This study is supported in part by the Land Tenure Center, a cooperative research and training program of the American Nations, the Agency for International Development and the University of Wisconsin.

November 1964 No. 2

THE ROLE OF THE NATIONAL INSTITUTE OF TOBACCO IN INCREASING TOBACCO PRODUCTION IN COLOMBIA

By

Ronald L. Tinnermeier

All views, interpretations, recommendations and conclusions expressed in this publication are those of the author and not necessarily those of the supporting or cooperating organizations.

THE ROLE OF THE NATIONAL INSTITUTE OF TOBACCO IN INCREASING TOBACCO PRODUCTION IN COLOMBIA

By Ronald L. Tinnermeier +

Introduction

The development of technical skills among farmers is considered an important variable in increasing agricultural production. However, the development of skills is a slow and difficult process.

The National Tobacco Institute in Colombia has set out to try to increase tobacco production by developing and promoting improved methods of cultivation and handling. This paper will review the program of the institute and analyze some of the changes in tobacco production in Colombia.

The institute

The institute was founded by Decree 3558 of December 10, 1954, as a semi-official body to defend the small tobacco grower. *

Its major functions are:

the development of tobacco production
the offering of technical advice and assistance
the search for the best prices and markets

+ Research Associate for the Land Tenure Center, a cooperative program of the American Nations, the Agency for International Development and the University of Wisconsin.

* Avila F., Padilla V., Van Rooij and Feder, Compendio de Legislación Agropecuaria y Organismos Agrícolas de Colombia. Servicio Técnico Agrícola Colombiano-Americano, Bogotá, Julio 1962.

The institute is financed partially by taxes, partially by tariffs from the importation of cigarettes -- largely from the United States -- and finally by official governmental subsidies.

Tobacco production

Colombia has a record of tobacco production dating back to the 1800's under the Spanish Crown. The exportation of tobacco by Spain from Colombia rose to as much as 7,000,000 kilos annually during this time. * Toward the end of the century the production of tobacco fell to an insignificant amount due to foreign competition and burdens on producers.

Currently tobacco production is on the rise as indicated in Table 1. The National Tobacco Institute has made a complete census of the tobacco producers since 1955. All the production figures in this paper are based on these surveys.

Although tobacco is not a major source of foreign exchange in Colombia, it is important socially and economically since some regions rely heavily on this crop. In 1955 it was estimated that 10 per cent of the population in Santander derived income from or depended directly on tobacco production.

Production figures indicate a continual increase at a decreasing rate since 1955 with the exception of 1960 when the level of production fell by 36 per cent from the 1959 level. The percentage change from year to year can be seen in Table 2.

The tobacco institute gave the following reasons for the 1960 decline:

1. Unfavorable climate
2. Suspension of buying cold climate tobacco
3. Suspension of credit and help to growers
4. Low prices and high costs in some zones.

---

* Romilio Rodrígues (FAO) Apuntes Sobre la Actividad Tabacalera en Colombia. Bogotá, Instituto Nacional de Fomento Tabacalero, 1961, p. 5.

TABLE 1. Tobacco Production.

	Total Prod. in Kilos	Kgs. Exported	% of the Total Production Exported
1955	28,749,769.5	4,472,252	15.6
1956	36,690,750.	5,183,611	14.1
1957	--	5,743,754	--
1958	38,040,713.	4,518,227	11.9
1959	38,659,030.	4,917,075	12.7
1960	24,859,273.	6,360,618	25.6
1961	27,884,494.	8,713,352	31.2
1962	38,213,174.	10,163,019	26.6

Source: National Tobacco Institute publications.

TABLE 2. Per Cent Change From Previous Year.

	1956	1958*	1959	1960	1961	1962
Cultivators	+44.0	+ 0.3	-12.8	-36.3	+ 7.1	+22.7
Hectares	+19.0	+10.0	- 3.5	-36.8	- 3.0	+40.1
Production	+27.62	+ 3.7	+ 1.6	-36.0	+12.2	+37.0
Yield	+ 6.4	- 5.7	+ 5.2	+ 1.8	+15.7	- 2.2
Exportation	+15.9	-21.3**	+ 8.8	+29.4	+37.0	+16.6
Export Prices	+19.0	-12.0**	- 6.8	- 9.7	+24.3	+21.7

*Data based on 1956 since data is not available for 1957.

