

Swidden Agriculture

Swidden agriculture is the scholarly and less deprecatory term for "shifting cultivation" or "slash-and-burn agriculture."ⁱ It refers to a diversity of agricultural systems in which fields are cleared and prepared using sword, adze or axe, and fire, and are cultivated for a short period and then fallowed for a longer one (Conklin 1957: 1). The term "swidden", which refers to the cultivated field and was probably first used by Izikowitz (1951: 7), at the suggestion of Ekwall (1955), is derived from the old English "swithen" (from the Old Norse term "sviona"), meaning to singe, which attests to the ancient history of this system of agriculture in Europe as well (Weimarck 1968). Swidden agriculture is still today the dominant upland farming system in Southeast Asia and has been practiced there for millennia. It is practiced by tens of millions of farmers in the region and is well-suited to its tropical ecosystems with high rainfall and poor soils.

This cultivation system is characterized by a cycle of clearing and burning vegetation, planting cultigens, weeding, harvesting, and fallowing (Conklin 1957; Dove 1985; Freeman 1970; Izikowitz 1951). Burning of cleared vegetation creates a temporary niche for cultigens by eliminating competing plants, and it sustains these cultigens by converting the biomass to nutrient-rich ash. After these nutrients are exhausted, the field is permitted to return to fallow under forest cover and the farmer 'shifts' to another plot in the forest to begin the cycle again. It is the fields, rather than the farmers, that are shifted in this system.ⁱⁱ Once a field has been fallowed, natural processes of afforestation usually can restore nutrient levels to the point that cultivation is again possible, provided that the fallow period exceeds the cultivation period in length. The differentiation between the periods of cultivation and fallow is not as clear as was once thought: much recent research has demonstrated that fallow period regrowth is also managed for economic ends, which may include the planting of perennial crops like rubber, rattans, sugar palms, and fruits (Conklin 1957; Pelzer 1978).

An oft-documented but widely misunderstood characteristic of swidden agriculture is its ability to produce relatively high returns per unit of labor if not land (Conklin 1957; Boserup 1966; Dove 1985), which gives farmers the time to simultaneously engage in other livelihood activities. Thus, swidden agriculture is typically part of a broader portfolio that can include gathering of forest products, hunting, wage labor, agroforestry, home gardening and permanent-field agriculture -- all of which shows how inadequate and essentializing the term "swidden cultivators" is when applied to such peoples. In addition, some of these economic pursuits have for centuries connected swidden peoples to international markets through trade in both cultivated commodities like pepper and rubber and forest products like latexes and resins (Pelzer 1978), notwithstanding the popular perception of swidden cultivators as historically cut-off from the rest of the world (the Indonesian government has long called them suku terasing "the most isolated people", e.g.).

There is limited evidence on the prehistory of swidden agriculture in the region. Archaeological evidence on agricultural evolution in Southeast Asia suggests that there have been two major dimensions of agricultural evolution in Southeast Asia: one involves the initial development of wetland followed by dryland agriculture; and the other, overlapping the first, involves the development of vegetatively reproduced crops in perennial gardens and then the seed-based reproduction of crops in swidden fields (Bellwood 1997: 203). This general developmental picture is supported by contemporary evidence from ritual and myth among swidden peoples,

which suggests that in agricultural prehistory tubers (like taro [*Colocasia esculenta* (L.) Schott]) preceded grains (and among the grains, Job's tears [*Coix lachryma-jobi* L.] and foxtail millet [*Setaria italica* (L.) Beauv.] preceded rice) (Dove 1999).

Throughout recorded Southeast Asian history, views of swidden agriculture have been imbricated with culture, politics, and morality.ⁱⁱⁱ Thus, the region's lowland states traditionally characterized upland swidden peoples as the cultural/ethnic "other" (Burling 1965). Similarly, colonial writers often referred to swidden cultivators as backwards, irresponsible, and wasteful, with the Dutch (e.g.) referring to swidden agriculture as roofbouw "robber agriculture". The absence of any empirical basis for these views was revealed by the mid-twentieth century publication of pioneering, monograph-length studies of swidden cultivation in the region (Condominas 1977 [1957]; Conklin 1957; Freeman 1970 [1955]; Izikowitz 1951).^{iv} These studies demonstrated that swidden agriculture can be a highly sophisticated and productive use of the environment, that it may indeed be the only sustainable form of agriculture yet devised for tropical rainforest habitats (Kleinman, Pimentel, Bryant 1995), and that the less sustainable forms often represent not archaic and obstinate traditions but recent adaptations to urban road-building, markets, and capital. Its adaptability to market opportunities as well as to the tropical environment, plus its marked labor efficiency, all help to explain the remarkable persistence of this system of agriculture in the face of a century-old developmental teleology that insists that it is about to "disappear". Swidden agriculture today supports as many as one billion people--22 percent of the population of the developing world in tropical and subtropical zones (Thrupp, Hecht, Browder 1997).

In spite of one-half century of systematic scholarship, the same century-old myths about the backwardness of swidden peoples and their system of cultivation persist in development and policy circles. The practice of swiddening continues to be treated by the governments of the region as perhaps the most powerful symbol of a condition of undevelopment that requires corrective government intervention. Current scholarship on swidden agriculture focuses on why these misunderstandings and misrepresentations of swidden agriculture persist and how they are deployed in debates about rural peoples and environments (Bryant 1994; Dove 1983, 1993). The fact that state antipathy toward swidden agriculture is uniform across the region, among governments of the left as well as right, suggests that the source of this antipathy lies in the challenge that the "illegibility" of swidden agriculture poses to state efforts of control and extraction (Scott 1998: 282-283).^v

Many of the political and cultural dynamics most characteristic of the region are reflected, thus, in the way that swidden agriculture has been interpreted and represented, reflecting as it does both historic contests over ideals of kingdom and colony and contemporary contests over visions of nationhood and modernity.

Michael R. Dove
Yale University
New Haven, Connecticut, United States of America

Steve Rhee
Yale University
New Haven, Connecticut, United States of America

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Endnotes

i. The term “shifting agriculture” bears inaccurate connotations of nomadism, and the term “slash-and-burn agriculture” bears equally inaccurate connotations of wanton destruction. The latter term has passed into colloquial use in the U.S. for ruthless business and political practices.

ii. In fact Conklin (1957: 134) notes that it is often the crop assemblages as opposed to the field that shifts.

iii. Linnaeus himself was admonished and censored when he reported favorably on the local practice of “burn beating” that he observed during his “Scanian Travels” in Southern Sweden in 1749 (Weimarck 1968).

iv. By the mid-twentieth century there had already been perhaps a century of less intensive but still valuable study of swidden agriculture by colonial travelers, officers, and researchers. See Bartlett’s (1955-1961) 1,544-page annotated bibliography on descriptions of swidden and related practices throughout the tropics. Cf. Spencer’s (1966) review of the swidden literature in Southeast Asia.

v. This suggestion is supported by the fact that refugees from oppressive, historic Southeast Asian states have commonly supported themselves by swidden agriculture. Cf. Friedman (1975) on the capacity of swidden agriculture to support state formation.