

PN-ABK-940

**HISTORICAL NOTES ON THE AGRARIAN STRUCTURE
OF TWO MUNICIPALITIES IN HONDURAS**

by

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This paper provides some historical information as the agrarian structure of two municipios in Honduras's coffee producing area: Quimistan and San Jose de Colinas of the departamento Santa Barbara. These two municipalities were involved in the Land Titling Project in 1983 and 1984. These notes provide some contextual material for the efforts going into the evaluation of that project.

Quimistan means the "place of spies or the place of rats" in Nahuatl. It is a very old origin going back to Don Pedro de Alvarado. One land title of 22 caballerias* in Quimistan goes back to 1741. The National Archive of Land Titles has three titles from two municipalities under study going back to the 18th Century. Two of them are related to this original title to Quimistan given to the Ortega family. The ejido "Machaloe" of the town of Santa Maria Magdalena in Colinas also apparently goes back to the 18th Century.

Santa Barbara itself was officially created in 1825. Colinas did not receive the title of city until 1926.

It seems that the population in the entire department of Santa Barbara was small at least until the turn of this century.

John Baily in 1850 says of Santa Barbara; "the river Chamelicon traverses a tract of land exceeding 110 miles in length by half as much in breadth, say more than 600 square leagues, chiefly covered by thick forests abounding in fine timber, such as mahogany, cedar, mora...with many other sorts but at present it can be turned to little account, because the whole of this extensive range is almost destitute of inhabitants...." (p.98). This general idea is backed up by an early Census which shows Santa Barbara in 1881 with only 29,474 inhabitants (in 5,735 houses). This is only one sixth of its present population.

⁵
*1 caballeria in 64 manzanas or 44.8 hectares.

The Economy in the area in the 19th Century was apparently focused around cattle, corn grown by slash and burn techniques, sugar cane, small areas of cacao (see Squier), and perhaps some coffee. Ortiz says that the first coffee exports out of Honduras came from Santa Barbara. Nevertheless Squier in 1870 makes no mention of coffee when he talks about Santa Barbara and in a 1914 study does not list Santa Barbara among the principal coffee producing departments of the country. Squier (1870) mentions that there were 7 gold mines, 5 silver mines, and a handful of other assorted mines in Santa Barbara.

The large cattle farms associated with this period were almost all titled in the period 1848-1892. Santa Barbara must have been an important area in the country at this time if only because four different presidents of Honduras came from Santa Barbara: Ponciano Leiva (president from 1873-6, 1885-91), Luis Bogran (1883-1891), Francisco Bogran (1919-1920), and Miguel Paz Baraona (1925-1929). The two Bogrannes and Miguel Paz were among the largest landowners in Quimistan.

Briefly, the families with the largest landholdings in this period were: (with the period in which they acquired them and the amounts titled).

Quimistan:

1. Los Ortigas (1871-1843) 252 caballerias.
2. Rios, Sebastian & Castro, Paulino (1780-1859) 285 caballerias.
3. Recorte, Presbitero Castro (1873) 148 caballerias.
4. Los Rodriguez (1858-1892) 119 caballerias.
5. Paz, Miguel & Desiderio de (1873-1892) 63 caballerias and 2,741 manzanas.
6. Los Bogran (Luis, Saturino, Francisco (1873-1892) 63 caballerias.
San Jose de Colinas:
 1. Bogran, Luis (1883) 118 caballerias.
 2. Rodriguez, Gregorio (1886) 57 caballerias.
 3. Los Pineda (Lorenzo, Albino, Casimiro, Aurelia, Jose Maria) (1844-1898) 34 caballerias & 3,246 manzanas.
 4. Los Rivera (Benigno, Mariano, Liberato, Lucio, Francisco, Timoteo, Venancio) (1840/1, 1886-1898), 11 caballerias & 2,181 manzanas.
 5. Paz, Fedro (1889-1898) 48 caballerias & 832 manzanas.
 6. Castellanos (Marcelo & Sabino) 37 caballerias.
 7. Los Toros (Isabel, Andres & Irene) (1898) 1,311.
 8. Orellano, Lic. Juan R. (1893) 999 manzanas.
 9. Nuila, Pablo (1889) 44 caballerias.

