SUGARCANE INDUSTRY ROADMAP (2011-2016)

The Sugarcane Industry Roadmap is formulated to serve as guide in the identification and implementation of appropriate programs and interventions to prepare the industry for year 2015 and beyond when tariff of imported sugar will be reduced to 0 - 5%.

SRA programs and interventions identified in the roadmap are condensed into a slogan - *"Gearing up Initiatives for AFTA 2015 & Beyond".*

A. Target Outputs

1. Increase in sugarcane area from 400,000 hectares to 470,000 hectares
2. Increase in farm productivity from 63 tons cane per hectare to 75 tons cane per hectare (63 TC/Ha to 75 TC/Ha)
3. Increase in sugar yield from 1.90 bags per ton cane to 2.1 bags per ton cane (1.90 LKg/TC to 2.1 LKg/TC)

B. Strategies

1. *Improvement of farm productivity and sugar yield*

   Statistics showed that small sugarcane farms which comprised around 90% of the total sugarcane farms in the country produced an average of 50 TC/Ha compared with big and well-managed farms which produced more than 100 TC/Ha.

   Sugar yield per ton cane is dependent on mill efficiencies and cane quality. Old and dilapidated sugar mills usually has low grinding efficiencies and cane quality is influenced by good agricultural practices, timely delivery to sugar mills and weather conditions.

2. *Improvement in the capacity utilization of sugar mills*

   Currently, capacity utilization of the country's sugar mills is around 60%. Sugar mills within the same province are competing for the supply of cane and are providing some hauling subsidies to farmers just to capture a bigger supply of sugarcane.

3. *Sugarcane and molasses as feedstocks for bioethanol production*

   The biofuels law was passed in 2007 where sugarcane and molasses were identified as major feedstocks for bioethanol fuel. The law mandates 5% bioethanol blend in gasoline starting February 2009 and 10% in 2011. The mandated requirement of bioethanol in 2011 for the 10% bioethanol mandate is around 460 million liters of bioethanol fuel. However, there are only three (3) existing bioethanol distilleries that can supply a volume of around 79 million liters. Although the law mandates that bioethanol fuel should be locally-sourced, importation is still allowed just to fill-in the supply gap.

4. *Power cogeneration*

   The sugar mills have long been cogenerating the power produced from bagasse for its own consumption in the processing of sugar. The potential for exporting excess power to nearby communities is very promising most especially when the renewable energy law was passed in 2008 which provides for incentives to renewable energy developers.

C. Programs and Interventions

1. *Block farming*

   Block farming is the banner program under the stewardship of Administrator Ma. Regina Bautista-Martin. This program espouses the operational consolidation of small farms to take advantage of plantation-scale production, thus, improving their productivities and sugar yields. Similar to the national convergence strategy, the Sugarcane Convergence Program (SCP) will involve the DA, DAR, and DENR. Operations of small farms will be consolidated into minimum "block farms" of 30-50 hectares. Ownership of each small farm is still maintained and respected, thus giving the landowners a share in the profit or earnings in using the land for sugarcane production.

   Small farms (10 hectares and less) will be consolidated into block farms with an aggregate area of no less than 30-50 hectares, through various innovative schemes like lease, joint venture, partnership, sharing, etc. to improve farm productivity and income of ARBs / small farmers ten (10) hectares and less. Professional farm managers / operations managers will manage each block farm.

Block farms will have priority in service delivery of the MDDC, SRA, Philsurin, SIFI, LGUs, the sugar mills and other agencies. Private investors will assist the block farms, either by direct investments and/or management or service delivery. Assistance from foreign funding can also be tapped for the acquisition of farm machineries, irrigation systems, etc. MDDCs will monitor the block farms, while SRA oversee the whole program implementation.

2. *Identification of expansion areas*

   The SRA extension personnel in coordination with the Mill District Development Committees (MDDCs) will identify potential expansion areas for bioethanol production and areas to augment the cane supply of underutilized sugar mills. Likewise, investors for bioethanol fuel production will be doing their own initiatives in looking for idle areas suitable for sugarcane production. The SRA will also tap the DAR in organizing the ARBs with idle lands that will be developed into sugarcane plantation.

3. *Farm inventory and GIS mapping*

   Accurate accounting of all sugarcane farms in the country is a very critical tool in arriving at sugar production estimates which will be the basis for SRA regulatory policies. The baseline data gathered from the farm inventory will also serve as guide for SRA in implementing the programs appropriate for a particular sugar milling district. SRA extension personnel will be tapped in the inventory of sugarcane farms and will be trained in GIS mapping. Outsourcing of experts will be also considered when there will be sufficient funding.

