

Tobacco cultivation and its impact on food production in Bangladesh

by Farida Akhter, Executive Director, UBINIG

Introduction and research background

Concern about chemical-based modern agriculture and promotion of monoculture crops triggered UBINIG's involvement in research on tobacco cultivation and its impact on food production.. Bangladesh is predominantly an agricultural country with over 70% of its population dependent on farming as a livelihood and about 23% of the national GDP is derived from this sector. Food production is of vital importance, and any threats is a national security concern. UBINIG is running an ecological agricultural movement called Nayakrishi Andolon since 1990 and is working with over 300,000 farming households in 17 districts. In the areas where UBINIG is working, particularly in Kushtia, Chakaria upazila of Cox'sbazar and Bandarban, farmers have experienced expansion of tobacco cultivation. Therefore, UBINIG was approached by farmers to look for strategies for transition out of tobacco.

It was in this context that UBINIG, in collaboration with the Social Analysis System (SAS2) initiative at Carleton University (Canada), approached the International Development Research Centre (IDRC) for support to assess constraints and transitions strategies needed to make a shift from tobacco to food production. The SAS2 is a comprehensive collection of concepts and tools for collaborative research and social action (Chevalier and Buckles, 2008)¹. The particular approach of SAS2 to participatory research has been an extremely rich methodology and experience for knowing and understanding how a 'crop' causes destruction in multi-directional and multiple ways.

UBINIG had worked previously with IDRC to develop Farmer-based Strategies for Enhancing Community Seed Wealth and Agro biodiversity, a study undertaken from 2000 to 2001. An initial exploration for the farmer-led study on tobacco production problems was then sponsored by UBINIG and the South Asian Network on Food, Ecology and Culture (SANFEC) through a SANFEC Small Awards project from 2003 to 2004. This prepared the ground for two phases of funding support from IDRC beginning in 2005 and continuing to the present day. The work focuses on conducting field based and farmer-led research on shifting out of tobacco to food crops.

This research is mainly carried out by farmers and UBINIG field based workers, particularly those engaged in the Nayakrishi Andolon (New Agriculture movement). They are always active in ensuring food is available through the use of local varieties of crops, and maintaining the diversity of seasonal crops and maintaining the ecological balance by avoiding chemical fertilizers and pesticides and not using ground water for irrigation. The present article is based on the findings of the research.

Tobacco Cultivation in Bangladesh

Tobacco as a plant (*Nicotiana tabacum* or less widely used *Nicotiana rustica*) belongs to the Nightshade family indigenous to North and South America. Nightshade is any member of the genus Solanum. It is interesting to note that 'Shade' does not refer to the blockage of light, but actually descends from the German word 'schade' which means destruction or damage (attributed to toxic/fatal effects characteristics of many Solanaceae species). The *N. tabacum* varieties are used for cigarette, cigar, cheroot, bidi, hookah, chewing and snuff tobacco and the varieties of *rustica* are used only for hookah, chewing and snuff. The plant prefers sandy, well aerated, well-drained soils and cooler climate. Hence it is grown in the winter season.

Whether tobacco should be termed a 'crop' remains a question. Apart from the fact that tobacco is not indigenous to Bangladesh its introduction in the biodiverse agrarian systems in this country can also be criticised as introduction of an 'alien invasive species'. This means non-indigenous species, or "non-native", plants or animals that adversely affect the habitats and bioregions they invade economically, environmentally, and/or ecologically. They disrupt an agro-ecological system by dominating over other cultivated and uncultivated crops essential for life and livelihood of a community.

Tobacco has been introduced since mid sixties of the last century into the fields where food crops were grown, and more widely after liberation in 1971 by the British American Tobacco Company in Teesta silt in Rangpur area (Sarkar and Haque, 2001)². Although Bangladesh Agricultural Research Institute (BARI) has conducted research and development activities of tobacco and

¹ Chevalier and Buckles (2008) A Guide to Collaborative Inquiry and Social Engagement. New Delhi/Ottawa: SAGE/IDRC. See also www.sas2.net

² Sarkar and Haque, Tobacco Agricultural Research in Bangladesh in the 20th Century, Bangladesh Agricultural Research Council, 2001, Dhaka

abandoned in 1995, tobacco production has mainly been pushed by big multinational companies such as British American Tobacco Company through contract growers (Sarkar and Haque, 2001).

The most important fact that needs to be recognised about tobacco is that it is a non-food crop -- it is not even a raw material for an industry that is necessary for the people of country. What it produces such as cigarette, bidi and other products are harmful and injurious to health. It is also not a 'cash crop' for farmers as the term is commonly understood. It is one of the very few crops in the world entering the world trade entirely as leaf. It is green from the planting time to the harvesting time, with no change in its green colour. This is why the company uses the slogan "Sobujer Somaroho" - (the abundance of green) in order to deceive since such a green plant has absolutely no ecological value and economic value in the local or domestic market. It is a crop that has only one market, i.e. the tobacco companies and their agents and they are interested in the leaves which they grade for quality and therefore decide the price. It has no biomass that feeds back to the soil. The company purchases only the leaves that are grown. The rest of the plant remains on the ground and does more harm to the soil.

According to the official Agricultural Statistics (2010)³ three varieties of tobacco -- Jati, Motihari and Virginia -- are grown in different districts of Bangladesh. Jati and Motihari are mostly grown in Rangpur and Bandarban, while Virginia is mostly grown in Kushtia, Rangpur, Jessore and Dhaka. Other varieties such as Burley are also grown in limited quantities. In terms of land area covered by all three kinds of tobacco, Rangpur still remains highest with 40345 acres during 2008-09 followed by Kushtia 22241 and Bandarban 4678 acres of land. Besides tobacco is extending to Jessore, Jhenaidah, Nilphamari, Lalmonirhat and even in Manikganj and Tangail.

Among the three varieties, Virginia is the most 'popular' variety for the companies. British American Tobacco (BAT) Company has introduced the Flue cured Virginia in 1967 on an experimental basis and by 1976 it started producing it commercially. Until 1971 Bangladesh had to import 95% of the total FCV consumed here.

At present it is claimed that Bangladesh produces international standard Flue Cured Virginia (FCV) and the demand for Bangladesh tobacco is growing in the global market. This is perhaps due to restrictions in other countries on tobacco cultivation. Obviously, this is not good news for food production. The production of Virginia variety of tobacco during 2008-9 was 22,277 metric tons, while the other varieties, such as Jati were 8,437 metric tons and Motihari was 9,270 metric tons⁴. The later two varieties are used for producing bidi - the local and cheaper version of cigarette. In the 2005-06 financial year, Bangladesh exported tobacco worth 95 crore 85 lakh 35 thousand (over 958 million) taka⁵. This is not a big amount for an export commodity. Till 2007-08 the import of unmanufactured tobacco (Raw) was 1125 million Taka⁶ More than what was exported. In comparison, the export of vegetables during 2008-9 was 8,945 million Taka according to Foreign Trade Section of BBS as recorded in the Statistical Yearbook of Bangladesh 2009.

