## Sindh Government fixes rate for sugarcane for 2016-17

The Sindh government has managed to fix the sugarcane rate for 2016-17 at Rs182/40kg in consultation with growers' bodies, coupled with an undertaking by sugar millers to commence cane crushing from mid of Nov.

For the first time, Sindh has come up with its own sugarcane rate, instead of Following Punjab, with a Rs2 raise in sugarcane price given its better sucrose recovery. Growers and millers agreed they won't challenge the government's notified rate.

This understanding reached between the stakeholders at the Oct meeting held in Karachi was different to the proceedings over the cane price of Rs172/40kg, notified for the 2015-16 season. The case is still pending adjudication.

Growers said if they had not agreed to the Rs182/40kg rate and insisted for a price of Rs225-200/40kg, nothing tangible could have been done. The sugar millers would have delayed the crushing season at the cost of the sugarcane producers.

When sugar factories delay crushing till the fag end of the season, farmers go for rapid harvesting of the crop, which provides an opportunity to millers to bargain for a lower price.Growers want a ban on the inter-provincial movement of sugarcane. Last year, as per reports, an average price of Rs190-200/40kg was paid to farmers, by Punjab's sugar mills, on the border of Sindh.

Growers want a timely start of the crushing season as, otherwise, there are delays in the sowing of wheat on around 10-15% of the sugarcane producing area, which reduces per acre yield. Pakistan Sugar Mills Association's (PSMA) Sindh chapter insists that cost of a kilogramme of sugar does not allow them to pay Rs190 or Rs200 per 40kg as demanded by farmers.

Growers argue that millers never share their cost of production, on 1kg of sweetener in black and white, with either them or the government. They reject the move for the deregulation of sugarcane prices as indicated by the federal ministry of industries and production.

## Foreign markets explored for agro products

The agro-food sector is the largest non-textile component of the national export basket, and has been the main driver of export diversification during the last 15 years since 2001.

The share of textiles has declined from 68% to 60%, whereas that of the food sector has increased from 10% to 19%.

The increase in share of national exports notwithstanding, only a small part of the total agro-food production is exported wheat 2%, meat 2%, sugar 5%, mango 6%, onion 10%, potato 18%, citrus 21% and dates 25%. Rice is the only exception with around 60% of produce being shipped abroad.

The prime reason for the suboptimal participation of agro-food production in the export market is the disconnection of the value chain from the dynamics of the global market which are complex, diverse and distinct from industrial products.

Firstly, food exports are linked to food tastes, which are profoundly cultural in nature. The narcissist myth of Pakistani fruits being 'the tastiest', is not supported by empirical realities.

The volume of our food exports to a country is directly proportional to the size of the Pakistani diaspora, as the main consumer of Pakistani food products remains the ethnic community instead of the larger mainstream consumer. For the mainstream segment, the export of 'taste' has to precede the export of 'product'.

Secondly, the production patterns and food safety requirements necessitate a specialized and agile supply chain, able to move with speed to the market.

Thirdly, perishable products (e.g. horticulture, meat and dairy) compete in the market on lead time rather than price.

The short shelf life confers a price premium in the regional markets by shielding against distant 'efficient' producers whose competitiveness erodes due to increased delivery costs and longer lead time.

The overpriced Pakistani commodities are knocked out of competition in regional markets Brazilian sugar captures the Iranian market as Pakistani sugar can't be exported without a 32%subsidy.

Australian wheat seizes the Chinese market as Pakistani wheat costs twice as much while the high-yield Indian basmati look-alikes grab 96% of the Saudi market as low-yield Pakistani super basmati is uncompetitive.

Fourthly, though ostensibly paradoxical, the fresh agricultural produce (e.g. tomato) in most of the developed markets is retailed at a higher price than its processed products (e.g. tomato paste) as the cost imposed by high wastage and expensive refrigerated logistics outweighs the cost of processing.

Fifthly, agriculture products trade in a protectionist and distorted global marketplace. The inconsistencies, inefficiencies and inequities afflict farm policies across the globe as developed countries continue to protect their agriculture sectors through subsidies, high tariffs and trade measures.

