

References

- Andreae, B. 1980. *The Economics of Tropical Agriculture*. Commonwealth Agricultural Bureau, Farnham. 178 p.
- Anderson, E.F. 1993. *Plants and People of Golden Triangle: Ethnobotany of the hill tribes of Northern Thailand*. Dioscorides Press. Oregon: Portland. 273p.
- Aronson, J., S. Dhillon, and E. Le Floch. 1995. On the need to select an ecosystem of reference, however imperfect: a reply to Pickett and Parker. *Restoration Ecology* 3: 1-3.
- Banerjee, A.K. 1995. *Rehabilitation of Degraded Forest in Asia*. World Bank Technical Paper Number 270. 43 p.
- Barrios, E., Buresh, R.J. and Sprent, J.I. 1996. Organic matter in soil particle size and density fractions from maize and legume cropping systems. *Soil Biology and Biochemistry* 28: 185-193.
- Beer, J. 1983. Research and development work by Costa Rican farmers: lessons for agroforesters. In: Moeller G.H. and Seal D.T., eds. *Technology Transfer in Forestry*. Pp 43-46. Forestry Commission Bulletin No. 61 London.
- Black, C. A. 1968. *Soil-Plant Relationships*. 2 nd Ed. John Wilay & Sons Inc.
- Boserup, E. 1965. *The Conditions of Agriculture Growth: the Economics of Agriculture Change under Population Pressure*. Chicago: Aldine 124 p.
- Brookfield, H. 2001. *Exploring Agrodiversity*. New York: Columbia University Press. 348 p.
- Brookfield, H., Padoch, C., Parsons, H. and Stocking, M. 2002. *Cultivating*

- Biodiversity: Understanding, Analyzing and Using Agriculture Diversity.
Intermediate Technology Development Group (ITDG). London. 292 p.
- Budowski, G. 1987. The development of agroforestry in Central America. In:
Steppler, H. and Nair, P.K.R. eds. Agroforestry: A Decade of Development,
pp 69-88. ICRAF, Nairobi, Kenya.
- Bue Paw. 2004. Rotational shifting cultivation in life cycle of Karen community.
B.S.D. printing Co, Chiang Mai. 223 p.
- Cairns Jr, J. 1980. The Recovery Process in Damaged Ecosystems. Michigan: Ann
Arbor Science. 167 p.
- CARE/INRC. 1995. Natural Resources Conservation Project: Sop Moei District, Mae
Hong Son Province. Brief Report prepared for Project Advisory Committee
(PAC) meeting. Bangkok: CARE international. 23 p.
- Chamber, R. 1992. Rural appraisal: rapid relaxed and participatory. IDS Discussion
Paper 311. Brighton: International Development Studies, University of
Sussex.
- Chansina, K., Chareonwatana, T., McArthur, H., Phonegntha, B. and Uehara, G.
1991. The agroecosystem of Ban Semoun. In: Report of a workshop on
Swidden Agroecosystems in Sepone District, Savannakhet Province, Lao
PDR. Khon Kaen: The SUAN Secretariat. Pp. 25-43.
- Chapman, E.C. 1967. An appraisal of recent agriculture changes in the northern
valleys of Thailand. In: Proceedings of the National Conference on
Agriculture Sciences. Sixth Session: Plant and Biological Sciences, Animal
Sciences and Agriculture Economics. Pp 438-446. Bangkok: Kasetsart
University.