In addition the "pueblos" that had ejidos titled in this period (1740-1901) include: Colinas: San Jose de Colinas, San Vicente, El Naranjo, El Corozal, Atima, Pajon, Celilac, Macholoa, Proteccion. Quimistan: Quimistan, Petroa, San Marcos, Macuelizo. With the one exception noted above all of these towns received their ejido titles between 1858 and 1898.

Many of these families continue to the important in the region. For example, a list of merchants in Colinas in 1936 includes one Castellanos (Casimiro) and one Rivera (Mariano), along with Juan Su, Medardo Florentino, Marco Tulio Castellon, y Ramo. Vindell.

What appears to be a greater land concentration in Quimistan compared to San Jose de Colinas has its origins in the nineteenth century. Large, extensive cattle estates became predominant in Quimistan compared to largely middle sized coffee farms in San Jose de Colinas. By 1900 six families in Quimistan had titled 947 caballerias and 2,751 mzs. While in San Jose de Colinas, 9 families had accumulated 349 caballerias and 6,570 manzanas.

The population series for San Jose de Colinas is the following:

YEAR	POPULATION	NO. OF HOUSES	RURAL	URBAN*
1887	3,917	?		
1905	3,793	?		
1910	4,876	714		
1916	4,847	823		
1926	5,541	-		
1930	6,210	1,116	4,635	1,575
1935	7,387	1,324	5,856	1,531
1940	8,469	-		
1945	9,068	1,562	6,947	2,121
1950	7,395	-	5,701	1,694
1961	11,044	1,812	8,022	3,022
1974	11,280	2,197	8,542	2,738

*"urban" means the "cabecera municipal."

One would have to compare these figures with the growth rates for Honduras as a whole in different periods, and obviously we should look at Quimistan as well, but what immediately is obvious is the low level of growth in population which took place between at least 1945 and 1974. This means there was probably significant out migration, which played undoubtedly a large role in the land market in the period.

COFFEE

Coffee is grown in the Department above 3,000 ft. It grows principally on hillsides with very steep slopes, often greater than 60%. The precipitation pattern is such that it continues to rain in the area in the months of December, January, and February when the coffee is harvested. This causes a number of problems and contributes to a serious disease "la helada" in the coffee production in the area. (At least the disease was serious in the mid 1950s).

The first coffee "beneficio" in the Department was owned by a Dr. Pineda and was built between 1933 & 1938. (Ortiz, 1953). Pineda in the 1950's bought up to 10% of all the coffee produced in the Department (8,000 qq.). He himself produced around 1,000 qq. He lent money to large growers who in turn lent money to small producers and bought coffee from them, advancing them loans from before the harvest. One particular problem which existed in the past is that small coffee producers did not produce enough corn to be self sufficient. Hence they bought corn from the large coffee producers/merchants at high prices in return from future sales of coffee. Based on the areas of corn planted per family among the smaller growers this could conceivably still be a serious problem today.

In 1952 there were only 4,749 Has. of coffee which were over 20 years old. While it is possible that some older coffee plantations had been replanted or pulled out, it is probable that there was not much more than this amount of coffee in the department in the early 1930's. The Department was traditionally plagued by "labor shortages" for the coffee harvests in the 1950's. It was said that most of the pickers in the Department were actually migrant workers who came from Gracias and Intibuca.