Tobacco in the Research areas:

Research was conducted in three tobacco growing areas: Kushtia (Daulatpur and Mirpur Upazilla), Bandarban (Lama and Ali Kadam upazila) and Cox'sbazar (Chakaria (upazila). The major companies involved in tobacco leaf production as well as cigarette and bidi production in these area are British American Tobacco (BAT) Company, Akij Tobacco, Abul Khair, Dhaka Tobacco, Nasir Tobacco. In the research areas the following varieties are grown by tobacco companies:

Table 1: Tobacco varieties in the research areas of UBINIG

Tobacco variety	Area
FCV K-326 (Goldleaf) NC-95	Daulatpur, Mirpur of Kushtia
FCV K- 326 G 28 (Benson)	Lama, Ali Kadam and Chakaria

Who are the tobacco growers?

There may be about one hundred thousand farmers who cultivate tobacco. Rough estimates suggest that 25,000 are associated with British American Tobacco Company⁷. Others are associated with about 5 more tobacco companies. There is no specific data collected in Bangladesh on the

³ Yearbook of Agricultural Statistics of Bangladesh, 2009, Bangladesh Bureau of Statistics, Ministry of Planning, GOB, August 2010

⁴ Yearbook of Agricultural Statistics of Bangladesh, 2009, Bangladesh Bureau of Statistics, Ministry of Planning, GOB, August 2010

⁵ The thriving tobacco industry by Shafiq Rahman, PROBE NEWS MAGAZINE, vol 9, Issue 39, March 18-24
<http://www.probenewsmagazine.com/index.php?index=2&contentId=4337>

⁶ Statistical Pocket Book, Bangladesh 2009, BBS. Table 9.07

⁷ The thriving tobacco industry by Shafiq Rahman, PROBE NEWS MAGAZINE, vol 9, Issue 39, March 18-24
<http://www.probenewsmagazine.com/index.php?index=2&contentId=4337>

number of farming households by crops so precise numbers are unknown. The total number of tobacco farmers is also difficult to find out because tobacco is grown through contract growers holding company cards, who then subcontract other farmers, particularly share croppers, to grow tobacco. In our view it is a misnomer to call tobacco growers 'farmers' because they are not 'free' to decide the crop pattern and are completely dependent on the company for the variety of tobacco to be cultivated, the inputs, as well as the marketing of their produce. This makes them more like workers in a factory setting where all decisions are made by managers.

Despite these limitations, it is important to ask, who are the tobacco growers in the context of Bangladesh agriculture? According to Agriculture Sample Survey of Bangladesh, 2005 the total number of farm households is nearly 16 million (1 crore 50 lakh and 89 thousand) out of which, percentage of marginal farm holdings is 38.63%, small farmers owning less than 2.5 acres is 49.86%, medium farm holdings 10.34% owning less than 7.5 acres and large farm holdings owning more than 7.5 acres⁸

In the three research areas, the number of farm holdings according to the Agricultural Sample Survey, 2005 is the following:

Table 2: Farm holdings in the research areas of UBINIG

Area	Total farm holdings	Small	Medium	Large	Tenant Holdings*
Kushtia	236798	215768 (91%)	19601 (8%)	1429 (0.60%)	15264 (6%)
Bandarban	46055	29486 (64%)	13687 (29%)	2883 (6%)	4835 (10%)
Cox'sbazar	159391	146877 (92%)	11797 (7%)	717 (0.44%)	3951 (2%)

* this column is additionally inserted to give figures on tenant holdings

Tobacco Company card holders are not necessarily land owners, so they do not fall into any category of farmers that are counted in the statistics. However, the land that is brought under tobacco cultivation is crop land and belongs to the landowners of the area. These lands are generally taken on lease for tobacco cultivation. The Tobacco companies take all kinds of attractive measures to recruit card holders either from the farming communities or non-farming communities and it is in their interest to be able to recruit card holders so that they control and ensure tobacco cultivation. In the local areas they are called '*Card dhari*' (Card Holders) or '*chukti boddho*' (Contract Growers) growers. The Company Card holding is issued by the Leaf Depot of the company for one year with specific variety of tobacco leaf to be produced. For example, Company X can issue the card for 2009-2010 for burley variety, or for Virginia K-326 variety. The card used for receiving inputs such as fertilizers (Urea, TSP, SOP, DAP) Coromil, Polythene etc. and against which a price is fixed. For example, in the card of a local company Tk.15,320 is fixed providing urea, TSP and SOP, while in the Card by BAT for fertilizer, polythene and Coromil the price is fixed at Tk.22,850. There is no unit price for each input. It is only the total price, which will be deducted at the time of selling the tobacco leaves. The Card holder is to commit, written in Bangla as '*Ongikar*' (agreement), which says the said amount is given as credit and must be paid back and the person also have to produce the quota amount of tobacco leaves in due time, otherwise the company may take legal action. In one card given by a local company there is signature of the Leaf Manager, but no signature of the Card Holder, on the other hand in the card of BAT, there is signature of the card holder but no signature of the company authority. However, it is to be noted that BAT card has a warning sign for not using children in any work related to tobacco production.

In the research areas the estimates of the company card holders are:

Table 3: Estimated number of Company Card holders in the research areas

Area	Number of Company Card holders	Number of other growers in tobacco cultivation	Total number of growers in tobacco cultivation
Kushtia (Daulatpur upazila)	11689 (90%)	1266	12955
Kushtia (Mirpur Upazilla)	8437 (91%)	796	9233
Bandarban (Lama upazila)	5754 (98%)	79	5833
Bandarban (Ali Kadam upazila)	1149 (97%)	37	1186
Cox'sbazar (Chakaria Upazilla)	3008 (98%)	65	3073

⁸ Statistical Pocket Book, Bangladesh 2009, BBS. Table 5.01

Those who are non-card holders are free to sell their leaves to any Buying house according to their own choice. However, companies try to include them under card holding contractual agreement so that they can control the supply of the leaves according to their needs.

Leasing land for tobacco

As the Tobacco card holders are not farmers, they take land on lease from the big landowners by paying cash amount for the period November to April. In Kushtia, the lease amount per bigha (33 decimal) is Tk. 5,000 to Tk.7,000. Here the tobacco yield is lower, only 400 to 450 kg per bigha because of the loss of soil fertility for continued use of land for tobacco. In Bandarban, land is still fertile and gains fertility regularly from the alluvium of Matamuhuri river. In Chakaria, the lease value per *Kani* of land (40 decimal) is Tk. 15,000 – Tk. 20,000 in the fertile area and Tk.10,000 to Tk.15,000 in the Boro areas. Here the yield of tobacco leaves is 500 to 600 kg per *Kani* (40 dec). In Ali Kadam and Lama of Bandarban the lease value per *Kani* is same as Chakaria because tobacco areas are more or less dependent on the same fertile soil on the bank of Matamuhuri river. Most of the absentee landlords find it easier to lease the land for tobacco and do not bother about food crops. On the other hand, the tobacco companies facilitate the card holders with cash money to get the land on lease. Some land owners give land on lease for the entire year at Tk. 20,000 to 25,000 and the contract growers may give it as short-term sub-lease during the Aus season.

