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**COTTON UPDATE – 21 May 2007**

**Has Cotton got anything to do with Corn?**

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**The Basic Question**

US Farmers are planting corn (called 'maize' on the African continent) this year<sup>1</sup> as demand for the grain to make ethanol, a Biofuel, has been extremely strong with concomitantly rocketing maize prices on Chicago grain exchange. The strong demand for ethanol has been directly caused by US legislation which makes clean fuel addition to traditional fossil fuel mandatory<sup>2</sup>. In addition, existing fuel additives have been found to be the subject of health concerns, hence a switch from these to ethanol. Farmers have made highly responsive planting decisions in reaction to these price signals, and are expected to plant for the largest corn harvest since the Second World War this year.

In order to obtain this bumper maize crop, some acreage is being put under maize where previously other crops, notably cotton, soya and rice were planted. This trend is not just within the traditional corn growing areas of the Mid-west, but non-core maize areas such as California, Minnesota, Idaho, North Dakota and Illinois according to the USDA estimates. A USDA survey in March 2007 indicated that farmers are reducing their cotton acreage by 20% from the previous season. This would effectively make the coming cotton harvest the smallest since 1989, the smallest in nearly two decades. This potentially has a positive implication for improved cotton prices in the face of declining cotton supplies.

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<sup>1</sup> The 'marketing' year for US corn runs from 1 September each year to 31 August of the following year.

<sup>2</sup> The US Renewable Fuels Act of 2005. This act sets a target of 7.5 billion gals of renewable fuel use in gasoline by 2012.

There is some production risk in moving to maize as cotton is a very hardy crop, while maize is more sensitive to growing conditions. Maize is less heat tolerant and requires more water (hence better rainfall) than cotton. The production costs of maize are relatively high in overhead relative to alternative crops. In the absence of the present maize price incentive, this would make cotton usually more popular in drier and marginal lands.

Is the switch out of cotton into maize going to become a permanent practice? This is an open question to which there is not yet a definitive answer. However, the permanence of the switch is not a foregone conclusion. At this stage a return of the currently displaced cotton acreage cannot be dismissed. Productive maize growing conditions in the 2007/2008 season could result in such a bumper maize crop that maize prices could fall considerably for 2008/2009 plantings in which case producers will reevaluate their alternative crops. In addition, and perhaps most importantly, if crude oil prices were to drop substantially, then ethanol demand could dwindle, which would then lead to a decline in the maize price once more. However USDA's own economists seem more concerned that there will be an enduring maize shortfall. 'The Economist' has commented that maize fuel is highly dependant on high oil prices noting that the maize is not the most efficient Biofuel source, with sugar cane being a far more efficient plant material source for green energy. Brazil is the example of a successful sugar ethanol producer. Imports into the US are however retarded by high import tariffs<sup>3</sup>.

### **Effect on Farm Subsidies**

Total US government payments to farmers were cut in half for all crops grown last year. For maize government support dropped to the lowest in a decade. This is because high maize prices narrow the gap between the floor prices and actual market realizations, making the differential that needs to be made good through subsidies much smaller. Strangely though because of the unique manner in which the subsidies are legislated, farmers who are switching over from growing cotton to maize will continue to receive government aid to compensate for low cotton prices.

Maize farmers received US\$2.1 billion in government payments for the 2006 crop, down from \$9.6 billion for the 2005 crop and the smallest amount of aid since 1996. Government farm aid has fallen because payments in two of the three farm aid programs fall when crop prices rise. Cotton support payments have remained high as the price has been depressed by large supplies and less demand worldwide. Cotton growers received nearly \$3 billion for the 2006 crop, still the most for growers of any commodity. The overall subsidy payment picture shows direct payments down by 32%, the detail is set out as follows:

<b>US Agricultural Subsidy Payments</b>						
<b>(US\$ Million by year)</b>						
	2002	2003	2004	2005	2006	% Change 2006/05
Direct subsidy Payments	12 415	16 523	12 965	24 349	16 540	-32%

(Source USDA/Cornell)

For two of the three main support programs making up the direct payments, payments are based on what farmers grew several years ago, not on what they grow this year or next. This means that farmers can switch to an alternative crop, but their subsidy payments will be based on their historical planting and not necessarily what they plant in the present season. In other words when farmers who traditionally plant cotton switch to maize, they will continue to receive some cotton subsidy payments. The effect is that they continue to receive payments under two of the cotton programs, even if they do not plant any cotton, and their new crop, maize, is collecting record revenues. The American Farm Bureau Federation has estimated that farmers who traditionally grow cotton will receive \$94 per acre from the government for the 2007 crop, and maize farmers will get \$22 per acre. This anomalous occurrence is one of the factors influencing the Farm Bill drafting debate on a practical level at the present time.

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<sup>3</sup> A US import tariff of 54 c/gal is imposed on imports of ethanol. High oil prices, tax incentives for blending (51 c/gal of ethanol) coupled with this import tariff have provided an economic incentive for an expansion in Biofuel from maize production.

## Closing Observation

While it is encouraging that cotton plantings are decreasing due to the growth of demand for US maize to produce ethanol, it is unclear whether this will be a permanent trend. We note that the sustainability of the trend is highly price dependent, both for crude oil and for maize itself. In addition despite crop switching away from cotton to maize, cotton subsidy payments remain intact for the meantime, and thus notionally the option of returning to cotton production in the short term remains feasible. This leads to the conclusion that inter-product effects especially when induced by further subsidies, are not a substitute for systemic reform of the overall US farm subsidy regime and impresses the importance of approaching the Farm Bill amendment process in a holistic manner. This being said immediate term US cotton supply curtailment is good news for other cotton producing countries, like the C-4, and should bring at least a modicum of short term international price suppression relief.

*"Corn based ethanol is neither cheap nor especially green: it requires a lot of energy to produce. Production has been boosted by economically-questionable help from state and federal governments, including subsidies, the promotion of mixing petrol with renewable fuels and a high tariff that keeps out foreign ethanol."*

*The Economist -10 May 2007*

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