## Deserts and arid lands cultivation : A solution for food security

According to the World Meteorological Organization, climate change and desertification are expected to lead to increasing levels of Stalinization and desertification of agricultural lands.

These dry-lands are characterized by inhospitable temperatures, inaccessible terrain and scarcity of sweet water which makes living in such areas difficult. Nonetheless, it is generally recognized that arid lands have a great potential for development.

Scarcity of freshwater is the major limiting factor. These areas largely depend on rainfall and/or groundwater for human needs, livestock consumption and sustaining scant agriculture.

However, recent scientific advancement and research have enhanced knowledge, providing a basis for humans to turn seemingly impossible situations into productive opportunities. One option to utilize arid land and saline groundwater sources not fit for human consumption, or agriculture, is by cultivating organisms that can withstand the high content of salt prevalent there.Seawater is being used to farm marine fish and plants all over the world.

Similarly, the initiative of utilising desert saline or brackish water for fish farming was launched in 1963-1965 and tested experimentally, showing that it was possible to use such water to rear fish successfully.

The high mineral content in these waters, along with high ambient temperatures and solar radiation, in fact support high primary productivity; forming a suitable and favourable food-base for fish.

Climatically, except for the northern part, most of Pakistan is arid or semi-arid; however by virtue of a well-developed irrigation system, the problem is confined to deserts and hilly areas that do not receive irrigated water.

These systems, however, need good water management which include saving and recycling and the introduction of modern aquaculture technologies such as 'recirculation.

Fish farming in desert and arid land is considered a fertile and lucrative enterprise these days. Many countries have developed such fish farming thus making their lands arable and productive. US, South Africa, Mexico, Qatar, Saudi Arabia, Egypt and Israel are some examples.

## Problems in stabilizing the wheat sector

The recent assumption that the government would do away with the wheat crop support price was followed last week by the remarks of the Minister for National Food Security and Research, at a press conference, that the ministry is not interested in enhancing the crop support price, and that reducing the cost of production is the ' best solution.'

With agriculture under distress for some time now, policymakers seem to be reviewing their policies to stabilize this sector that is the backbone to the country's economy and deserves to be put at the centre of the national development strategy.

The support price for wheat has been frozen for the past couple of years and sugarcane price going by this season's rate of Rs180 per 40 kg, fixed by Sindh is as much as millers generally paid to sugarcane growers last year in Punjab.

The next step, sooner or later, may be the withdrawal of the support prices of wheat and sugarcane if the approach to cutting the cost of production proves to be a success.

Lower prices could make local commodities competitive in the international market.

A lot of the government's money was stuck up in stocks purchased from the market to shore up the falling rates. Export was either subsided or ruled out with domestic prices higher than the international market rate.

The announcement of enhanced support prices was promptly followed by an increase in prices of farm inputs which drained off a sizeable portion of the gains intended for farmers.

The subsidy to farmers turns out to be a real support for fertilizer manufacturers, importers and suppliers. Punjab has gone a step further by announcing Rs100bn interest-free loans for growers.

Reduced cost of production of agricultural raw materials would make traditional industries like textiles, sugar mills etc more competitive.

The commodity pricing issue, between farmers on the one hand, and the industry and trade on the other hand, needs to be resolved by all stakeholders in their mutual interest to help the government withdraw its intervention.

## New innovation in rice cultivation

A low-cost, direct dry rice cultivation technology has been developed at Plant Sciences division of the National Agricultural Research Centre in Islamabad. This technology will not only reduce the cost and enhance rice production by 25% but will also save nearly 35% of irrigation water.

The new technology will enable growers to timely sow and therefore harvest their rice crop 20 to 25 days earlier. This will create a cycle of punctual planting of subsequent crops due to an early harvest.

Monsanto Pakistan showcased its latest bio-tech corn seed technology together with high performance hybrid seed products to a galaxy of corn farmers at its research farm located at Manga Mandi near Lahore the other day.

The main objective of the event was to educate the farmers on Monsanto's latest products and technology. The occasion also included an exhibition for various vendors and businesses related to the agriculture sector, including agriculture implements manufacturers, on-farm solar energy solution providers, fertilizers, silage and agri-finance institutions.