Growers are trapped into tobacco

It is important to understand why the growers have been growing tobacco for a long time. May be initially they got some cash income but have been incurring loss in terms of soil fertility, plant genetic resources, livestock and poultry and human health. According to UBINIG research there are several reasons including cash earning, perceived high profit, guarantee of inputs and market and also the involvement of farmers through Company Card plays a coercive role for continuing tobacco cultivation. At the same time lack of support for food production by the department of agriculture discourages farmers to remain in food production. Tobacco companies can easily take advantage of the situation.

Therefore, it is not true that the tobacco companies have involved the farmers in tobacco production only by motivation. The attractions that draw farmers to tobacco production are lump sum cash income at a time, input and credit advance from the companies and ensured market through procurement of tobacco leaves by the companies. The most important effort of the companies is to bring the farmers into the Company Card system which entices the farmer for short or long time with tobacco production. Once a farmer is enrolled in the Company Card system it is very difficult to get out of tobacco production. The legal basis of the Company Card system is vague and deserves separate investigation that was not within the scope of the study.

In Bangladesh the daily newspapers are covering the news on extensive cultivation of tobacco in different districts. In these reports, they have also identified the reasons for extensive tobacco cultivation.⁹ These include:

1. Taking advantage of poverty of the Indigenous community of the Chittagong Hill Tracts.
2. Credit advance from tobacco companies
3. Input supply from the company
4. Commitment of the company to procure tobacco leaves from the farmers directly on cash payment.
5. Compliments of souvenir by the company agents to the farmers
6. Neglect of the Department of Agriculture Extension (DAE), local administration and forest department
7. Insufficient supply of inputs for food crops production
8. Unstable price and market of all other crops
9. Lack of interest of the Ministry of agriculture for growing food and other most essential crops
10. Farmer do not get remunerative price of crops including rice when there is a good harvest and production
11. Farmers do not always benefit from good harvest and production of tomato and potato, because of lack of marketing policy.

In these reports it is clear that lack of support to food production, particularly for marketing makes the growers vulnerable to tobacco cultivation.

⁹ From Tobacco to Food Production: Consolidation, Dissemination and Policy Advocacy, First Interim Report, April 2009-March 2010, by UBINIG, April 2010

Movement from One area to Another

For decades tobacco production has moved from one location to another, not due to the increased interest of farmers but rather due to the loss of soil fertility and destruction of sources of fuel wood in areas under production. This trend can be seen from government records¹⁰ showing that tobacco leaves are produced in last ten years between 36,755 metric tons in 2000-01 to 40,272 metric tons in 2008-9 with virtually no increase in land area (73,870 acres in 2000-1 to 73,811 acres in 2008-9). The unofficial statistics of tobacco cultivation far exceeds the government figures as the companies were moving from one district to the other, which are hardly updated in the national statistics; company moves mostly when they face decline in soil fertility and shortage of fuel wood for curing tobacco leaves. After Rangpur, the Teesta silt, tobacco production started at Kushtia in the fertile land of Gangetic Flood Plain and now to the Chittagong Hill Tracts mostly for the river Matamuhuri's fertile land and the trees in the hill forests.

By 2005 – 2006, Kushtia experienced again declining soil fertility and thereby low productivity and low quality of tobacco. The companies, already been aware of such possibilities, started moving to other districts. This time the movement was to the southern part of Bangladesh, particularly to the Chittagong Hill Tracts (CHT). Based on the availability of fuel wood tobacco production was started in Chittagong Hill Tracts (CHT), more specifically to Bandarban district since 1984. Initially tobacco was grown on 740 acres but it was increased on 4,750 acres in 2005 – 2006, an increase of 540%. This was the same time, when Kushtia district started showing decline in soil fertility and no trees for firewood, except the ones such as Ipil Ipil, British American Tobacco Company provided in the name of saving the environment! However, tobacco cultivation is still extended within Kushtia district and in the adjoining districts. The rate of increase is 41%. That means, the tobacco companies are concentrating more on the CHT where they can get the fertile land of the Matamuhuri River and can use the trees of the Hill Tracts.

In recent years 2007 to 2010 tobacco cultivation has again increased. It has increased indiscriminately and abruptly at the cost of intrusion in land suitable for production of food crops. In 2006 – 07 Tobacco production was 75860 acre and 2007-08 there was 71680 acre. In 2008-09 there was tobacco on 100863 acres. In 2009 -10 tobacco cultivation was on 1,82,780 acre. That means there was an increment of 141% in 2009 -10 as compared to 2006 – 07. It is surprising that there was no government policy to decide what crops are needed to be grown during these time and no steps taken to stop extension of tobacco. Companies, on the other hand, were very worried about the reduction of 4180 acre of land under tobacco in 2007 – 08 compared to 2006 – 07. It was observed in Kushtia that tobacco was grown on 46,517 acre in 2006 – 07. Next year (2007 – 08) there was tobacco on 32,791 acres. That means there was a reduction of 29% compared to the previous year. During this period, there was an increase of the cultivation of Maize in Kushtia. In 2008 – 09 tobacco cultivation increased in 35617 acres. Compared with 2007 – 08 there was an increase of 8.6%. In Bandarban tobacco was grown on 4794 acres in 2006 – 07. In 2007 - 08 tobacco was grown on 6014 acre showing an increase of 25%. But 2008 – 09 tobacco was grown on 5745 acres there was a reduction of acreage of tobacco in this year due to the efforts of the Army to protect hill Forest and restrict the cultivation of tobacco in boro rice field¹¹.

Impact on Food crops

In Bangladesh, the cropped areas are divided as single, double, triple and current fallow area. As of 2008-2009, the total cropped land is 35,614,000 acres. The triple cropped area is 3,158,000 acres, double cropped area is 9677 acres, single cropped area is 6786 acres and current fallow land is 1171 acres and net cropped area is 19621 acres¹².

In the research areas of Kushtia, Bandarban and Chakaria (Cox'sbazar) tobacco is mostly grown in the double and triple cropped areas. That is, the land which was used for growing winter crops and for Aus crops.

¹⁰ BBS, Statistical Yearbook of Bangladesh 2009

¹¹ Extensive cultivation of tobacco is creating food crisis in Bangladesh by Farida Akhter, UBINIG, 2010

¹² Yearbook of Agricultural Statistics of Bangladesh, 2009, Bangladesh Bureau of Statistics, Ministry of Planning, GOB, August 2010, Table 10.1 p.313

Table 4: Cropped land in three research areas and tobacco replacement of food crops

Research Areas	Double cropped land in acres (2008-09)	Triple cropped land in acres (2008-09)	Double cropped ¹³ land (in acres) 2010-2011	Triple cropped area (in acres) 2010 - 2011	Tobacco ¹⁴ grown (2010-2011)	Replaced food crops
Kushtia	341,000 (27% of total cropped land)	182,000 acres (14% of total cropped land)	35057 acres (12% of total cropped land)	242223 acres (84% of total cropped land)	48432 acres	20 food crops including boro rice, potato, ,mustard, wheat, pulses and vegetables
Bandarban	15,000 acres (17% of total cropped land)	3000 acres (3% of total cropped land)	39465 acres (33% of total cropped land)	7834 acres (67% of total cropped area)	13115 acres	20 food crops boro rice, mustard, chilli, felon, French bean, winter vegetables and fruits
Chakaria (Cox'sbar)	NA	NA	35963 acres (65% of total cropped area)	15884 acres (29% of total area)	3933 acres	22 food crops boro rice crops mustard, chilli, felon, French bean, winter vegetables and fruits

For tobacco and its replacement of food crops, two cropped areas mean primarily Rabi season (November to March for crops such as Boro Rice, wheat, Maize, Potato, pulses, vegetable, oil seeds etc.) and Kharif-I season April to July for Aus, growing Jute, Maize, pulses, vegetables). So in terms of seasons and land areas covered, tobacco plays a significant role in replacing food and important agricultural crops such as Jute.