- Chapman, E.C. 1978. Shifting cultivation and economic development in the lowlands of northern Thailand. In: Kunstadter P., Chapman E.C. and Sabhasri S. (Eds). *Farmers in the Forest: Economic development and marginal agriculture in Northern Thailand*. University Press of Hawaii, Honolulu, Pp. 222-235.
- Charley, J.L. and McGarity, J.W. 1978. Soil fertility problem in development of annual cropping on swiddened lowland terrain in Northern Thailand. In: Kunstadter, P., Chapman, E. C. and Sabhasri, S. (Eds.). *Farmers in the Forest: Economic development and marginal agriculture in Northern Thailand*. University Press of Hawaii, Honolulu. Pp. 236-254.
- Coffey, K. 2000. PLEC Agrodiversity Database Manual. Report for PLEC. United Nations University (available at www.unu.edu/env/plec)
- Conklin, H.C. 1957. Hanunoo agriculture: a report on an integral system of shifting cultivation in the Philippines. *FAO Farming Development Paper No. 12*. FAO. Rome.
- Conklin, H.C. 1961. A study of shifting cultivation. *Current Anthropology* 2: 27-61.
- Department of Land Development 1989. *Master Plan for Developing the Highland of Northern Thailand*. Bangkok: department of Land Development, Ministry of Agriculture and Cooperation. 55p.
- Dodd, J.C., Arias, I., Kooman, I. and Hayman, D.S. 1990. The management of population of vesicular arbuscular mycorrhizal fungi in acid infertile soil of a savanna ecosystem II. The effects of pre crops on the spore populations of native and introduced VAM fungi. *Plant and Soil*. 122: 241-248.
- Douds, D.D. and Schenck, N.C. 1990. Cryopreservation of spores of vesicular-arbuscular mycorrhizal fungi. *New Phytol* 115: 667-674.

- Enters, T. 1996. The token line: adoption and non-adoption of soil conservation practices in the highlands of Northern Thailand. In: S. Sombatpanit, M. A. Zobisch, D.W. Saunders and M. G. Cook. (Eds.). Soil conservation Extension: From Concepts to Adoption. Bangkok: Soil and Water Conservation Society of Thailand. Pp 417-427.
- FAO 2006. FAOSTATS. www.fao.org
- Ganjanaphan, A., Laungaramsri, P., Jatuworaphrek, T., Hengsuwan, P., Rakyuthitham, A. Amprasert, V., Natapulwatana, S., Chamroenphrek, M., Suthornhao, P., and Onphrom, S. 2004. Rotational Agricultural Systems: Situation and Change. Research Report. Faculty of Social Sciences. Chiang Mai University. 334 p.
- Gardner, S., Sidisunthorn, P. and Anusarnsunthorn, V. 2000. Forest Trees of Northern Thailand. Bangkok: Kobfai Publishing Project. 545 p.
- Grandstaff, T.B. 1980. Shifting cultivation in northern Thailand. Resource System Theory and Methodology Series 3. United Nations University, Tokyo.
- Greenland, D.J. 1975. Bringing the green revolution to the shifting cultivator. Science. 190: 841-844.
- Greenland, D.J. and Kowal, J.M.L. 1960. Nutrient content of the moist tropical forest of Ghana. Plant and Soil. 12: 154-175.
- Greenland, D.J. and Okigbo, B. N. 1983. Crop production under shifting cultivation and maintenance of soil fertility. In: Symposium on Potential Productivity of Filed Crops under Different Environments. Pp. 505-524. International Rice Resaech Institute. Los Banos: Philippines.
- Hairiah, K., M. van Noordwijk, and Palm, C. 1999. Methods for sampling above and

- below ground organic pool. In D. Murdiyarso, M. van Noordwijk, and D.A. Suyanto (Eds.). *Modeling global change impacts on the soil environment*, pp. 46-77. BIOTROP- GCTE/Impact for Southeast Asia (IC-SEA), Bogor, Indonesia.
- Harper, D.E. 1986. *Sustainable Agriculture on Slopes: The effectiveness of international development projects in fostering soil conservation in north Thailand*. Ph. D. Dissertation. University of Hawaii. 469p.
- Harper, J.L. 1977. *Population Biology of Plants*. London: Academic Press. 892 p.
- Higgs, E.S. 1997. What is good ecological restoration? *Conservation Biology* 11: 338-348.
- Hinton, P. 1973. Population dynamics and dispersal trends among the Karen of Northern Thailand. In: R. Ho and E.C. Chapman. eds. *Studies of Contemporary Thailand*. Canberra: Australian National University Research School of Pacific Studies Department of Human Geography. Pp 235-252.
- Hinton, P. 1978. Declining production among sedentary swidden cultivation: the case of Pwo Karen. In P. Kunstader, E.C. Chapman and S. Sabhasri (Eds.) *Farmers in the Forest: Economic development and marginal agriculture in Northern Thailand*. University Press of Hawaii, Honolulu. Pp. 185-198.
- Hobbs, R. J. 1993. Can revegetation assist in the conservation of biodiversity in agriculture areas? *Pacific Conservation Biology*, 1:29-38.
- Hobbs, R.J. 2001. Current ideas and concepts in restoration ecology. In: a workshop on *Regeneration Ecology and Management for Degraded landscapes and Forest Ecosystems*. 10-16 February 2001. Multiple Cropping Centre, Chiang Mai University.