Area & Number of Coffee Producers in Santa Barbara

1952	15,920	Hectares	5,101	Producers
1965	26,200	"	5,956	"
1974	26,536	"	6,615	"

Looking at a comparison of coffee in production and not yet producing we get:

Year	Production (HAs)	Not in Production (HAs)
1952	11,299	4,621
1965	19,984	6,216
1974	23,363	3,173

Based on this we see that coffee area increased by some five times between the mid 1930's and 1965, but from the 1965 to 1974 remained somewhat stagnant with new plantings probably just replacing the old coffee area. New coffee not yet in production fell from almost 1/3 of total area in 1952 to less than 1/5 in 1974.

In 1952 about 2.3 of the coffee in Santa Barbara was grown on ejidal lands, about 20% on private lands, and the remainder on other lands.

Colinas

There is a reference to coffee being important in Colinas as early as 1936 (Meza Caliz, 1936).

There was 498 producers (53% of the total) of coffee in 1965. This rose to 587 (59%) in 1974. The percentage of producers who produce coffee rises as the farm size increases from 47% of farms under 5 hectares to 81% of farms over 100 Hectares. Still what is clear is that coffee is largely in the hands of small and medium size producers and even the large landowners do not have large areas of coffee. The average producer with less than 5 Has. produce 1.3 HAs, of coffee, those with 5-20 & 20-100 each average 4.2 Has., and even those with over 100 HAs. only average 11 Has of coffee (1974).

The area in production in 1974 had the following break down:

Size of Farms	Hectares of Coffee	%
5 Hectares	369	17
5-19 "	917	42
20-99 "	692	31
100 "	314	10

Clearly there is little land concentration in coffee production, although the very smallest producers are largely underrepresented in production.

General Coffee Statistics

Year	Hectares	Has. in Production	Has. Not in Production	QQ
1965	2,176	1,967	209	20,475
1974	2,292	2,174	118	25,036

In 1974 14% of the area in farms in Colinas was in "permanent crops."

Quimistan

Coffee seems to be much less important in Quimistan than in Colinas. While the total area in coffee is greater in Quimistan, fewer producers (and a smaller percentage of producers) produce it; production is lower, and it occupies a significantly smaller percentage of the area in farms.

There were 399 producers (31% of the total) of coffee in 1965. This rose to 540 (48%) in 1974. Coffee production in 1974 was concentrated among those farmers with 5-100 Hectares. 27% of farmers with less than 5 Has. planted coffee and 61% of those with more than 100, compared with 78% for those with 5-20 and 71% for those with 20-99. The average amounts of coffee planted per farm were somewhat similar to those in Colinas ranging from 1.8 for farmers with less than 5 Has., to 14 Has. for those with more than 100 Has. We can see from the table below that coffee production in Quimistan is somewhat more concentrated among what we might call medium sized producers (20-100 Has.) than small producers, in comparison to Colinas.

The area of coffee according to farm size in 1974 was the following:

Farm Size (Has.)	Hectares	%
5	257	10
5-20	767	29
20-99	1,231	49
100	351	12
Total	2,611	100

General Coffee Statistics

Year	Has.	Has. in production	Has. not in production	QQ
1965	2,575	1,476	1,099	11,735
1974	2,611	2,036	575	17,160

Judging from these statistics (particularly the percentage of area not yet in production) it would seem that Quimistan had its growth in coffee significantly later than Colinas. Nevertheless in 1974 only 8% of the area in Quimistan in farms was in permanent crops (compared to 14% in Colinas.)

CATTLE

Santa Barbara

Although cattle has always been the chief source of income in the department, it would seem that it particularly grew in importance after the late 1950's when Honduras became involved in meat exports to the U.S. The opening of slaughterhouses in San Pedro Sula for export were key in this

5

process. Previously to the 1960's Santa Barbara was not considered one of the major cattle raising departments of the country, but after this time it was. Cattle production was also considered relatively modernized, compared to other areas based on such factors as percent of pure breed stock, "modern" administration, etc.

The precipitation pattern in the Department is particularly propitious for cattle. There is no completely dry season. Even in March it rains an average of 2.5"-5", with the higher rainfall being farther north. (Quimistan is significantly more humid than San Jose de Colinas.)