More than 500 corn farmers from all over the province attended the field trial and demonstration event.

While briefing the visitors, Shariq Bokhari, Company's Sales Effectiveness Lead-Asia & Africa, explained that the new bio-tech seed had the potential to increase the yield of corn crop by an additional 5 to 10 % through mitigation of yield losses incurred on account of weed and insect attacks.

He further explained that Monsanto continuously strives to introduce the best and most suitable technologies in Pakistan and places great emphasis on rigorous testing and quality controls.

He highlighted that till date Monsanto Pakistan has showcased the bio-tech technology to over 20,000 farmers, the academia, scientists, students and the media at specially developed learning centres established at the University of Agriculture, Faisalabad, National Agriculture Research Centre, Islamabad, and Monsanto R&D Stations in Manga Mandi and Depalpur.

Explaining the features of to be launched bio-tech corn products, Monsanto's Regulatory Affairs Lead Muhammad Asim said, "The bio-tech seed has special features that enable better yield assurance through protection against weeds and pests, resulting in enhanced livelihood of farming communities."

Asim confirmed that the new bio-tech corn received approval in February 2016 for commercialization from the Federal Ministry of Climate Change and currently permissions of hybrids with the modern technology is awaited for commercial import from the Ministry of National Food Security & Research.

## Quality kinnow output likely to boost export earnings

Pakistan started its kinnow export season recently with a mix of positive and negative factors. Exporters and officials believe that exports might cross the figure of 0.3m tonnes. The government has, however, fixed a target of 0.6m tonnes.

The field reports suggest a huge leap in the fruit quality. Three crucial months September, October and November went almost dry, saving the fruit from many pests that normally come with moisture in the air. Officials have quantified a 20% quality improvement in the standing crop.

The absence of pests has reversed the ratio of A-Grade and B-Grade fruits in orchards.

This year, 60% of the produce is A-Grade (exportable) quality at the start of the season, but the ratio is expected to improve as the entire crop races towards maturity.

With fixed cost of labour and improved crop quality remaining the same, the farmers and exporters might see a rise in profits.

Based on PHDEC's assessment and some farmers, too, agree, the final output figure might be close to 0.4m tonnes

The quantity of fruit, however, is a matter of debate. The farmers and exporters linking the situation to dry weather feel that Pakistan may have to be content with 2m tonnes against the normal 2.2m or an occasional 2.3m tonnes of output. They have also cited a marginal increase in the market price, a sign of low supply.

But officials of the Pakistan Horticulture Development and Export Company (PHDEC) think that the quantity is not less, and maturity is taking time due to weather which has delayed colouring and harvesting of the fruit.

Even if this less quantity argument is accepted, it could not, in any way, impact the export figures the exports range between 12-13% of the total production.

The Afghan buyers, who normally swarm the Punjab's kinnow market by this time, are missing so far. Farmers feel that new trade and visa processes have caused a delay and the government should rethink its policy priorities for the Afghan market which is almost a natural extension of the domestic market.

Pakistan does not have as much low-quality (smaller fruit) as the Afghans purchase. Pakistan itself has a huge market for that kind of fruit. So, the farmers are avoiding the Afghan buyers as they can sell this fruit on cash in the domestic market. This may hurt export to Afghanistan.

The new trade process only demands registration of each vehicle crossing the Pakistani border against the earlier requisite of quantity-based permits, regardless of the transportation mode.

This issue of short supply of small-sized fruit may also hurt the Russian sale prospects for the Pakistani Kinnow.

The Russians, along with some Central Asian states, absorb almost 25% of our kinnow exports all in small size. How exporters meet their orders from Russia would largely decide the final export figure.

Exports to Iran remains a grey area. Owing to banking problems and hindering cash transfers between both the countries, Dubai serves as conduit for most of the exports doubling the duty charges and rendering the export process commercially unattractive.

Moreover, Iran insists on barter of apple for kinnow. On top of it all, the Iranian domestic kinnow lasts till January, leaving only a small period of February for Pakistan as the season runs out by the end of that month. Iran, together with Afghanistan, used to consume over 0.2m tonnes or over 60% of the export.

Therefore keeping these factors in mind, Pakistani policymakers should advise their relevant institutions to explore new markets.