**Based on 1957 data.

It appears that the production level is affected greatly by the world tobacco price because 1960 was also the lowest price year since 1943. The price level began to drop in 1956 from 57 U.S. cents to the low of 37 U.S. cents per kilo in 1960. These prices reflect actual prices received from Colombian exportation. Climate does not seem to have played as important a role as indicated by the institute since yields per hectare still increased in 1960. (See Tables 2 and 3). The national average was 1,781 kilos per hectare in 1960 as compared to 1,749 in 1959, 1,662 in 1958 and 1,763 in 1956. It is reasonable to assume that if there had been adverse climate conditions this would have been reflected in the yield figures; this clearly is not the case.

It is not clear how much the change in buying habits and the extension of credit affected the production level in 1960. However, one could argue that tightening credit and reducing purchases of poor quality tobacco could be outcomes of the low world price level. The institute does indicate that the production level of 1960 equalled demand while in 1959 there was a surplus of 10,000,000 kilos. Thus it looks as if the local and foreign demand greatly affects the production level and in 1960, much more so than the factors listed by the institute.

TABLE 3. Yield Per Hectare in Kilos.

	1955	1956	1958	1959	1960	1961	1962
Antioquia	806	1,879	1,878	--	--	--	--
Bolívar	3,560	2,249	2,436	3,149	2,710	2,924	2,756
Boyacá	1,328	2,254	1,049	1,206	1,170	1,304	1,375
Caldas	--	2,106	1,619	--	--	--	--
Cauca	757	2,229	1,476	2,329	4,669	3,037	2,880
Córdoba	--	--	2,381	2,904	2,083	1,974	2,327
Huila	1,214	1,518	1,994	1,368	1,066	1,843	1,437
Magdalena	2,817	2,510	2,081	2,175	2,995	2,503	2,378
Nariño	459	2,639	1,903	3,174	1,844	2,932	1,803
N. Santander	893	1,315	1,468	2,051	1,532	1,593	1,447
Santander	1,435	1,324	1,373	1,568	1,527	1,543	1,526
Tolima	1,077	1,347	1,768	1,280	1,116	1,455	1,943
Valle	1,739	2,071	1,976	2,349	2,537	2,984	3,532
	1,657	1,763	1,662	1,749	1,781	2,060	2,015

Another factor which supports this conclusion is the fact that close to 25 per cent of the Colombian production is exported. In 1960, 1961 and 1962 the export percentages were 25.6, 31.2 and 26.6 respectively. (See Table 2). For this reason, world tobacco prices probably will be reflected in the production figures.

Table 2 indicates the relative changes in number of cultivators, hectareage and level of production. Production tends to lag the number of cultivators in both up swings and down swings. On the upswing the production did not rise as fast as the number of cultivators while on the downswing production fell at a slower rate. In 1959 even with a drop in the number of cultivators and hectares, production continued to rise due to increases in yields. This phenomenon tends to lengthen the adjustment periods caused by changes in demand.

Traditionally the Department of Santander has been the main producer of tobacco in Colombia. Until 1960 Santander was the absolute leader in terms of production, hectares and number of cultivators. However, since 1960 there has been a definite shift to the coastal regions. Bolívar is now the leader in production and number of hectares but Santander still has the largest number of cultivators. The high yields, fertile soil and double cropping system in Bolívar have brought this change about. There is little doubt that this trend will continue. The soils in Santander are becoming depleted by serious erosion and lack of irrigation permits only one crop per year. Santander has one of the lowest yields per hectare in the country. (See Table 3)

Land tenure

Latin America is often characterized as being largely latifundios; however, in Colombia there is also the problem of minifundio. Coffee and tobacco producers belong to the minifundio group. Since 1955 the average holding for each cultivator has been less than one-half a hectare. As indicated by Table 4 the average tobacco holding in Colombia in 1962 was 0.496 hectares. The average sized holding has not changed greatly since 1955.

Indicating the tobacco holdings does not necessarily lead to the conclusion that there is minifundio since the tobacco production may be only a part of a much larger operation. The only information available from the

census of 1955 indicates this is not the case, however. The average tobacco farmer had a total hectareage of 1.98 which means tobacco composed 24.2 per cent of the farm area. (See Table 5) These figures are representative of the main tobacco producing departments of Bolívar, Santander, Boyacá and Tolima. Antioquia had an average farm size of 8,032 hectares in 1955 with 12.3 per cent or .9861 hectares of this in tobacco.