Colinas

In 1965 there were 3,975 head of cattle in Colinas. In 1974 this rose to 8,488. (In fact the real level of growth may be somewhat less, due to the fact that calves under one year are not included in the first figure and are in the 2nd.)

Relatively few of these animals were considered to be for meat production. In 1974 there were only 122 steers above two years old and 714 bulls for meat production. In comparison there were 2,763 cows over 3 1/2 years and 1,894 from 2-3 1/2. Also of particular note is that there were only 95 oxen in 1965 and 83 in 1974, a good indication that almost no plow agriculture exists in the municipality, limiting production to slash and burn for annual crops and tree crops.

35% of all farms reported having some cattle in 74. This ranged from 18% of those with less than 5 Has., to 96% of those with over 100. While the distribution of cattle among farms is somewhat unequal it is nowhere near as unequal as in Quimistan. Farms with less than 5 Has. had 521 head (6%) the 5-19 category had 1,032 head (12%), the 20-99 category had in Colinas 2,248 head (26%), and the over 100 category had 4,687 head (55%). There were at least five farms in the municipality with over 500 head of cattle. The larger farms definitely concentrated the beef cattle. Those over 100 Has. had 112 out of 122 of the steer over two years, 711 of 714 of the bulls for meat production, and 558 of 774 of the younger bulls "Torettes".

Colinas reported some 8,230 Has of pasture in 1965 and 9,532 Has. in 1974.

Quimistan

In Quimistan there were 17,065 head of cattle in 1965 and 20,528 in 1974. There were more clearly meat related cattle in Quimistan: 2,182 steers, 184 bulls for meat and 1,315 young bulls. Similarly to Colinas the number of oxen are minimal compared to the number of farms (167 in 1965 and 65 in 1974).

The percentage of farms with cattle 27% (303 farms) is slightly lower in Quimistan than in Colinas. The important thing however, is the much greater concentration of cattle ownership in Quimistan. Farms with less than 5 Has. had only 359 head (2%), the 5-19 Has. category had 3%, the 20-99 category had 18%, and farms larger than 100 Has. had 15,933 head (78%). The 51 farms in Quimistan with over 100 Has. which have cattle have an average of 320 head per farm.

Cattle production in Quimistan seems a little more extensive than in Colinas. With 22,836 Has. in pasture this meant an average of only .9 head/HA. A 1963 OAS document mentions that "lots of fertile lands in Quimistan are used for extensive livestock production."

OTHER CROPS

Corn:

Colinas:

Primera: In 1965 there were 879 Has., and in 1974 847 Has. This constituted 85% of the area in annual crops. 735 of 948 farms (77%) grew corn in primera in 1965, 60% in 1974.

Postrera: (65) 312 Has., (74) 162 Has. 385 of 948 farms grew corn in postrera in 65, 163 of 993 in 1974.

Quimistan:

Primera (65) 1,929 Has. (74) 1,137. This constituted 74% of 1974 annual crop area. 72% of farms grew corn in primera in 65, slightly less in 1974.

Postrera: (65) 693 Has., (74) 235 HAS, 50% planted in postrera in 1965, only 18% in 1974.

The predominance of corn as the staple crop in the area is notable. No sorghum production was noted and bean production as seen below was low. Corn & beans according to the OAs in 1965 were grown principally for consumption, and reference is made to "migratory" production (probably slash & burn). Almost all of the corn planted was grown by itself, not associated with anything else.

Worth nothing is the fact that while most farms planted corn, not all did. This may mean that some farmers have taken the question of comparative advantage to such an extreme that they have grown coffee instead of corn rather than in addition to. There is a brief quote in Ortiz (53) which backs this up. If this is true it would have a number of interesting implications.

Beans:

Colinas: Primera: (65) 52 Has., (74) 55 Has. Only 132 producers produced beans (in primera) in 1965, only 97 in 1974. For postera the figures were: (65) 62 Has., (74) 43 with 144 and 82 producers respectively.