As of 2008-09, the major food crops, that are listed in terms of acreage is the following:

Table 5: Major food crops in Bangladesh between 2006 to 2009 (in thousand acres of land)

Crop	2006-7 Acres, 000	2007-8 Acres, 000	2008-9 Acres, 000	Increased/ decreased
Rice (Aus)	2238	2270	2633	+
Rice (Aman)	13382	12474	13584	+
Rice Boro	10522	11386	11654	+
Wheat	988	958	975	+-
Potato	852	993	977	+
Jute	1034	1089	1039	+-
Pulses	769	558	559	-
Oil seeds	841	875	877	+
Spices and condiments	860	738	680	-
Winter Vegetables	435	453	453	same

It is very clear that the pulse and spices and condiments cultivation has reduced, while wheat and jute cultivation also has been affected.

According to BBS, 2009, Tobacco is grown in 77,000 acres of land which is about 3.2% of the triple cropped land. However, the unofficial statistics is much more acres of land under tobacco and would at least account for 5% of triple cropped land. The main difference between the other crops and tobacco in cropped area is that the later affects the land for the entire year. Tobacco is not yet grown in all the districts of Bangladesh. There are some major districts such as Rangpur, Kushtia, Jessore, Dhaka, and three most important districts of Chittagong Hill Tracts such as Bandarban, Rangamati and Khagrachari. In these districts, the increase of tobacco cultivation has been very high. In the CHT it was 304% and in Bandarban alone it was 540%.

In terms of statistics at national level, the land coverage under tobacco is apparently less significant compared to other crops. But since tobacco moves from one area to the other, after causing depletion of land fertility, replacing food crops, directly those which are grown during winter season, and indirectly the crops which overlaps and clashes with sowing or harvesting season of other crops.

Among the various agricultural crops Rice is grown as the major food crop occupying 76% of total cropped land (BBS, 2005)¹⁵ in three major seasons - Aus, Aman and Boro. Wheat is also part of the staple food grown in winter crop season in the dry zone areas of the country.

¹³ UBINIG Information collection, 2010

¹⁴ UBINIG Information collection, 2010

¹⁵ Yearbook of Agricultural Statistics of Bangladesh, 2005, Bangladesh Bureau of Statistics, Ministry of Planning, GOB, Dhaka, Bangladesh

In Bangladesh, farmers produce food and other crops both as cash and for subsistence needs. So, all crops are cultivated for cash as well as for subsistence needs. Rice, vegetables, pulses, oil seeds are also cultivated for meeting cash needs of the farming households. However, few crops such as Fibre crops (Jute & cotton), Sugar cane, spices and condiments (such as chili, onion, garlic, coriander etc.) and narcotics (such as betel leaves, tea) do not have immediate food value, but helps farmers earn cash for meeting food and other needs. These crops are cultivated according to farmers own choice of crop production and according to their geographical conditions and land types. Tobacco does not fit into any of the characteristics of these cash crops grown in the country, yet, in recent years, it is observed that tobacco has been listed as one of the six major cash crops such as jute, cotton, sugarcane, tea, betel leaf and tobacco.

In the following table we are comparing with the tobacco sowing and harvesting time [Sowing: Mid Oct. to Mid Dec. & Harvesting: Mid Feb. to Mid April] with major cereal, fibre, pulses, spices and food as cash crops. We want to see whether tobacco causes any kind of interruption in the cultivation of these crops. The last column of the table is included by the author to show how the sowing and harvesting time of other crops clashes with tobacco.

Table 6: Sowing and Harvesting Period of Important Crops, 2002-03 to 2007-08¹⁶

Name of Crop	Sowing Period	Harvesting Period	Clash with tobacco
CEREALS			
Aus Paddy	Mid March to Mid April	Mid July to Early August	With sowing period
Broadcast Aman paddy	Mid March-Mid April	Mid Nov-Mid Dec	Sowing and harvesting
Transplanted Aman paddy	End June-Early Sept	December to Early January	Harvesting
Local Boro paddy	Mid Nov-Mid Jan	April May	Sowing and harvesting
High yielding Boro paddy	Dec. to Mid February	Mid April-June	Sowing and harvesting
Wheat	Nov-Dec	March-Mid April	Sowing and harvesting

That means no cereal crop can be cultivated in the land designated for tobacco by the company through the farmers.

Name of Crop	Sowing Period	Harvesting Period	Clash with tobacco
FIBRES			
White jute	Early March-Mid April	July- August	Sowing period
Tossa jute	Mid April - Early May	August-Sept	Sowing period
Mesta	April-May	Oct-Nov	Harvesting period

Jute is one of the major crops indigenous to Bangladesh and particularly to the tobacco growing areas such as Kushtia, which is a cash crop as well as farmer's subsistence needs with jute sticks for housing materials, ropes etc. But three different jute types are affected either at sowing period or at harvesting period. That means jute cannot be grown in the designated land for tobacco.

Name of Crop	Sowing Period	Harvesting Period	Clash with tobacco ¹⁷
PULSES			
Masur	Mid Oct. to Mid Nov.	Early Feb. to Early March	Sowing and harvesting
Kheshari	Mid Oct. to Mid Dec.	Mid Feb. Mid April	Sowing and harvesting
SPICES			
Bhadoi Chillies	Mid April to Mid July	Sept. - Dec	Sowing and harvesting
Rabi Chillies	Mid Nov. to Mid Jan.	March - May	Sowing and harvesting
Onion	Beginning Oct. to Early Dec	Late April. to Mid June	Sowing and harvesting
Turmeric	Mid April to Mid June	Mid Dec. to Mid March	Sowing and harvesting
Ginger	Mid March-Mid May	Mid Dec. to Mid March	Sowing and harvesting
Coriander	Oct. to -December	Mid Feb. to Mid March	Sowing and harvesting
FOOD CUM CASH CROP			
Potato	Mid Sept. to Mid Nov	Mid Jan. to March	harvesting
Sugarcane	Mid Oct. to Mid Dec	Mid Oct. to Mid April	Sowing and harvesting

Source: Source: Agriculture Statistics Wing, BBS

It shows clearly that the more land areas are cultivated by tobacco in the pulse and spice, potato and sugarcane growing areas, the less will be the level of food production. According to a study by

¹⁶ Statistical Pocket Book Bangladesh 2009 Bangladesh Bureau of Statistics, Planning Division, Ministry of Planning, GOB, Dhaka, Bangladesh, February 2010

¹⁷ UBINIG research, 2010

Bangladesh Agricultural Institute of Mymensingh, it was found that there is a yearly production deficit of 250,000 metric tons. The yearly production is 420,000 metric tons. The yearly import of pulses is 260,000 metric tons at an expense of foreign exchange 1200 billion taka.¹⁸

Aggressiveness of Tobacco: Takes away land for the year-round crop

It appears from the crop calendar that the tobacco production matches with rabi season with some overlapping with the previous crop season khairf-2 and the follow up crop of the Kharif – 1 season. Consequently, pulse, mustard, other oilseeds, winter vegetables have no place in the field for cultivation. Tobacco does not allow any other crops to be grown as companion crop in mixed culture. The broad leaves of tobacco cover the entire space and suppress everything. Even there is no scope for any uncultivated food plants to grow. Tobacco directly competes with boro rice for season and space. Moreover tobacco overlaps the sowing time of Aus rice in the Karif – 1 season. Tobacco also overlaps the sowing time of Jute.