A breakdown of the 1962 tobacco holdings show that for the country, 60.39 per cent of the holdings are from 0 to less than 1/2 hectare, 27.99 per cent from 1/2 to less than 1 and 10.25 per cent from 1.0 to less than 2 hectares, making a total of 98.63 per cent being less than 2 hectares. Although there is a large variance between departments, the four major producing areas are represented by the country average. The percentage of 0 to 1/2 hectare plots rose from 1955 to 1958 and then leveled off, while the percentage of plot sizes 1/2 to 1 and one to two hectares, has decreased slightly. The same changes have taken place within the two main departments of Santander and Bolívar.

In addition to the fact that the holdings are very small, a limited percentage of the producers are owners. The rest are renters or sharecroppers. In 1955, twenty-five per cent of the producers owned their land while the rest were sharecroppers. In 1962 the national average had dropped to 21 per cent owners. This drop is due largely from the shift of production from Santander to Bolívar dropping the percentage of owners from 22 in Santander to 13 per cent in Bolívar.

No distinction has been made in the census materials as to the type of rental agreements used, with the exception of 1955. At that time non-owners were classified as sharecroppers, renters, sharecroppers-renters, owners-sharecroppers and free rent. The majority were either sharecroppers or renters, the most being sharecroppers. It has been said but not substantiated, that the majority, 65 per cent, of non-owners are sharecroppers. * The type of sharecrop lease varies from farm to farm but is usually within these three categories:

---

* Romilio Rodrígues, op. cit., p. 58.

TABLE 4. Hectares in Tobacco, Number of Growers and Size of Holdings.

	Hectares in Tobacco	Number of Growers	Hectares Per Grower
1955	17,488	36,243	0.482
1956	20,816	52,191	0.398
1958	22,893	52,359	0.437
1959	22,100	45,668	0.484
1960	13,957	29,091	0.479
1961	13,533	31,167	0.434
1962	18,967	38,236	0.496

TABLE 5. Hectares Tobacco Related to Total Holdings.

	Ave. Farm Size of Tobacco Growers	Ave. Size of Tobacco Lots	Tobacco % of Farm
Antioquia	8.032	.9861	12.3
Bolívar	1.428	.3067	21.5
Boyacá	1.924	.5251	27.3
Cauca	1.742	.3995	22.9
Huila	2.998	.3281	10.9
Magdalena	4.363	.4583	10.5
Nariño	1.351	.4593	34.0
N. Santander	2.711	1.7010	62.7
Santander	1.869	.5304	28.4
Tolima	1.978	.6775	34.2
Valle	3.399	.4095	12.0
	1.983	.4807 *	24.2

* Differs from figure in Table 4 since Table 5 doesn't include data from Caldas.

1. One-fourth of the harvest goes to the owner when he supplies the land and the tobacco drying barn. The sharecropper furnishes the rest and receives three-fourths of the crop.

2. One-third goes to the owner when he furnishes the land, drying barn and fertilizer. The rest is supplied by the sharecropper for which he receives 2/3 of the harvest.

3. One-half of the crop goes to the owner when he furnishes the land, drying barn, fertilizer, oxen and part of the drying frames.

There are a few one-fifth type leases while some owners furnish more than others for the same part of the crop.

An official of the institute indicated that cash rent is not accepted by most owners because they fear they will not be able to collect. They fear that once the crop is sold other people, such as creditors, salesmen, etc. may get their hands on the money before the sharecropper pays his rent. This may be one explanation for the high percentage of sharecropping.

In addition to having small plots and being sharecroppers, the tobacco growers' families have little education and are about 55 per cent illiterate. These figures are from the 1955 census with no breakdowns according to age.

Directed parcelization

The Tobacco Institute is taking a serious interest in the welfare of the producers. An experiment has been tried by the institute in two departments of the country to further these aims.