Quimistan:

Primera: (65) 266 Has., (74) 294 Has. 410 & 264 producers respectively. Postrera (65) 77 Has., (74) 56 Has., 98 & 82 producers.

7

Sugar Cane:

Colinas: Sugar cane for local consumption with non-industrial processing seems to have been important in Colinas at least since the mid-nineteenth century. In 1974 118 farms reported growing 124 Has. of cane. 35 "trapiches" were reported in the 1965 census, 47 in 1974.

Production in Quimistan seems to be much less important. Only 12 trapiches in 65, 2 in 74. Only 2 farms reported production in 74 (11 Has.).

Tobacco:

Tobacco is produced only in Quimistan. 7 farms planted 40 Has. in 1965, 3 farms planted 57 Has. in 1974. Because of tobacco's very intensive production this obviously has a larger impact than the area might imply. There are many historical references of tobacco in the area, but it seems that at least until recently tobacco was actually concentrated in nearby municipalities such as Progreso and Macuelizo.

Vegetables:

Vegetable producers seem to be principally in Quimistan. Like tobacco it is probably grown with irrigation, tractors, pumps, etc. (Minimal amounts of vegetables were noted in Colinas.) A total of 66 Has. of vegetables were reported in 1965 and 36 Has. in 1974. Tomato, cabbage, cantelope, watermelon, and yuca were grown. 61 producers produced watermelon in 1965 and probably some 100 farmers produced vegetables in one form or another.

Bananas:

Usually associated with the coffee production. In Census data banana & plaintain areas fell from 181 Has. in Colinas and 140 in Quimistan in 1965 to 39 & 53 in 1974.

Municipality	1965		1974	
	Hectares	Producers	Hectares	Producers
Quimistan	17	58	32	21
Colinas	21	74	64	26

From these figures it is clear that rice is generally grown in very small areas, probably for personal consumption.

4

LAND TENURE

Type of Tenure:

Santa Barbara 1952

Land Tenure Type	% of Area	% of Farms
Private Property	54.6	18.1
Ejidal Property	33.3	28.4
Rented	5.2	7.1
Sharecropped	2.2	12.9
"Colono"	.7	3.2
"Used" (Occupied w/out title)	4.0	10.4
Mixed	-	20.0
Total	100.0	101.1

Source: 1952 Census quoted in Adams*

Note: National land was not listed as a category in the 1952 census as it was in later census.

Sharecropping in general was very high in Santa Barbara in 1952. The 2.2% of the area figure is in comparison with .7% nationwide. Sharecropping was said to be declining, however, by the late 1950's (Adams).

The total percentage of farmers working lands they do not own (renters, sharecroppers, and "colonos" was 23.2%. This apparently rose between 1952 and 1965 when the percent of farmers renting lands rose to 31.3%. (Other comparisons between the two Censuses are useless because in 1965 the category ejidos was not included, national lands were.) Adams reports that land in Quimistan rented for 6 or 7 lempiras or 2 fanegas (800 ears of corn/fanega) per manzana in 1957. This was about average compared to rental prices quoted for other parts of the country. (It would be interesting to see how that compares with rental prices today in corn equivalents.)

While there was no category for "communal lands" in the 1952 Census, Adams reports "...Communally held lands were more common in the Northern Interior of the country. Such holdings were reported for Quimistan..." "Communal usually refers to private property held by a number of co-owners..."

Quimistan

Land Tenure Type	% Area (65)	% Farms (65)	% Area (74)	% Farms (74)
Private Property	67.8	12.5	48.7	13.0
Ejidal Property	10.3	15.3	*	*
National Property	15.0	17.5	23.2	48.0
Rented	4.1	33.9	6.5	25.2
Used	2.9	5.2	*	*
Mixed	-	15.6	21.6	13.8
Total	100.0	100.0	100.0	100.0

Richard Adams, Cultural Survey of Guatemala, El Salvador, Nicaragua, Honduras, and Panama, 1957.