Consequently tobacco does not only compete with other crops in one season but also it blocks the land for two other seasons and the crops. It is interesting to note that the tobacco is now moving to those areas where there was Aus rice in the Kharif-1 season. If the present trend of extension of tobacco continues, then definitely there will be a sharp reduction of Aus rice production.

Takes away inputs of food cultivation: Fertilizer, pesticide, irrigation

Tobacco cultivation requires huge amount of fertilizers, pesticides, seed, irrigation water and labour. These are the same inputs which are also required for Boro rice cultivation and other crops. The seed of particular variety of tobacco is provided by the company, of course at a price. So tobacco growers do not keep any seed by themselves. They are always dependent on the company for the supply of seeds.

At different stages of tobacco cultivation, fertilizers and pesticides as well as irrigation water is needed. According to company credit form, the required inputs are fertilizer such as Urea, TSP/DAP, SOP sakaricide, pesticides/fungicide such as Bovistin, ridomil etc.

According to UBINIG research tobacco growers use many different types of fertilizers including Urea. For each tobacco grower UBINIG estimated figures of fertilizer use is the following:

Fertilizer: Urea 575 kg / ha and TSP 466 kg/ha

Pesticides have at least 16 applications, using as many as 47 different brands by different growers which are sold in the open market.

The tobacco growers receive fertilizers through the company card from the companies themselves. The company collects the fertilizer from the dealers of Bangladesh Chemical Industries Corporation (BCIC), the largest public sector corporations under the Ministry of Industry. The Department of Agricultural Extension (DAE) has the responsibility of providing fertilizers to the farmers of Rabi crops, particularly for Boro cultivation by taking fertilizers from registered dealers under BCIC. Fertilizer plays a very important role in tobacco cultivation. The cost estimate of fertilizer, pesticide and irrigation according to UBINIG study¹⁹ is the following:

Table 7: Cash cost for fertilizer, pesticide and irrigation for tobacco cultivation

Areas	Fertilizer cost/per hectare	Pesticide cost/ hectare	Irrigation cost/ hectare	Total Cash cost/ hectare
Kushtia	42228 (31%)	4854 (3%)	4564 (3%)	134860
Cox's bazar	44344 (24%)	12142 (6%)	9645 (5%)	183754
Bandarban	36927 (20%)	10146 (5%)	9417 (5%)	187984

At the tobacco grower level information of UBINIG, it is found that fertilizer accounts for between 20 to 30 percent of the cash costs, so to be able to receive fertilizer at lower price or subsidised price is very much necessary for the tobacco growers. On the other hand, the fertilizer taken away from food crops may lead to substantial decrease in food production, particularly rice production. So government can contribute to regulating tobacco production by limiting the supply of fertilizers.

Irrigation Scheme for Boro crops

There is an irrigation scheme for each boro crop areas by the government. Under each scheme 20-60 acres crop land can be irrigated. The Water Scheme Manager organises the machine, pump, Diesel, Drain pipe etc. for supplying the water. In Bandarban they use the stream water from the Hills and water from Matamuhuri. For boro rice crops, the farmers pay Tk. 2500 per season in cash or in

¹⁸ Deshe daler ghat ti bochore 2 lakh 50 hajar ton, Daily Ittefaq, 19 March, 2011

¹⁹ Comparative Economics of producing alternative combinations of Rabi Crops by substituting Tobacco in Bangladesh by Md. Mosharraf Uddin Mollah, Consultant, UBINIG

kind by paddy. But this irrigation water is often taken by the tobacco growers and therefore the rice production is hampered.

Questions about Tobacco

'Cash' crop but for whom?

It is a misnomer to call tobacco a 'cash' crop and to list it in the government statistics as one of the six major agricultural cash crops such as jute, cotton, sugarcane, tea, betel leaf and tobacco. Unlike Jute, cotton and Sugarcane tobacco is not even linked to any particular national industry that strengthens the economy. Tobacco is grown only under the contract system of specific tobacco companies, not under any government controlled system of cash crops related to particular industry such as Jute or Sugarcane. So the tobacco cultivation has no immediate production benefit to the development of country's economy. The only department that benefits from tobacco cultivation is the National Board of Revenue by receiving Tax and VAT (Value Added Tax) British American Tobacco Company stands top among the vat paying companies. This company introduces itself, "The BAT contributes more than Tk. 12000 million to government annually large private sector tax payer." The BAT has been presented as investment success in the web site of The Bangladesh Board of investment (BOI), based in the Prime Minister's office.

British American Tobacco Company (BATC) the largest multinational tobacco company contributes a sum of Tk. 12,000 millions annually. In 2005, ten companies contributed a sum of Tk. 49,180 millions as VAT. Out of which the British American Tobacco Company contributed the highest of Tk. 18,520 millions. A national tobacco company, Dhaka Tobacco of Aziz Group has contributed Tk. 7,130 millions, which was in the third position. In that year the NBR has earned an income of 106,000 millions. Two tobacco companies have contributed Tk. 25,640 millions. They have formed the VAT payers unit under the NBR since 2004 (News From Bangladesh, Daily News monitoring service, 22 September, 2005). In 2007-08 The British American Tobacco Company had contributed Tk. 28,280 millions and Dhaka Tobacco had contributed Tk. 11800 millions.

In the tourist brochures, Tour to Bangladesh.com tobacco is presented as 'smokers like the tobacco of Rangpur very much'²⁰ So it is for the entertainment of the tourists and not for the general people. Moreover, it is also a violation of the SMOKING AND TOBACCO PRODUCTS USAGE (CONTROL) ACT, 2005 which has a particular focus to controlling smoking, production of tobacco, use, purchase, sale and advertisement. While the advertisement of cigarettes are prohibited these tourist promotion is encouraging cultivation of tobacco in particular areas.

The tobacco companies claim to offer jobs and therefore manages to receive the country's first-ever Best Employer Award 2008 in the Consumer Goods/FMCG category, introduced by leading jobs portal, Bdjobs.com. (2009)²¹ There is no basis of comparing whether it is the most leading job provider, but receiving such an award helps them to advertise for enhancing the 'goodwill' of the company.