Three parcelization projects have been established at Bócore in Santander (652 has., 96 parcels) and Piedras Blancas (1,074 has., 99 parcels) and San Pedro (239 has., 31 parcels) in Bolívar. These projects were started by the institute as an experiment to help alleviate the landless and poor conditions of the majority of the tobacco producers. The objectives are threefold:

1. to raise the level of living of tobacco producers
2. to increase tobacco production
3. to help landless farmers obtain their own land.

The Bócore project is the oldest and most advanced of the three. It is not the largest in the area, however, it is the largest in terms of value. Only Bócore will be discussed in this paper since data is not easily available for the other areas.

We should first begin by explaining the system of training used by the institute. One of the institute's experiment stations "El Cucharo" is located near San Gil, Santander, and encompases 303 hectares of which 85 hectares are used for tobacco culture and experimentation. This station is to aid all tobacco growers in the region; however, there now is a training program for 37 families within the farm. Each family is given a house with latrine and running water and about 2 hectares of tobacco lands. The farmer shares a drying barn with a second family. Each family is expected to participate in the training program as outlined by the institute. The term of contract is for one crop period or one year. If both parties are satisfied it is extended for the second year. The institute provides 25 per cent of the expenses and the cultivator 75 per cent. The institute's expenses are in the form of land, drying barns, the house, chemical fertilizer and insecticides and needed tools. The cultivator provides the labor and must attend the Radio School classes as well as classes of the institute. The children must attend elementary school.

The school has two grades and plans are ready for the third grade to begin. The institute hires the teachers and provides the school. There is also a small chapel and the visiting priest is also paid by the institute. There are four "prácticos" or extension agents and one home agent who work with these families.

After the two year training program at "El Cucharo," the families can go out on their own or move to the parcelization zone of Bócore. If they go elsewhere the instute will not provide credit but it will help to get credit from a bank. If the family moves to Bócore they are located on a plot of land and a 15 year loan is arranged for the purchase of the farm. A contract is arranged, usually one of the types listed previously, the type depending upon the financial resources of the family. The beginning

contracts are limited in the sense that the cultivator cannot plant other permanent crops or make improvements. As the cultivator progresses he is given more freedom to grow other crops and to raise livestock, if feasible. He is still required to market his tobacco through the institute. In this way the loan is paid off and hence in effect they are forced to save.

The size and value of the parcel depends on three factors: 1) rockiness, 2) slope and 3) fertility. Each of these classifications has three additional subdivisions. The price is set accordingly. For example, a farm with no rocks, flat and fertile is valued at 1,750 pesos per hectare while a very stony, very steep and infertile plot is valued at 125 pesos per hectare. This has resulted in the largest plot being 15 hectares and the smallest 4 hectares. The value of the farm is then broken down for yearly payments.

The largest loan due is 2,762 pesos while the smallest is 1,491 with the average being 2,161 pesos. The yearly payments have fallen behind the loans due. In 1960 the average loan payment amounted to 1,852 pesos as compared to the average loan due of 2,161 pesos. In looking over the records one finds that only two farmers had met their loan due payments while others were close to meeting them or far from it depending upon their income.

The agrónomo felt there was a much higher correlation between income and management than income and size.

The average gross income from tobacco in 1962 was 5,800 pesos of which one-fourth was paid to the institute as land payments. The average net income was estimated at between 2,500 and 3,000 pesos. One farmer with 200 hens and a modern laying house made more than 6,000 pesos gross from the hens.

Only one crop of tobacco is produced per year as compared to two in the coastal regions. Irrigation is not very feasible since the only water source is 3 to 4 miles away on the other side of the valley. Drinking water is now brought by a four-inch pipe from that source. This means that since irrigation is not feasible farmers will have to diversify, as the one did to chickens, to increase farm income in the future. It should be noted, however, that these farmers are in a much better position than most tobacco producers in Santander. They have an

average of 6 hectares as compared to the department average of less than one-half, they have brick homes with running water, they have a source of credit and technical assistance.

There are presently 2 extension agents and one home agent working in Bócore. The area is now in the process of establishing a market and supply cooperative with the possibility of assistance from a Peace Corps volunteer.

Bócore has been an experiment by the institute to see what can be done. In addition, much has been learned about costs of production, possible success of parcelization and the feasibility of a farmer being able to pay for land from his crops.

This experiment is but a small step in trying to better the plight of the small tobacco farmers but it does indicate that something can be done and with success.