

A NOTE ON TARO CULTIVATION IN BELAU

Kazutaka NAKANO

The "traditional" staple of Belauans has been taro. A number of writers have described and discussed various aspects of taro cultivation in Belau. KUBARY'S (1895) and KRÄMER'S (1926) descriptions (the former can be read indirectly through the latter and BAMMAN & WEY (1991)) of the nearly continuous cultivation of taro in swampy land (*mesei*) have been regarded as the norms of typical cultivation in olden days. Cultivation in a *mesei* is surprisingly labor intensive, with a well maintained irrigation system. Labor intensity seems comparable to contemporaneous cultivation in wet paddy fields in Japan.

Although disintensification had been proceeding even in the era of Japanese administration (SUGIURA, 1942), *mesei* cultivation was still ubiquitous until the early 1960s (McCUTCHEON, 1985). Even several years ago, it was possible to find some *meseis*, though the custom of allotting sections of the harvested taro to particular functions and statuses had been much modified (BAMMAN & WEY, 1991). The successive procedure of the operations for taro cultivation at one *mesei* is also described in detail by MCKNIGHT and OBAK (1960) and some others besides the preceding writers.

Dechel is another system for taro cultivation in swamps. It is not continual cultivation, but, after two or three consecutive uses for taro production, it needs at least five years' fallow to regain its productive potential (McCUTCHEON, 1985). That is to say, *dechel* is more like shifting cultivation, a kind of swidden in swampy land. Another type of swidden also found on upland areas is called *sers* though Belauans state that, ideally, fallowing should not be necessary there (McCUTCHEON, 1985). Nowadays, taro is not always the dominant crop there, but cassava appears to be preferred very often. According to MCKNIGHT and OBAK (1960), whereas "Palauans strongly deny that there was dry-land cultivation of any plant before European contact" (p. 34), "dry-land cultivation of *kukau* [taro] is said to have been practiced in the time of the gods" (p. 7). At any rate, it seems certain that a boom of upland cultivation began shortly before German administration (MCKNIGHT & OBAK, 1960) and the *sers* system has not yet experienced a severe slump since then, although "kukau as a feed crop is still limited largely to swamp cultivation" (MCKNIGHT & OBAK, 1960, p. 8). "Now the *dechel* and the *sers* appear to be replacing the *mesei* as the taro cultivation method ..." (McCUTCHEON, 1985, p. 178).

As stated by NAKANO et al. (1987), Belauans frequently tell us that most of the grasslands and fernlands covering vast areas of Babeldaob Island were caused by intensive cultivation by Japanese colonists and evacuees from Koror after the blockade by U.S. Navy during WW II. It seems unbelievable, however, that the origin of all grasslands and fernlands can be sufficiently explained only by such Japanese activities. The landscape of Babeldaob Island strongly suggests that upland swiddens with short fallow periods were ubiquitous during at least one definite era between the myth age and European contact, although such grasslands may have been maintained for the defensive purposes, as SCOTT (1979) insists. Archaeologists (OSBORNE, 1966; LUCKING, 1984) who were engaged in intensive field surveys in Babeldaob Island agree that the prehistoric terraces, most of which are covered by grasses and/or ferns, had the defensive functions. The latter author did not emphasize their use for agricultural production. Some cases in

which forests are recovering on such grassland areas can be observed, as pointed out by LUCKING (1984), too. Mostly, recurrent fires keep the grassland communities as they are (NAKANO et al., 1987). Furthermore, according to KRÄMER (1926), the herbs in grasslands and the branches of woody plants in bushes were pulled out or plucked to be utilized as green manure for a mesei. Probably, this was another major factor retarding the vegetational succession.

It is generally accepted that the Belauan population shrunk remarkably after European contact. This is one basis for suggesting the possible predominance of taro cultivation on dry land in ancient times (McCUTCHEON, 1985). McCUTCHEON (1985), however, stated that "the mesei was the established, time-honored and most common cultivation method between the time of the first written descriptions in 1783 ... and the mid-1960s" (p. 178) and discussed why Belauans adhered to labor intensive cultivation in meseis despite a marked population decrease. A question arises because this conflicts with BOSERUP's (1965) persuasive theory which is in line with the law of least effort and marks a logical and actually exemplified development that "the agricultural disintensification is a rational response to decreased population densities" (McCUTCHEON, 1985, p. 168). McCUTCHEON (1985) enumerates the factors of "resistance to disintensification" in the case of Belau, principles discussed by BROOKFIELD (1972): the good taste of the taros grown in mesei, and the elaborate irrigation works which constitute pre-existing investment and are deeply connected to the social network. Perhaps these factors have been highly effective. In addition, however, I want to mention KUBARY's (1895) statement, which is cited in KRÄMER (1926), that taro cultivation is securer and more productive than that of any other plants. I interpret this statement to mean that intensive cultivation in a mesei secured the stability of good land-productivity of taro. One strong reason for the production stability of taro cultivation in swamps is considered to be the much reduced probability of injury by continuous cropping than cultivation in upland fields. As often advocated by not a few agricultural economists, for a risk-evading subsistence farmer, the stability at a satisfactory, even though less than maximal, level of land-productivity is more attractive than the law of least effort. This is especially so for a society in which the inclination to evade risk prevails. Whether a Belauan village society was such or not is another question which should be investigated.

The dechel-mesei line is considered parallel with the developmental line from wet rice swiddens to wet paddy fields without fallowing. The latter line was discussed in detail by SEAVOY (1973). Wet rice swiddens are popular in Borneo Island, as reported earlier by GEDDES (1954). The developmental lines from a swidden to a field of continual cultivation in swampy land in accordance with BOSERUP's (1965) theory should be discussed separately from the cases with the line from a usual swidden to an upland field without fallowing. Swampy land itself may have an intrinsic property that the agriculture there tends to direct the farmers to intensive cultivation if they have crops very well suited to that environment. Probably, this property is closely connected to stability with high land-productivity of agriculture there.

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