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A History of Coffee Planting in the Mt. Hagen Area.

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The first Agricultural Station in the Western Highlands was established at Korn Farm, near Mt. Hagen before the war. The staff available to develop it and to service the Western Highlands (which included the Enga Province until 1971) was small (just two or three officers) until the 1960's. It has expanded rapidly since then. (See Table 1).

TABLE 1

BUILD-UP OF AGRICULTURAL EXTENSION STAFF

WESTERN HIGHLANDS

Year	Graduate/ Diplomate Staff	Certificate	Locally Trained Field-Workers
BY 1960	3	-	3
1965	14	1	16
1970	16	3	29
1975	21	17	29

In 1944 a block of 144 coffee trees was planted at Korn Farm. There are stories of some trees having been planted before that date by missionaries, and some by indigenes who received seed from the missionaries. These stories may well be true. The administration's attitude towards smallholder coffee was indecisive right through the 1950's and the missions and planters who gave seeds or seedlings to local people were more responsible for plantings than were Administration officers.

The Wahgi Valley was an attractive area for European settlement. The indigenous people tended to live on the foothills and slopes of the great mountain ranges either side of the valley, and large flat areas of the valley floor were aquired by the Administration for allocation to European planters. In the Mt. Hagen Sub District seventeen relatively large (around 200 ha. each) areas were allocated for development of coffee plantations, and thirty more within the District.

Most of this land purchasing took place in the early and mid 1950's. (There was a further wave of land alienation in the 1960's for tea planting). The plantations were visited regularly by the agricultural staff, and were supplied with seed for establishing both coffee and shade tree nurseries. In 1953 further plantings of coffee were made at Korn Farm and an experimental block to investigate the suitability of different varieties of coffee, shade trees, coffee spacing, pruning and fertilising was established over the next two years.

At about this time the Department of Agriculture became involved on the Gazelle Peninsula with its first major smallholder planting program - The Tolai Cocoa Project. Perhaps because of the confined area involved and the roads and services already established, it was possible to provide close supervision and assistance to the Tolai plantings. Moreover by an Ordinance the Administration declared what would be a minimum permissible block, and authorised field staff to ensure that prescribed standards of planting and husbandry were maintained.

But no such close supervision of smallholder plantings was feasible in the Highlands coffee areas. The District Agricultural Officer (in a letter dated the 14th August, 1957, D.A.S.F., Mt.Hagen) worried about the lack of control, suggested an Ordinance for regulating coffee planting. Each annual report from Mt. Hagen from 1955 to 1960 mentioned the increasing amount of smallholder plantings and the fact that much of it was of poor standard. In 1955 Project Manager N. Blood stated,

> Native plantings have been made in a very haphazard manner with little thought to shade and other very necessary factors .

In that year he started a "Coffee Register" and he established gardens in each of the Census Divisions of Mt. Hagen Sub-District. He noted that the people were prepared to remove poorly established gardens and to replant them to approved standards with assistance from the Department's staff. Farmer trainees were taught all phases of coffee culture and in subsequent years are mentioned accompanying patrols and assisting villagers.

The first smallholder production is noted in the D.A.S.F. Annual Report from the District in 1955-56: "small quantities of coffee were sold by a few local producers". In 1958-59, 15 tons of village produced coffee came from the District. But still the Department of Agriculture seemed to have been more concerned about the poor standards of planting than about any concerted effort to push forward with establishing a smallholder industry. In 1958 the Acting District Agricultural Officer informed the District Commissioner,

> The general view of this Department is not to force nor with any ordinance restrict the planting of coffee by natives..... Unfortunately the influence of missions and European planters have (sic) successfully turned an organised development into a trouble breeding mess.

The 1958 Annual Report for D.A.S.F. from the Western Highlands mentions that,

> Field work with native gardens was limited during the year..... shading, pruning and curing of coffee is, in nearly all cases, hopeless

More staff, it was stated, were needed to remedy the situation. In 1959 the Report stated that in regard to coffee the policy of the Department was passive: "No great urging of coffee has been made, yet all possible help is given to those wanting to grow coffee".