More cash, but less happiness

Tobacco as a 'crop' is harmful in many ways. For example, it has direct impact on soil depletion, pollution of soil and water from excessive use of chemical fertilizers, pesticide and irrigation water and worst of all is the damage to forest, homestead trees, road side trees etc. Tobacco is prone to many diseases therefore requires huge chemical inputs, upto 16 applications of pesticides including those which are banned for use such as Aldrin, Dieldrin, DDT²². There are studies which have shown the environmental, social and health impact of the tobacco cultivation but yet no strong step is taken by the government to stop such hazardous and aggressive crop. Its impact on food production is clearly understood because it occupies land of food crops for the entire year, it takes away the inputs needed for growing food crops and most importantly the specific areas growing tobacco become food deficit areas. So the notion of Monga for Northern district of Rangpur may extend from Kushtia to all the way upto Chittagong Hill Tracts, which were usually food exporting areas.

The social impacts are also very much visible. In the families of tobacco growers, the stress situation hampers the family peace and happiness; children are deprived of going to school in tobacco harvesting and curing time (march-April) and also during firewood collection time in August-September. Many students cannot appear at secondary school exams (SSC) if their families are growing tobacco.

²⁰ <http://www.tourtobangladesh.com/Crops-of-Bangladesh.php>

²¹ http://www.bat.com/group/sites/uk__3mnfen.nsf/vwPagesWebLive/DO6ZKMGW?opendocument&SKN=1

²² Tobacco Control, Social, Environmental and Economic Perspective Choices for Bangladesh Vol. 1, Compiled and edited by Md. R. A. Khan, Department of Agricultural Marketing, February, 2007

Women: The invisible victims in tobacco growers' families

Women and children are severely affected by lack of nutritious food in the family, lack of fruit trees in their homestead and also due to lack of livestock and poultry keeping. Excessive use of pesticides prevents poultry keeping, and also collection of fodder for the cows. The uncultivated sources of food are depleting leaving the poorer families dependent only on cash to buy food.

Rahima Khatun from Daulatpur Kushtia said, 'Men in our families, get allured by cash income earned from tobacco. They see large amount of cash money which they receive after selling the leaves. But soon this money is spent for treatment of diseases that the family members suffer, paying for the debts, managing food costs as every food item has to be bought. At one point, we do not have money anymore. The husbands sell the jewelleryes of their wives to meet the cost. If this goes on, I am afraid, they will sell their wives!'

Women are not attracted by the 'cash' earned after selling the tobacco leaves in April-May. What they see is that this money goes back to the company for paying debts, to the doctor for treatment and for some luxury goods for consumption of men in the family such as mobile phone, motor cycle etc. After getting good amount of cash money, some tobacco growers build their houses with bricks, but hardly they are able to put cement plaster on them.

Women's labour as family labour is not counted, but her labour is very much crucial at the time of curing. Women spend sleepless night for over 70 hours at stretch to make sure that the leaf curing is perfect for grades to be good. After selling of the leaves, women become vulnerable for unhappy family situation because of the loss faced by the head of the family from the company.

Women have felt redundant in terms of using their knowledge in farming, seed keeping, post harvesting works and overall involvement in food production.

Shifting to Food production

Tobacco farmers even though they are gaining financially cannot justify that they are doing something good. They have a sense of guilt in their faces. They know what they are doing is not good for soil, human health, for social well-being of people etc. On the other hand, farmer growing food crops have a 'clear conscience' and have a happy face. In the UBINIG research²³, the initiatives to discuss the possibilities of shifting out of tobacco was immediately received by the poor and marginal tobacco growers and particularly those without company cards.

This was a good starting point to see the constraints and how to strategise to shift out of tobacco as it was farmers' spontaneous decision and they were searching for a way out. Direct experiments at the field level in the three research areas were first carried out with the objective to find out the proper substitute crop for replacement of tobacco during the season when tobacco is grown. The villages where tobacco is grown extensively have lost crop diversity, particularly the food crops. However, the replacement of tobacco by substitute food crops involved a lot of issues including i. land selection, ii. Cropping plan, iii. Seed management and Land preparation. But in order to get the land free from tobacco and to grow food crops, farmers needed to discuss the seasons before sowing and after harvesting of tobacco crops.

Therefore, the need was not only to select substitute crops but also to devise a cropping pattern round the year matching the environmental and ecological conditions. Generally tobacco is harvested during early Chaitra to mid Baishakh (mid March to end April). At this stage, the farmers go for planning of the next season and crops. Those farmers who like to continue tobacco production they plan for growing Aus paddy: Aus paddy occupies the land during Jaista to Bhadra (mid June – mid September).

Tobacco is grown during Kartik to Baishakh (mid October – mid April). The tobacco farmers follow a cropping pattern such as Tobacco – Aus paddy – Tobacco or Tobacco – fallow land – Tobacco. In the later pattern the land, in fact, remains fallow for about four months and tobacco becomes monocrop cultivation for the entire year. Clearly tobacco has impact on food crops round the year. Tobacco is a single crop, which does not match with any other agricultural cash crops grown in the country.

On the other hand, farmers who have decided to shift out of tobacco they plan to grow other crops in Baishakh – Ashar (mid April – mid June). Those farmers, who have expressed interest to give up tobacco and go for the food crops, needed support particularly in the selection of crops and necessary inputs, particularly the seeds.

The cropping pattern is designed keeping the major crop seasons of summer, monsoon and winter in view:

- Summer season: Baishakh – Jaista (mid April – mid May)
- Monsoon & post monsoon: Ashar - Kartik: (mid May – mid October)

²³ From Tobacco to Food production: First Interim Technical Progress Report, by UBINIG, April 2010

- Winter (Kartik – Baishakh: mid October – mid April)

Those farmers who have expressed interest for abandoning tobacco in favour of growing food crops, cropping designs were made for this transition period which included crops for summer and monsoon season. The crops selected for this period are termed as 'Transition crops'. The main transition crops for Cox's Bazar include: leafy amaranths, leaves of radish, coriander, okra, bitter gourd, yard long bean etc. The main transition crops for Kushtia region included: leaf amaranth leafy radish, spinach, cabbage and coriander.

The crops grown for substituting tobacco in the rabi season are called substitute crops. The main substitute crops for Cox's Bazar included potato, French bean, Felon, sweet gourd, chili, Egg plant, Ground nut and tomato. The main substitute crops for Kushtia included potato, wheat, maize, garlic, masur (lentil), mustard and chili.

Seed distribution for Transition and Substitution crops

The main demand of the farmers was to get seed support. This is because the tobacco companies have been offering all sorts of support to the farmers. But despite such supports by the tobacco companies, the farmers who have decided to give up tobacco production as real losers and victims of tobacco aggression, they wanted to shift. These farmers have lost seeds of winter crops by remaining involved in tobacco cultivation for long time. They, in fact, do not have any seed in their hand. Accordingly, the farmers have been demanding the seed support from the beginning of the program. The seed support was provided from Nayakrishi Seed Network (NSN), Nayakrishi farmers and from the local source.