4. *Research, development and extension services*

   SRA has two experimental stations that will cater to the R,D & E needs of the sugarcane industry in coordination with the PHILSURIN which is the private sector research arm of the sugar industry. SRA- LAREC in Floridablanca, Pampanga conducts research and development projects on sugarcane nutrition, variety improvement programs, maintain propagation farms of sugarcane high-yielding varieties (HYVs) and ecological tests of developed cane varieties while SRA-

LGAREC in La Carlota City, Negros Occidental conducts breeding of new sugarcane varieties, maintains the germplasm bank and propagation farms of sugarcane HYVs, variety improvement programs, production of sugarcane plantlets through tissue culture, studies on soil nutrition, development of production technologies, ecological tests of developed varieties, etc..

SRA has extension personnel assigned in every sugarcane milling districts who provides technical / advisory services to cane farmers, collect soil samples for analysis as basis for fertilizer recommendations, gather / monitor farm data and work closely with the MDDC in extending the necessary support services in their areas of responsibility.

5. *Farm-to-Mill Roads*

   This program will be implemented in close coordination with the Department of Agriculture as the main source of funding for the establishment of farm-to-mill roads. Existing farm-to-mill roads in sugarcane districts are being rehabilitated every milling season since these are dirt roads which are not passable during rainy days. Rehabilitation is usually funded by the sugar mills in partnership with the MDDCs. GIS maps are being generated in coordination with the Sugar Masterplan Foundation, Inc..

6. *Farm mechanization*

   Sugarcane is a crop which needs deep plowing, hence, farm mechanization machineries such as tractors and implements are necessary to improve and optimize the farm productivity. A proposal for ACEF funding will be worked out which includes counterpart funding from the private sector.

7. *Irrigation*

   Irrigation systems installed in the country's sugarcane farms are mostly procured through private sector initiatives. SRA will be submitting a proposal for BSWM funding of irrigation systems for the sugarcane milling districts to increase the number of irrigated sugarcane farms.

Sugarcane Industry Roadmap (By Crop Year)

(Crop Year)	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
A. Production						
1. Sugar (MT)	2,400,000	2,575,498	2,694,420	2,847,862	3,036,886	3,122,398
2. Bioethanol (Liters)	0	14,356,299	97,313,500	3,158,119	278,859,004	304,487,125
3. Sugarcane (MT)	25,396,825	26,877,295	28,824,068	31,466,936	34,321,452	35,355,034
B. Area (Hectares)	**400,000**	**405,501**	**418,501**	**440,501**	**462,501**	**470,751**
C. Self-sufficiency						
1. Sugar, %						
% of Production vs.Domestic Demand	126	133	136	141	148	149
% of Total Supply vs. Total Demand	116	119	122	126	132	133
2. Bioethanol, %	0	11	27	44	56	57
D. National Yield						
1. MT Sugarcane/Ha, Average	63.49	66.32	69.15	71.98	74.81	75.00
MT Sugarcane/Ha, High	65.00	70.00	75.00	80.00	85.00	90.00
2. LKG/MT Cane, Average	1.89	1.93	1.97	2.02	2.06	2.10
LKG/MT Cane, High	2.00	2.10	2.20	2.30	2.40	2.50
E. Farmers' Income (Pesos / Hectare/Year) - @ Planters' share of 65%;						
Note: Incremental decrease of sugar price due to tariff reduction[1/]						
@ Pesos per 50-kilo bag	**1,993**	**1,794**	**1,614**	**1,485**	**1,411**	**1,340**
1.'@ Prod'n Cost, P70,000/Ha., average	85,449	79,233	72,943	70,364	71,333	67,221
2.'@ Prod'n Cost, P100,000/Ha., high	68,409	71,388	73,137	77,628	87,089	96,030
F. Jobs Generated						
Total Number of workers(1.5 jobs/ha)	600,000	608,252	627,752	660,752	693,752	706,127
No. of jobs generated[2/]	-	8,252	19,500	33,000	33,000	12,375

[1/] Assuming the price of bioethanol is influenced by sugar price; tariff reduction : 2011 - 38%, 2012-28%, 2013-18%, 2014-10%, 2015-5%

[2/] Agricultural workers only