This attitude was to change suddenly and dramatically in 1960. A new District Commissioner was appointed, the dynamic, autocratic Tom Ellis. He called a meeting of Field Officers on 6th October and in opening it said,

> I have called this conference in a hurry, gentlemen, to take up the matter of native coffee development in this area as a whole..... After looking around the district shortly after I arrived here, it seemed that the

> attitude towards any coffee development was neutral or passive..... I stressed (to Administration Headquarters, Port Moresby) that coffee was being planted by natives of this District whether the Administration wished it or not..... The policy towards coffee planting by natives in this area is going to change and we will be actively encouraging native coffee planting and development (D.A.S.F, Mt.Hagen, 23-2.A).

As a result of Ellis' decision, large coffee nurseries were established by village people, under the supervision of field officers at selected centres throughout the accessible parts of the District. (From the first) there was considerable difficulty in providing supervision and ensuring maintenance of the nurseries, and it is impossible to estimate what proportion of the seedlings planted in these central nurseries were eventually established in village gardens. In the Mt. Hagen Sub-District 26 nurseries totalling 3.5 acres (1.42 Ha) were planted.

Irrespective of the success of the centralised nurseries, it is clear that coffee planting went ahead with new drive throughout 1961 and 1962. The D.A.S.F. District Annual Report for 1961 mentions the increased interest and describes field planting work:

> Teams comprising a trained Field Worker and Farmer Trainees or Trainee Field Workers have constantly patrolled throughout the year in all Sub-Districts except Lagaip, and mainly in the Mount Hagen Sub-District. Each and every one of these patrols has had as priority aims: 1. correct coffee practices...

The report went on

> With greater production coming in during the year and an expected doubling in the coming year, the problem of processing

> has become paramount. Generally native coffee quality can be described as poor to bad.....

To estimate the amount of coffee actually established by smallholders in the various areas of the Highlands has been a problem for planners and statisticians from the first. In 1962 Papua New Guinea entered into the International Coffee Agreement, and, in order to estimate plantings, an enormous effort was made to conduct a complete census. The figure for the Western Highlands District village grown trees was put at 1.1 million.

From the signing of the Coffee Agreement, the Administration adhered to its provisions of not encouraging further plantings and of prohibiting the planting of coffee on new agricultural leases. But still planting continued. The 1964 Report for Mt. Hagen Sub-District states

> Work continued on teaching improved cultural methods. Although no encouragement was given to plant coffee, ever increasing amounts are being planted

The following year the Report for the area said,

> In accordance with Departmental policy assistance has been given in coffee maintenance; however no assistance has been given to prospective planters. Regardless of this, however, considerable areas are still being planted by native growers

At this time, increasing emphasis was being given to establishing cattle projects, to the unattractive but high altitude pyrethrum crop, and to the new tea industry. The 1966 and 1967 annual reports for the Mt. Hagen Sub-District do not mention coffee at all!

In the 1968 report it was noted that

> in accordance with Departmental policy extra plantings (of coffee) are not encouraged. Extra plantings are, however, continuing, although some of these new gardens are probably replacing old established gardens that have deteriorated over the years.....

The notion that an equilibrium may have been reached with new gardens merely replacing those which had become so unproductive that they had been abandoned was common at this time. But the rapid growth in indigenous production and subsequent reappraisal of the extent of smallholder plantings proved this to have been wrong. Given the changed world supply and demand patterns which have allowed Papua New Guinea a greater share of the market, this has proved a national benefit. But during the 1960's it was a cause of anxiety.

The expatriate planters in particular were concerned to prevent increased native production over-supplying the Territory's set quota. In a letter to the District Commissioner (dated 30th June, 1965) the Wahgi valley Farmers and Settlers' Association stated:

> It is appreciated that in the spirit of the International Coffee Agreement the Administration is not encouraging further plantings of coffee by indigenes, is not providing seed and is not alienating further land for coffee plantings. The matter is still one of considerable concern to the Association in the long term interests of the coffee industry as a whole and we are wondering if the Administration may not be able to consider more active discouragement of plantings still going on amongst,