## Tunnel farming gains ground

Tunnel farming for vegetables is becoming popular across the country as it boosts per-acre yield, cuts the cost of production and helps in off-season production.

Back in 2005, the 'fruit and vegetable development project' of the Punjab government was launched as the first major initiative on tunnel farming.

Now thousands of farmers in all provinces are engaged in it. Many of them say it has helped them grow more and better veggies at lower than usual costs, thus boosting their income.

The average per-year production of tomato, cucumber, cabbage, cauliflower, turnip, bitter and bottle gourds, okra and capsicum has increased during FY2010-14, as compared to FY2005-09, according to the officials of the Ministry of National Food Security and Research.

Consolidated data for FY2016 on veggies' cumulative output is yet to be released. But officials of agriculture departments of Sindh and Punjab confirm a rising trend during the last fiscal year.

Some private sector companies have also started playing a key role in promoting tunnel farming. Farmers in Punjab, Sindh and KP are taking advantage of services provided by them

In Sindh and KP, too, similar incentives for tunnel farming are being provided.

Guesstimates by officials put vegetable output in tunnel farms at 2-3% of the total production of 3.1m tonnes (excluding potatoes).

The National Agricultural Research Centre and Ayub Agriculture Research Centre continue to provide technical know-how on tunnel farming to growers across the country.

The cost of running these tunnel farms are stated to be lower than that of the walk-in and high tunnels, the first providing enough space between two series of rows for growers' movement, and the second housing multi-storey rows of artificial soil beds for veggies.

Senior bankers say they have been lending to owners of tunnel farms, both under a specialized incentive scheme introduced in the last two years and as part of regular operations.

"But loaning for setting up such farms might have been slower because it is treated as an agricultural development loan and attracts a different approval criteria," admits the head of the agriculture division of one of the top five banks.

## Pakistan's papaya pest squashed through bio-control

Papaya orchards in Pakistan nearly wiped out by a severe infestation mealybug (Paracoccus marginatus) of the papaya before the largely farmed country decided to replace conventional chemical pesticides that were not effective with natural predators that proved to be successful.

The system was developed by agro-biotechnologists and entomologists at the Pakistani chapter of the UK-based Centre for Agriculture and Bioscience International (CABI) who introduced the use of Acerophagus papayae, a parasitoid (insects whose larvae parasite upon and eventually kill the host), to effectively control the mealybug infestation.

"Farmers are happy with this cost-effective, pesticide-free technique to deal with the mealybug and now see possibilities of recovering their papaya farms," says CABI research coordinator Abdul Rehman.

He regrets though that by the time the biological method became available many farmers had already shifted to other crops.

Papaya once covered some 921 hectares in the two coastal provinces of Sindh and Balochistan, according to the National Agriculture Research Council (NARC). But, after the first mealybug attack on papaya was reported in 2008, the area under papaya had shrunk to 307 hectares by 2014.

"Demonstration of the bio-control technique and awareness building among farmers helped wide-scale adoption and resulted in over 80% control of the papaya mealybug."

CABI researchers also set up a Natural Enemies Field Reservoir on the farmers' fields to breed the A. papayae parasitoid as well as eight other natural predators of the papaya mealybug.

Amjad Pervez, director-general at the NARC's Karachi-based regional office, says that the advantage of the bio-control approach lies in its simplicity and in the fact that it is self-sustaining.

Rehman's team has hammered out a three-pronged plan to promote the field reservoirs through public-private partnerships.

"The bio-control approach has saved the papaya (farming) and also increased profits by reducing expenses on the pesticide sprays once used to fight the pest."

"The plan shall be implemented to boost research and development to strengthen the bio-control process to completely contain papaya mealybug. Sindh and Balochistan provinces' farmers' organisations and vegetable and fruit traders' associations will also be engaged in this regard as key stakeholders," Pervez explains.

"Rehman says Pakistan's experience in safely controlling the mealybug has been shared with CABI chapters in the Asia-Pacific, European, and African countries.

"Entomologists and fruit pest experts have already communicated possibilities for replication of the bio-control approach, with some necessary modifications in countries like Congo, Indonesia, Malaysia, Nigeria, Sri Lanka, Taiwan and Thailand" he says.