- Hobbs, R.J. and Hopkins, A.J.M. 1990. From frontier to fragments: European impact on Australia's vegetation. *Proceedings of the Ecological Society of Australia*, 16:93-114.
- Hobbs, R.J. and Norton, D.A. 1996. Towards a conceptual framework for restoration ecology. *Restoration Ecology* 4: 93-110.
- Hurni, H. with the assistance of an international group of contributors. 1996. *Precious Earth: from Soil and Water Conservation to Sustainable Land Management*. Berne: International Soil Conservation Organization (ISCO) and Centre for Development and Environment (CDE). 89 p.
- IBRAM. n.d. *Towards Sustainable Land Management in the 21st Century*. The IBRAM Vision Bangkok: International Board for Soil Research and Management. 18 p.
- ISTA (International Seed Testing Association). 1999. Biochemical test for viability. *Seed Science Technology* 27: 201-244.
- Izikowitz, K.G. 1951. *Lamet-hill Peasants in French Indochina*. Gothenburg: Elanders Boktryckeri Aktiebolag.
- Jackson, M. L. 1967. *Soil Chemistry Analysis*. Prentice-Hall of India Private Limited. New Delhi. 498 p.
- Kass, D.C.L., Foletti, C., Szott, L.T., Landaverde, R., and Nolasco, R. 1993. Traditional fallow systems of the Americas. *Agroforestry Systems* 23: 207-218.
- Kaya, B. and Nair, P.K.R. 2001. Soil fertility and crop yield under improved-fallow system in southern Mali. *Agroforestry Systems* 52: 1-11.
- Keen, F.G.B. 1978. Ecological relationships in a Hmong (Meo) economy. In

- Kunstadter, P., Chapman, E. and Sabhasri, S. (Eds.). *Farmers in the Forests: Economic development and marginal agriculture in Northern Thailand*. University Press of Hawaii, Honolulu. Pp. 210-221.
- Kerby, J., Elliot, S., Maxwell, J.F., Blakesley, D. and Anusarnsunthorn, V.: 2000. *Tree, Seeds and Seedlings for Restoring Forest in Northern Thailand*. The Forest Restoration Unit. Biology Department, Science Faculty, Chiang Mai University. 151p.
- Khuenkaew, S. 1998. The Salween chainsaw massacre. *Bangkok Post*. 25 January 1998. Perspective. p 5.
- Koutika, L.S., Sanginga, N., Vanlauwe, B., Weise, S., 2002. Chemical properties and soil organic matter assessment under fallow systems in the forest margins benchmark. *Soil Biology and Biochemistry* 34: 757-765.
- Kunstadter, P. 1978. Subsistence agriculture economics of Lua and Karen Hill farmers' Mae sarieng District, Northwesten Thailand. In: Kunstadter, P., Chapman, E. C. and Sabhasri, S. (Eds.). *Farmers in the Forest: Economic development and marginal agriculture in Northern Thailand*. University Press of Hawaii, Honolulu. Pp.71-133.
- Kunstadter, P. and Chapman, E. C. 1978. Problems of shifting cultivation and economic development in northern Thailand. In: Kunstadter, P., Chapman, E. C. and Sabhasri, S. (Eds.). *Farmers in the Forest: Economic development and marginal agriculture in Northern Thailand*. University Press of Hawaii, Honolulu. Pp. 3-23.
- Kunstadter, P., Chapman, E.C. and Sabhasri, S. 1978. *Farmers in the Forest:*