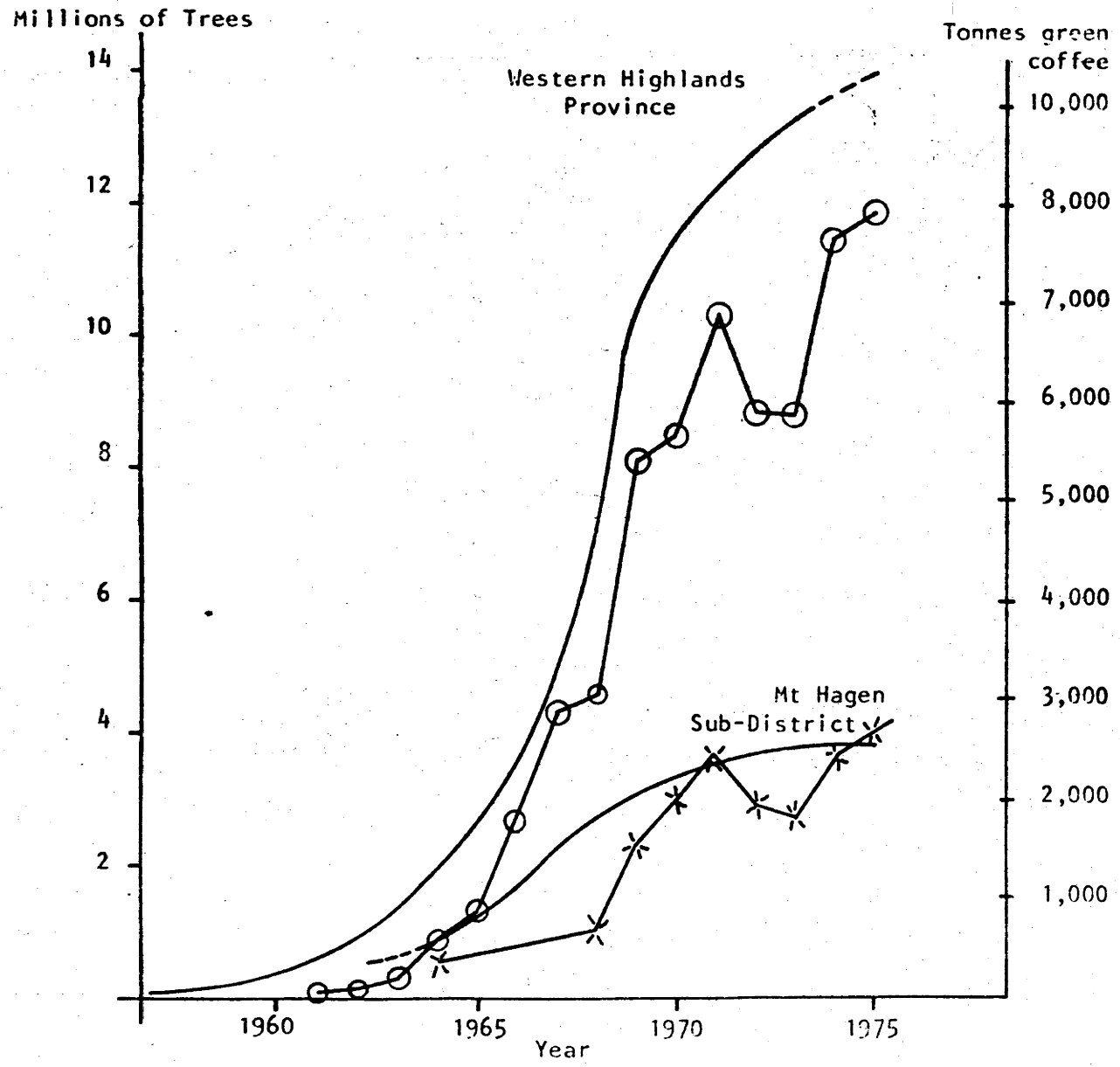
particularly, the smallholders.....

Despite the lack of extension services and in the absence of any encouragement from the Administration field staff, the number of smallholders coffee trees continued to rise, and following it the quantity of coffee produced expanded. (See Figure 1.)