Colinas

Land Tenure Type	% Area (65)	% Farms (65)	% Area (74)	% Farms (74)
Private Property	74.8	31.1	34.4	34.9
Ejidal Property	18.8	15.8	*	*
National Property	.4	.2	25.0	32.7
Rented	5.4	23.7	1.7	12.1
Used	.6	.8	*	*
Mixed	-	28.4	38.1	20.3
Total	100.0	100.0	100.0	100.0

*Categories do not appear in 1974 Census.

**Judging from source data most of this probably private land.

There are not many conclusions we can draw from this data except that renting is much more common in Quimistan than it is in Colinas. One hypothesis is that this is because of the existence of a significant number of minicoffee producers in Colinas who because of the nature of the crop require secure tenure, while this exist to only a minimal extent in Quimistan.

For 1965 we have no figures crossing farms size with type of tenure. For 1974 94.3% of rented farms were smaller than 5 HAs (7 mzs) - not including mixed tenure forms where larger farms may be engaged to supplementary rental. 63.3% of farms in Quimistan under 5 Has. and 23.6% of such farms in Colinas were rented.

Farm Size:

1965 Farm Size (mzs.)	Quimistan		Colinas	
	% of Farms	% of Area	% of Farms	% of Area
< 5	42.7	2.3	47.1	3.7
5-19	27.4	6.8	31.6	13.3
20-99	23.3	22.0	17.3	28.2
100-499	4.9	24.5	3.5	27.9
>500	1.4	44.2	.5	26.8
Total	99.7	99.8	100.0	99.9
1974 Farms Size (Has.)	% of Farms	% of Area	% of Farms	% of Area
< 5	46.0	2.5	58.1	6.2
5-19	30.5	9.8	27.7	16.2
20-99	19.7	22.6	11.3	27.9
100-499	3.5	18.5	2.2	24.3
>500	1.1	46.5	.5	25.8
Total	99.9	99.9	99.8	99.4

Source: Agricultural Census 1965 & 1974.

Note that you can not directly compare the 1965 Census with the 1974 Census because the first is in manzanas and the second in hectares (1.4mzs). With that said what do we find:

The clearest result is the greater degree of land concentration in Quimistan than in Colinas. Farms over 500 mzs. controlled 44.2% of all land

in Quimistan in 1965 compared to 26.8% in Colinas. This concentration seems to have increase mildly from 1965 to 1974, considering that a substantial percentage of the land in farms between 100-499 hectares must belong to farms over 500 mzs.

Another way to look at this greater land concentration in Quimistan is to note that in 1965 there were 46 producers in Quimistan with more than 200 mzs., the average being 668 mzs. This is in comparison with 15 farms of over 200 mzs in Colinas, with a smaller average size (633 mzs.). For 1974 the respective comparisons are 23 producers with more than 280 mzs. in Quimistan (average 1,260 mzs) compared to 12 in Colinas which on average were smaller (744 mzs.) This difference can not be explained by the difference in size between the two municipalities since Quimistan had only 14% more farmers than Colinas. Part of the difference probably does lie, however, in land use and land potential, since as noted before livestock is more important in Quimistan and coffee more important in Colinas.

Interestingly micro-farms of four manzanas or less stayed practically stable in both relative and absolute size between 1965 and 1974. In Quimistan they went from 42.7% of the farms to 37.5% and in Colinas from 47.1% to 48.6%, there being around 400-500 of such farms in each municipality. Two possible explanations for the stability are factors limiting the subdivision of farms and/or the emigration or complete proletarianization of the new population. It would also be interesting to know if this has remained stable over the last 10 years.