Since the start of tobacco cultivation and its gradual expansion without any regulation, the acreage and production of food crops started declining in the research areas. The trend is such that the production of vegetables has become negligible. The diversity of crops has been reduced with the introduction of tobacco. Only rice and some vegetables are grown in the kharif season. The farmers do not have any seed of food crops in their hand. The farmers have lost the tradition of maintaining seeds as food crops were not grown anymore. In case of urgent need for food production the farmers buy seed from the market mainly High yielding varieties (HYV) and hybrids. In this situation, a holistic approach is needed to invigorate the base of crop variability and diversity²⁴.

Programs were taken up for seed production and management in collaboration with Nayakrishi Andolon and Nayakrishi Seed Network. The main seed related activities included collection, conservation, evaluation and documentation of indigenous varieties of crops and maintenance of seeds of farm. Shifting out of tobacco to food production meant producing food crops that were traditionally grown in the area with the local variety seeds, no use of chemical fertilizer and pesticides and no ground water irrigation. Shifting to another chemical-based food production such as hybrid will not solve the problem of regaining soil fertility, environmental degradation etc.

UBINIG research following biodiversity based and ecological food production has shown very good results within two years of shifting to food crops. The farmers have produced a combination of food crops substituting tobacco in the winter season in the three research areas. Their results were²⁵:

Table 8: Gross and Net Return on combination crops of food

Areas	Crops	Total Cost including labour	Gross Return	Net Return
Kushtia	Potato+Maize+Lentil+coriander	Tk. 1,03,688 per hectare	Tk. 2,16,927	Tk. 1,13,239
Cox's bazar	Potato+French bean+Felon	Tk. 99,073 per hectare	Tk. 2,46,172	Tk. 1,47,099
Bandarban	Potato+French bean+Felon	Tk. 1,01,142	Tk.2,88,271	Tk. 1,87,129

Farmers in the research areas have also calculated the loss of food crops due to tobacco. This was done in a meeting of farmers based on their knowledge of crops and the market price in their local areas. The following estimate based on the average yield and existing market price has been presented in following table:

Table 9: Estimated return from different substitute crops of tobacco

Area	Land under tobacco production (acre)	Number of varieties of food crops	Market price of food crops (Taka)	equivalent in USD
Lama, Bandarban	10,090	21	110 million	1.57 million
Alikodom, Bandarban	5,120	23	378.44 million	5.40 million
Chakaria, Cox's Bazar	4,283	24	298.64 million	4.26 million
Daulatpur, Kushtia	20,000	7	142 million	2 million

²⁴ Comparative Economics of producing alternative combinations of Rabi Crops by substituting Tobacco in Bangladesh by Md. Mosharraf Uddin Mollah, Consultant, UBINIG

²⁵ Comparative Economics of producing alternative combinations of Rabi Crops by substituting Tobacco in Bangladesh by Md. Mosharraf Uddin Mollah, Consultant, UBINIG

Marketing of food crops

In Bangladesh, the lack of policies to support farmers for marketing the food crops becomes a big hindrance for remaining in the food production. Usually the bumper food crops lead to farmers earning less as has been seen in the case of potato, jute, rice and different vegetables. Farmers living in remote areas face even more difficulties in marketing of their produce. The cold storage facilities are also inadequate and are not affordable for the poor and marginal farmers. This year (2010-11) the farmers in the research areas have done a marketing survey to know about the possibilities of marketing of food crops.

Table 10 : Prospects of marketing of crops grown in Cox'sbazar-Bandarban and Kushtia

Crops	Prospect of marketing
Cox's Bazar - Bandarban	
Potato	The farmers started potato harvest since the last week of January. The price of potato that time was BDT 20-25 per kilogram. The current price is BDT 15-16 per kilogram. Comments: Dohazari variety of potato grown by the Nayakrishi farmers is popular. It is much on demand on the market.
French bean	Green French bean has been marketed since the second week of January. The price of bean in the market was BDT 50-60 per kilogram. The farmers have been collecting the ripe seeds of French bean since the first week of February. The current price of ripe French bean seed is BDT 40-50 per kilogram. These seeds can be stored after proper drying. The stored seeds can be sold in the market, BDT 70-80 per kilogram in the next season. Comments: This crop is also locally popular and it is much on demand round the year.
Radish	The farmers disposed radish in the market during December, 2010 to January, 2011. The market price of radish was BDT 20-25 per kilogram. Currently the price of radish has come down to BDT 5-6 per kilogram. The radish can not be kept in the shelf for marketing for long time. However the farmers maintain seeds in their own hands. Comments: The farmers have been benefited from radish production because of higher market price this year.
Felon (cowpea)	The farmers can store felon. The yield of felon was appreciable this year. The felon is still in bearing stages for which it could not be marketed. It is anticipated that the market price of felon will be BDT 60 per kilogram this season. Comments: The farmers can store felon and as such it is a prospective crop for the farmers.
Sweet gourd	Sweet gourd is a profitable crop. It does not involve high cost of production. All parts of the plant including leaves, flowers, twigs and fruits are much on demand in the market. The farmers can also stone the ripe sweet gourd. Raw sweet gourds, ripe and un-ripe are sold in the market BDT 12-15 per kilogram. Comments: Sweet gourd is a prospective crop for the farmers for it does not involve much cost of production.
Kushtia	
Potato	Market price of potato was BDT 7-8 per kilogram at the time of harvest during end of January. The market price of potato was BDT 4-5 per kilogram during the second week of February 2011. It is anticipated that the price of potato may go up to BDT 10 per kilogram. The price of seed potato saved in cold storage may go up to BDT 16-25 per kilogram in the next season.
Potato	Market price of potato was BDT 7-8 per kilogram at the time of harvest during end of January. The market price of potato was BDT 4-5 per kilogram during the second week of February 2011. It is anticipated that the price of potato may go up to BDT 10 per kilogram. The price of seed potato saved in cold storage may go up to BDT 16-25 per kilogram in the next season.
Mustard/rye	In the present season, second week of February, the price of mustard was BDT 1400-1500 per mound. After three months, in June the price will go up to BDT 1700-2000 per mound.
Lentil	The market (mid February, 2011) price of lentil was BDT 3000 per mound. After three months, the price will go up to BDT 3500 - 3800 per mound.
Wheat	The market (mid February, 2011) price of wheat was BDT 800 - 1000 per mound. After three months the price may go up to BDT 1200 - 1400 per mound.
Garlic	The market (mid February, 2011) price of garlic was BDT 4000 - 4500 per mound. After three months the price may go up to BDT 6000 - 8000 per mound.
Coriander	The market (mid February, 2011) price was BDT 80-100 per kilogram. After three months it is expected to go up to BDT 150 - 200 per.
Maize	The market (mid February, 2011) price of maize was BDT 500- 600 per mound. After three months the price will go up to BDT 700 - 800 per mound.

Policy Issues

Regulation on tobacco cultivation is an urgent need for solving food crisis and for saving the environment and human health. However, since it is neither completely under agriculture, nor in industry, the regulation has not been very successful with enactment of the SMOKING AND TOBACCO PRODUCTS USAGE (CONTROL) ACT, 2005 by the Ministry of Health of the Government of Bangladesh. This law is enacted with a view to controlling smoking, production of Tobacco, use,

purchase, sale and advertisement. However, the bill also provides options about giving loan for food crops production in article 12.

