing the prices towards northward direction. Prices are witnessing long term **Symmetrical Triangle** formation on the

chart suggesting prices to trade within the upper and lower bands. Only a breakout on the higher side may confirm further bullish trend. Prices are witnessing **Trend Line resistance** at 3100 levels. On breach and sustains above may escort the prices to further highs. Prices are witnessing **Trend Line support** at 2680 levels. On sustained trade above is likely to remain higher. The Principle of **Fibonacci retracement** states that prices are witnessing support at 2682 levels which is 38.2% retracement of the range 1585-3360 levels. On sustains above would lead the prices to test 2941 levels which is 23.6% retracement of the above mentioned range. In case markets breaches below 2682 we may expect limited gains. On the lower side strong support is seen at 2472 levels.

Conclusion: We expect prices to trade higher and recommend buying near the support levels.



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