The increase in plantings has followed a sigmoidal curve, in the same manner as Shand and Straatmans, (1974:183) have described in the establishing of smallholder cash crops in other parts of Papua New Guinea. Moreover, although there appears to have been a trend over the past ten years towards smaller gardens (almost certainly reflecting the lessening of land availability), the limited scale of smallholder plantings was from the outset, notable. Perhaps the most important clue to understanding the ignorance of the coffee growers of pruning, fertilising and other techniques for maintaining trees in bearing condition, lies in the virtual withdrawal of extension services from the smallholder coffee industry after 1963. On a province-wide basis, only 12% of it was planted by that date. But almost all of these early plantings were less than three years old, and the stage where pruning and shade control would be required had not been reached, and these techniques had not been demonstrated widely when the extension support was curtailed. This had, however, little effect on the spread of plantings. In the ten years from 1963, when extension assistance for planting coffee was cut off, the amount of coffee planted expanded from less than two million trees to more than thirteen million. Quite certainly most of this expansion was made by new growers planting their first coffee gardens. Shand and Straatmans (1974), noted from their surveys of smallholders establishing cash crops that characteristically the period of rapid expansion involved the entry of many new growers, rather than established growers expanding their holdings. The almost universal involvement of village men in the coffee areas in coffee growing and the relatively small size of individual holdings supports this.

In an attempt to learn more of the coffee extension work actually done in the Mt. Hagen area from 1960–75, a questionnaire was sent in February 1976 to ten senior Rural Development Officers who had been in charge of the District or who had worked in the area over that period. The

FIGURE 1.


Millions of Trees
Tonnes green coffee
14
12
10
8
6
4
2
10,000
8,000
7,000
6,000
5,000
4,000
3,000
2,000
1,000
Western Highlands Province
Mt Hagen Sub-District
1960
1965
1970
1975
Year
Expansion of village coffee plantings.
Village Coffee production.

questionnaire invited comments from the staff on the coffee extension and coffee development problems. It also sought to discover whether attempts had been made to teach particular aspects of knowledge which would have helped the villagers in managing their coffee.

The respondents covered the whole period for which information was sought, with considerable overlaps in time. Eight of the senior Rural Development Officers completed and returned the Questionnaire. One more made contact and discussed the problems of the period.

TABLE 2

COFFEE EXTENSION - W.H.P. 1960-75

Years	Estimated staff time spent on coffee	Emphasis given to: Lining Gardens	Estab. Shade	Shade Control	Pruning	Weeding Mulching	Fertilising	Pulping Washing Storing	Marketing
60-62	50%	4	4	1	4*	2	0	4	0
62-64	40%	2	2	1	2	2	0	2	0
64-66	5%	1	1	1	1	1	0	1	0
66-68	5%	1	1	0	2	1	0	1	0
68-70	20%	1	2	2	3	2	1	3	1
70-72	40%	1	2	3	3	3	2	2	1
72-75	40%	1	2	3	4	4	2	3	1

Emphasis Code:

0 - nil
1 - little
2 - some
3 - moderate
4 - major

* There is a lack of distinction here between initial frame formation and rehabilitation pruning. The emphasis since 1970 has been on rehabilitation.

No response was received from one. The replies were quite consistent, and are summarised in Table 2. It is apparent that there was indeed a period of neglect of coffee extension work after the signing of the Coffee Agreement, and that the enormous plantings made during that period were achieved without assistance from extension workers. Up until 1962, the emphasis was on establishment of gardens, while more recently efforts have been directed at garden rehabilitation through weeding, mulching, pruning, shade control and even some fertilising. No attempt was made to supply the information required for growers to make rational decisions on selling parchment or cherry. The growers' judgment appears to have been based on whether he could conveniently process the cherry himself or whether he wished to avoid the extra labour.

Extension techniques appear to have been limited to cont acts in the gardens and in the villages between the growers and the Department's field staff. The field staff involved were almost entirely junior (mostly Rural Development Assistants). They gave verbal instructions and demonstrated techniques. But little or no use was made of other teaching aids over this period, nor was any support from other government agencies sought or given.

Most of the agricultural staff replying to the questionnaire added points on the difficulty in achieving improvement in coffee husbandry and management. A typical comment was

> At first glance it appears that improvement in coffee husbandry may be a substantial answer to increasing cash incomes in rural areas of the Mt. Hagen Sub-District. In fact this has proved most difficult to achieve.. .... The extension methods used in most cases were traditional ones, and perhaps if more accent were placed on the methods used, more impact would have been made..... The people are relatively happy with their coffee. Thus motivation to improve cultural methods is negligible.

It does appear, then, that the current difficulties in improving cultural methods in smallholder coffee gardens lies not only in satisfaction with the returns from present high prices, but in the inconsistencies of approach in the past.

Bibliography:

Shand R T and Straatmans W, 1974 Transition from Subsistence: Cash Crop Development in Papua New Guinea N.G.K.U.B. No. 54.