Article 12: Granting of Loan for production of Alternative crops to tobacco products

(1) *To discourage tobacco farmers from producing tobacco products and to encourage them to produce alternative cash crops the Government shall provide loan on simple terms and the facility shall continue for the next five (5) years from the coming into force of this Act.*

(2) *For motivating in gradually discouraging the production and use of tobacco products and for the purpose of discouraging the establishment tobacco products industry, the Government will formulate necessary policy.*

Since the enactment of the law, more than five years have passed but no support was given to the farmers willing to shift out of tobacco. However, Bangladesh Bank has taken some initiative which is laudable to discourage tobacco cultivation.

Bangladesh Bank Circular: No loan for Tobacco farming

With a view to discouraging the production of tobacco, The Bangladesh Bank, the central bank of the country, in a circular on 18 April 2010 has ordered all the scheduled commercial banks for not granting any loan for tobacco farming. The Bangladesh Bank has taken this decision keeping in view the concerns about public health, economic condition, food crisis and environment.

The circular of the Bangladesh Bank mentioned that smoking and use of tobacco products are threats to public health and food security. The direct users of tobacco, their family members including children and others, colleagues, in addition tobacco producers, processors, workers and all other peoples around are affected by the adverse impact of tobacco. The production of food crops has been reducing with time due to extension of tobacco production. A huge quantity of fuel wood is needed for curing of tobacco leaves, which releases poisonous smoke in the environment. Consequently trees are logged indiscriminately and the environment is polluted by the poisonous smoke.

Under these circumstances it was advised for not granting any loan for tobacco production. The Circular also noted that previous disbursed loan for tobacco should be adjusted and realized just on schedule. Such loans shall not be renewed or extended in any case (The daily Shamakal, 19 April, 2010).

It may be noted that Anti Tobacco campaign, results of different research on tobacco causing food deficit and anticipated impacts of tobacco on farmers have contributed to such bold decision by the Bangladesh Bank.

Decision by the Ministry of Agriculture: Withdrawal of Fertilizer subsidy

The Ministry of Agriculture, GoB is aware of the adverse impacts of the tobacco cultivation. One of the intelligence agencies of the government had investigated the adverse impacts of tobacco cultivation on behalf of the Ministry last year (2009).

The agency had conducted through investigation in the south western region, including Kushtia district and adjoining areas. The Agriculture Minister, Begum Matia Chowdhury has approved the report on 15 April, 2010. It had been indicated in the report that the number of tobacco farmers increased alarmingly in Kushtia region. The tobacco producers were introduced at the cost of food crops including rice. Short and long term recommendations have been made in the report to change the situation. Withdrawal of subsidy on fertilizer for tobacco farming has been mentioned as an immediate measure. Fertilizer subsidy was withdrawn from the tobacco farmers based on the recommendation of that report. It was learnt that 18-20 thousand metric ton of fertilizer is used on for growing tobacco on 49,000 hectares in Kushtia region (The Jugantor, 17 April, 2010)

Since in recent days, the Ministry of Agriculture has taken strict measures for withdrawal of subsidy for the tobacco growers, the company has given different directions for the Card Holders to collect Urea fertilizer at a time when it does not compete with Boro crop. The tobacco growers are asked to collect Urea fertilizer at the time of Aman season with loan given by the company. The dealers also charge higher price (Tk. 50 – 100 more per bag of fertilizer). However this creates condition for corruption on the part of dealers and DAE field officers for supplying 500kg of fertilizer per acres resulting in crisis of fertilizer during Boro season. The Tobacco companies collect TSP and SOP from the Ministry of Agriculture and the Ministry of Industries and then distribute it to the tobacco growers.

Imposition of Export Tax in the National Budget

In the last budget of 2010-11, an export tax of 10% was imposed on tobacco leaves by the Ministry of Finance.

Who is Responsible for Regulating Tobacco cultivation?

The government of Bangladesh signed the WHO Framework Convention on Tobacco Control (FCTC) on 16 June 2003 and ratified the same on 10 May, 2004, accordingly Bangladesh has its own law on tobacco control. However, implementation of SMOKING AND TOBACCO PRODUCTS

USAGE (CONTROL) ACT, 2005 will remain incomplete without clear regulatory measures against the tobacco cultivation. Tobacco companies are able to advertise their so-called Corporate Social Responsibilities (CSR) by providing Bill Boards with messages on tree plantation, medicinal plants, climate change etc. They even manage to get Environmental awards!

But the main problem is that there is a lack of clear understanding as to the question of the relevant Ministry in respect of taking decision for controlling tobacco production and such other issues. Let's look at different ministries and their relevance to tobacco cultivation regulation.

1. Ministry of Finance and NBR are the recipients of tax from tobacco companies. So they can increase tax on tobacco products as well as tobacco export and earn more revenue. It will help discourage tobacco cultivation.
2. Ministry of Agriculture will be very effective if the Department of Agricultural Extension can ensure by supporting food crop production and provide necessary inputs to farmers and provide marketing facilities.
3. The Ministry of Industries can ensure that the fertilizer distributed to dealers must go to food producing farmers.
4. Ministry of Land can ensure that the land suitable for food production should be restricted against tobacco production and also protect the government Khas land from tobacco production.
5. Ministry of Commerce can monitor the exports of tobacco leaves and regulate the trade licenses of the companies. They can also monitor the increased food import (specially pulses, rice) as created by tobacco cultivation.
6. Ministry of Food and Disaster Management monitors the situation of food crisis, but must link it to food crisis created by tobacco cultivation and thereby take necessary action.
7. Ministry of Labour must ensure the labour utilisation, wages and also prohibit use of child labour in different stages of tobacco production.
8. Ministry of Environment & Forest can play significant role in protecting the forest from tobacco curing by making a separate law ensuring no tree be cut to cure tobacco. They can take initiatives against pollution of water, and village environment during the curing time. Demands are made by village people not to build Kilns within 500 meters of educational institutions.
9. Ministry of Education must make sure children are able to get education in the tobacco growing areas. It is to be noted that the tobacco curing season is the time of Secondary School Exams and many students have to drop because of the need for working as family labour. Young children are occasionally dropping in and out of education due to tobacco related works.
10. The Ministry of Home Affairs, Law and Justice Ministry and the Health Ministry are very crucial for their role in making necessary amendments in the Tobacco Control Law by including issues of tobacco cultivation and ensuring proper implementation. The Health Ministry have take into account the health hazards due to tobacco cultivation.

The other Ministries such as Ministry of Women and Child Affairs, Cultural Ministry and the Ministry of Religious Affairs can play significant role in ensuring safety of people from the hazards of tobacco cultivation.

Finally, it is recommended that a comprehensive policy on tobacco control in general and control tobacco cultivation in particular must be taken up by the government. As a part of global movement against usage of products, Bangladesh government as well as the groups working on tobacco control must incorporate the issues of harmful impact of tobacco cultivation on environment, food production and human health. It is not only the Ministry of Health that can take decision on controlling tobacco cultivation, but the Ministry of Finance, Ministry of Environment and Ministry of Agriculture must act together to regulate tobacco cultivation.

[This paper is prepared in collaboration with the research team particularly with active support of Rafiqul Haque Tito and Mujahidul Islam Prince]

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