- Economic development and marginal agriculture in Northern Thailand.
Honolulu: University Press of Hawaii for the East-West Center. 402p.
- Kwesiga, F. and Coe, R. 1994. The effect of short rotation *Sesbania sesban* planted fallow on maize yield. For Ecol Mgt 64:199-208.
- Laungaramsri, P. 2001. Refining Nature, Karen ecological knowledge and the challenge to the modern conservation paradigms. Chennai: Earthworm Books. 257 p.
- Lovelace, G. W. 1991. Research on swidden agriculture in Sepone district. In: Report of the 1991 SUAN-EAPI-MAF Agroecosystem Research Workshop on Swidden Agroecosystems in Sepone District, Savannakhet Province, Lao PDR. Pp. 3-10. Khon Kaen: The SUAN Secretariat.
- Mafongoya, P.L. and Nair, P.K.R. 1997. Multipurpose tree pruning as a source of nitrogen to maize under semiarid condition in Zimbabwe. Part I Nitrogen-recovery rates as influenced by pruning quality and methods of application. Agroforestry System 35: 31-46.
- Magurran, M.E., 1988. Ecological Diversity and its Measurement. Princeton University Press, New Jersey.
- Marschner, H. and Dell, B. 1994. Nutrient uptake in mycorrhizal symbiosis. Plant and Soil. 134: 1-20.
- McCracken, J.A., Pretty, J.N. and Conway, R. 1987. An introduction to rapid rural appraisal for agriculture development. London: International Institute for Environment and Development.
- McKinnon, J. and Bhruksasri, W. 1983. Highlanders of Northern Thailand.
KualaLumpur: Oxford University Press.

- Morton, S.R., Stafford Smith, D.M., Friedel, M.H., Griffin, G.F. and Pickup, G. 1995. The stewardship of arid Australia; ecology and landscape management. *Journal of Environmental Management* 43: 195-217.
- Myers, R.J.K., Palm, C.A., Cuevas, E., Gunatilleke, I.U.N., Brossard, M., 1994. The synchronization of nutrient mineralization and plant nutrient demand. In: Woome, P. L., Swift, J. (Eds.). *The Biological Management of Tropical Soil Fertility*. Pp. 81-115. Wiley, Chichester.
- NRC 1987. Hilltribe Survey 1987. Bangkok: National Research Council
- Nakabutara, A. and Rerkasem, K. 1992. Highland Resources Integration Project. Final evaluation report submitted to CARE/ international, Thailand. 38 p.
- Nakano, K. 1978. An ecological study of swidden agriculture at a village in northern Thailand. *South East Asian Studies* 16:411-446.
- Noss, R.F. and Cooperrider, A.Y. 1994. *Saving Nature's Legacy: Protecting and Restoring Biodiversity* Island Press, Washington, D.C.
- NSC, 2004. Statistical Yearbook 2003. National Statistical Center. Vientiane. 144 p.
- Nye, P.H. and Greenland, D.J. 1960. *The Soil under Shifting Cultivation*. Commonwealth Agricultural Bureaux, Farnham Royal. Bucks, England. 156p.
- Nye, P.H. and Greenland, D.J. 1964. Changes in the soil after clearing tropical forest. *Plant and Soil* 21: 101-112.
- Nye, P.H. and Stephens, D. 1962. Soil Fertility. In: Wills, J. B. *Agriculture and Land Use in Ghana*, pp 127-143. Oxford University Press, London.
- ONCB-UNFDAC. 1983. A Master Plan for Opium Poppy Cultivation Regions of