## Sino-isation of farming sector

A recent study by IFPRI, launched at PIDEs 32nd AGM held a few weeks ago, highlights that one of the reasons behind slow farming growth is low productivity. Total factor productivity in agriculture sector has in fact remained flat since 1990, where growth has been driven by input intensification rather than technical change.

As a consequence food security has been persistently high, and consumption patterns remain skewed to cheaper calorie sources.

Highlighting that farming growth is critical to reduce rural poverty, Abid Burki, Professor of Economics at LUMS, stressed that commercialization can increase the scales of production in agriculture sector, examples of which are already quite visible in poultry, livestock and dairy sectors. Burki maintains that advanced technology in feeds and breeds is critical to the success stories, much of which is tech transferable at larger scales.

In this backdrop, Pakistan could make good use of Chinas farming sector skilled labour and as well as farming technology. Global media reports suggest that China is fast approaching the maximum production of food that can be obtained from its land. Its total arable land and permanent cropland actually fell between 1991 and 2009. In his presentation at PIDEs moot, Burki highlighted that China has 20% of worlds population and just 8% of worlds arable land.

Moreover, with incomes rising in China, the Asian dragons middle class is expected to grow from 10 percent of population in 2013 to 40 percent of population in 2020.

This trend will continue with the lifestyle changes creating pressures for imported meat, dairy, cereal, fruits and vegetables. Little wonder then that agriculture is one of the pillars of the China Pakistan Economic Corridor, whereas China is already investing Central Asia and Europe to develop farm land for food production.

However, Pakistan needs to critically evaluate the options and conditions under which Chinese investments whether direct or via contract farming could be allowed in Pakistan since this country has plenty of hungry mouths to fill on its own. Plus, Pakistan's overall population growth, including the growth of its middle class, also has to be reckoned with.

## Agriculture department and Nestle sign MoUs

Punjab Agriculture Department has signed two Memorandums of Understanding (MOUs) with Nestle Pakistan for agricultural sustainability including Chaunsa Mango sector and Water Resource Management. For the Chaunsa project Nestle Pakistan shall take on board Mango Research Institute Multan as a research partner.

By virtue of these MoUs, Nestle Pakistan will provide technical support for improving quality and quantity of Mangoes to the growers. With the latest research in Mango sector, farm practices to be introduced will enable growers to work in a best way according to the latest production techniques.

Under another MoU, in water resource management project, water Management wing of Agriculture Department will partner with Nestle Pakistan for a program which offer 60 % subsidy to farmers who employs high efficiency irrigating system (Drip Irrigation) and other Water conservation techniques, technology and practices. Nestle will also bear the 30 % share that the farmer owes to the government.

The pilot project will spread over 10 acres, located at Sheikhupura District. Commenting on the collaboration, Secretary Agriculture Punjab Muhammad Mehmood said that more than 90% of water usage is for agriculture and in order to successfully tackle the prevailing water shortage, we need to encourage farmers to become mindful of how they use water. He further said that Chaunsa is one of the best variety of Mango with the potential for export but again, we need to teach farmers how to improve quantity and quality of yield, he added.

## Agriculture, Food, Drug Authority to be operational soon

According to Chief Minister Shahbaz Sharif, setting up the Punjab Agriculture, Food & Drug Authority is an important step towards provision of quality medicines and food items to the people of the province.

The CM expressed these views while addressing a meeting at the Civil Secretariat through a video link, which considered the matters relating to the Punjab Agriculture, Food & Drug Authority.

Addressing the meeting, the chief minister said that the Punjab Agriculture, Food & Drug Authority would become fully operational during the current year.

Issuing instructions for activating the board of the authority immediately, he said he will preside over the meeting of the board. Shahbaz Sharif directed that the matters regarding construction of the offices of the authority should be finalized and work be started.

He directed that the best international firm should be selected for this purpose in a transparent manner. The chief minister directed that human resource should be selected on merit and special attention should be paid to its training. Shahbaz Sharif said the Punjab government was also establishing state-of-the art drug testing labs in the province and five such labs would start functioning in the province by June 2017.◆