Land Use:

	Quimistan (%)		Colinas (%)	
	1965	1974	1965	1974
Annual Crops	6.7	4.1	6.5	5.8
Permanent Crops	7.1	8.0	15.0	14.9
Pasture	58.5	60.0	51.7	56.3
Others	27.7*	27.9	26.8**	23.0
Total	100.0	100.0	100.0	100.0

*Mostly "mountains & forests".

**Mostly "fallow".

One obviously sees here the greater importance of coffee in Colinas and slightly greater importance of livestock in Quimistan. In addition it seems likely that the land listed as "others" in Colinas is of somewhat higher quality than that in Quimistan. Ecological aspects may condition greater land concentration in Quimistan where there may large areas of poor quality land.

Looking at the correlation between land size and land use we find:

Micro-farms devote themselves principally to annual crops (basic grains) as expected. 68.4% of the land in farms 3 mzs. or under is in annual crops. More surprising, however, is the percentage of land dedicated to permanent crops (coffee) on micro farms in Colinas (35%). This phenomenon is minimal in Quimistan (14.5% of the land in farms this size is dedicated to permanent crops).

Land Area in Farms:

The percentage of physical land area which is in farms is a measure both of the completeness of the Census and the degree to which the areas covered might be agricultural frontier or to the contrary are areas where all lands have been claimed.

In 1952 45.3% of the land area in Santa Barbara was in farms. This was the third highest in the nation and compares with a nationwide average of 22.4%. In other words, this area has been largely claimed since at least that time, with few new lands to be opened up.

In 1965 49.3% of the land in Quimistan was found to be in farms in the Census and 65.8% in Colinas. This did not change much between 1965 and 1974 when the comparative figures were 51.4% and 68.6% respectively. The smaller percentage of land being accounted for in Quimistan is compatible both with the idea that the municipality may have large areas of poor quality land, as well as the higher degree of land concentration in Quimistan.

CAPITAL

The following capital goods were found in the 1965 & 1974 census.

Type of good	Quimistan		Colinas	
	1965	1974	1965	1974
Plows	94	35	14	5
Gas Motors	41	36	0	25
Sugar mills "trapiches"	12	2	35	47
Coffee depulpers	199	355	303	352
Vehicles	40	74	1	50
Tractors	19	26	0	1
Grass shredders	11	24	0	7
"degrainers"	12	-	18	-
Irrigation pumps	23	36	16	3
Bee hives	-	60	-	0
Fumigation pumps	-	20	-	2

We have already mentioned some points concerning capital accumulation in the context of discussing sugar cane production, the minimal nature of plow agriculture, and coffee. (Although we might add on coffee that the great increase in depulpers is additional evidence for a later development of coffee in Quimistan that is quite recent.)

When we look at the normal symbols of mechanization (tractors, vehicles, irrigation, motors, fumigation pumps), we see that Quimistan has a significant group of farms (between 30 and 80) that have "modernized" in this sense while Colinas has few indeed. Since we do not know the farmsize involved, we do not know if these capitalized farms in Quimistan are the largest or whether there is a significant group of perhaps the vegetable growers, tobacco planters or the equivalent of capitalized small and medium sized farms.

Additional evidence on the importance of slash and burn agriculture at least in the late 50's can be found in Adams: "in the northern departments the wooden plow is very little used." (including quimistan). A digging stick (which in Quimistan is called a huisute) is used. In 1952 there were only 21 plows/1,000 farms in Santa Barbara compared to the national average of 225. Machetes used in Quimistan are straight. (They are called gaurisimas). The curved machetes are not used. Hoes are common.

FARM MANAGEMENT

In Colinas in 1974 there were 33 farms managed by administrators, rather than their owners. These farms only covered 5.2% of the land area. In Quimistan, in contrast, there were 53 such farms covering 39.3% of the land. Three "sociedades comerciales", farmers who had incorporated in Quimistan, covered 2,201 Has. (5.8% of the land). In colinas 5 cooperatives, 5 "sociedades comerciales", and 6 other groups were reported but between all of them they covered less than 300 Has.