- Thailand. Office of the Narcotic Control Board and the United Nations Fund for Drug Abuse Control. Bangkok.
- Ovington, J. D. 1962. Quantitative ecology and the wood land ecosystems concept. *Advances in Ecological Research* 1: 103-192.
- Padoch, C. and De Jong, W. 1987. Traditional agroforestry practices of native and ribreno farmers in the lowland Peruvian Amazon. In: Gholz, H. (Eds). *Agroforestry, Realities, Possibilities, and Potentials*. Pp 179-194. Martinus Nijhoff, Dordrecht, Netherlands.
- Penth, H. 2000. The brief history of Lan Na civilization of north Thailand. Chiangmai: Silkworm Press. 88 p.
- Peters, J. (ed.) 2000. *Tetrazolium Testing Handbook*. Contribution No. 29 to the Handbook on Seed Testing revised 2000.
- Pickett, S. T. A., and Parker, V. T. 1994. Avoiding the old pitfalls: opportunities in a new discipline. *Restoration Ecology* 2: 75-79.
- Power, L. E. and McSorley, R. 2000. *Ecological Principles of Agriculture*. Thomson Learning, Delmar. 433p.
- Pretty, J.N. 1995. *Regenerating Agriculture: Policies and Practices for sustainability and self-reliance*. Washington D.C. : Joseph Henry Press. 320 p.
- Raintree, J.B. and Warner, K. 1986. Agroforestry pathways for intensification of shifting agriculture. *Agroforestry Systems* 4: 39-54.
- Ramakrishnan, P.S. 1984. The science behind rotational bush fallow agriculture system (jhum). *Proceeding Indian Academy of Science (Plant Science)* 93: 379-400.
- Ramakrishnan, P.S. and Saxena, K.G. 2005. Fallow management under shifting

- agriculture in North-Eastern India. In *Soil Biodiversity, Ecological Processes and Landscape Management*. Pp. 229-238. Oxford & IBH Publishing Co. Pvt. Ltd. New Delhi.
- Rambo, A. T. 1990. Shifting cultivation as a problem in human ecology. In: K. Gillogly (Eds.). *Two Upland Agroecosystems in Luang Prabang Province, Lao PDR: A Preliminary Analysis*. Pp. 178-184. Khon Kaen: The SUAN Secretariat.
- Rerkasem, K. 2000. *Chiang Mai Activity 1999-2000*. UNU-PLEC Annual Report. Chiang Mai University. 52 p.
- Rerkasem, K. 2001a. Farmers' management of fallow succession in Thailand. In *Proceedings of an International symposium on Managing Biodiversity in Agricultural Ecosystems*. Organized by United Nations University, Secretariat of the Conservation on Biodiversity and International Plant Genetic Resource Institute. 8-10 November 2001. Montreal, Canada. Tokyo: United National University (CD Rom)
- Rerkasem, K. 2001b. *Vegetation management by forest farmers in mountain mainland Southeast Asia*. CMUPN lab Working Paper 1: 53-80.
- Rerkasem, K. 2002. With contribution by N. Yimyam, C. Korsamphan, C. Thongngam, S. Thepsarn and P. Kaewpha 2002. *PLEC/ Thailand Report for 1999-2002*. Report submitted to the United National University. Chiang Mai University. 24 p.
- Rerkasem, K. 2003. Upland land use. In M. Kaosa-ard and J. Dore (eds.) *Social Challenged for the Mekong Region*. Pp. 323-346. Bangkok: White Lotus.
- Rerkasem, K., Yimyam, N., Korsamphan, C., Thongngam, C. and Rerkasem, B. 2002.

- Agrodiversity Lessons in Mountain Land Management. Mountain Research and Development. 22(1): 4-9.
- Rerkasem, K. and Rerkasem, B. 1994. Shifting Cultivation in Thailand: Its current situation and dynamics in the context of highland development. IIED Forestry and Land Use Series No. 4. 140p.
- Rerkasem, K. and Rerkasem, B. 1995. Mountain mainland Southeast Asia: Agroecosystem in transition. Global Environment Change 5: 313-322.
- Reuter D.J., Edwards D.G. and Wilhelm N.S. 1997. Temperate and tropical crops. Plant Analysis, an Interpretation Manual. CSIRO: 81-285.
- Ruddle, K. 1974. The Yukpa cultivation system. A Study of Shifting Cultivation in Columbia and Venezuela. Berkley: University of California Press. 197 p.
- Ruthenberg, H. 1971. Farming System in the Tropics. London: Clarendon Press, 2nd Edition. Oxford University. 366 p.
- Russell, E.W., 1973. Soil Conditions and Plant Growth. Tenth ed. Longman, London.
- Sabhasri S. 1978. Effects of forest fallow cultivation on forest production and soil. In: Kunstadter P., Chapman E.C. and Sabhasri S. (Eds). Farmers in the Forest: University Press of Hawaii, Honolulu, pp. 160-184.
- Saito K, B. Linqvist, G.N. Atlin, K. Phanthaboon, T. Shiraiwa, T. Horie. 2006. Response of traditional and improved upland rice cultivars to N and P fertiliser in northern Laos. Field Crop Research. In press.
- Sanchez, P.A. 1976. Properties and management of soil in the tropics. New York: John Wiley & Sons. 618p.
- Sanchez, P.A., and Miller, R.H., 1986. Organic matter and soil fertility management

- in acid soil of the tropics. *International Society of Soil Science Transaction, Thirteenth Congress*, Pp 609-625.
- Santasombat, Y. 1998. *Biodiversity and Indigenous Knowledge for sustainable Development*. Regional Center for Social Science and Sustainable Development (RCSD). Faculty of Social science. Chiang Mai University. 300p.
- Santasombat, Y. 2003. *Biodiversity: Local knowledge and sustainable development*. Chiangmai: Within Design Co. for Regional Center for Social Science and Sustainable Development, Chiang Mai University. 247p.
- Santisuk, T.1988. *An account of the vegetation of Northern Thailand*. *Geocological Research*. Vol. 5 Stuttgart: Steiner-Verl. Wiesbaden. 101p.
- Schmidt-Vogt, D. 1995. *Swidden farming and secondary vegetation: two case studies from northern Thailand*. In: J. Rigg (Ed.) *Counting the Cost: Economic Growth and Environmental Change in Thailand*. ISEAS Environment and Development Science. Chapter 3. pp 47-64. Singapore: Institute of Southeast Asian Studies (ISEAS).
- Schmidt-Vogt, D. 1999. *Swidden farming and fallow vegetation in Northern Thailand*. *Geocological Research Volume 8*. Franz Steiner Verlag. Stuttgart.
- Schmidt-Vogt, D. 2001. *Secondary forests in swidden agriculture in highlands of Thailand*. *Journal of Tropical Forest Science* 13(4): 748-767.
- Sirabanchongkran, A., Yimyam, N., Boonma, W., Rerkasem, K., Coffey, K., Pinedo-Vasquez, M. and Padoch, C. 2004. *Varietal turnover and seed exchange: implication for conservation of rice genetic diversity on-farm*. *IRRN Notes* 29.2/ : 12-14.

- Smith, S.E. and Read, D.J. 1997. Mycorrhizal Symbiosis. 2nd ed. Academic Press. London.
- Spencer, J. E. 1966. Shifting Cultivation in Southeast Asia. University of California Publications in Geography, Volume 19.
- Sutthi, C. 1995. Swidden crops germplasms on highlands of Thailand. Chiang Mai Tribal Research Institute. 111 p.
- Sutthi, C. 1996. The knowledge of slash and burn agriculture on highland area. Chiang Mai: Tribal Research Institute. 219p.
- Sutthi, C. 1989. Highland agriculture: From Better to Worse. In: J. McKinnon and B. Vienne (Eds.). Pp. 107-142. Hill Tribes Today.
- Swift, M.J., and Sanchez, P.A., 1984. Biological management of tropical soil fertility for sustainable productivity. Nature and Resource 20, 1-10.
- Tan-Kim-Yong, U. 1990. Participatory land use planning as a sociological methodology for natural resource management. Paper presented at International Workshop on Community Forestry. Nagoya, Japan. 50p.
- Tarawali, G. 1991. Effect of stylosanthes fodder banks on grain yield of maize. Trop. Grass. 25: 26-31.
- Taylor, J. and Harrier, L.A. 2001. A comparison of development and mineral nutrition of micropropagated *Fragaria x ananassa* cv. Elira (strawberry) when colonized by nine species of arbuscular mycorrhizal fungi. Appl. Soil Ecol. 18: 205-215.
- Thrupp, L.A., Hecht, S.R., Browder, J.O. with Lynch, O.J., Megateli and O'Bisen, W. 1997. The diversity and dynamics of shifting cultivation: Myths, Realities, and Policy Implications. World Resources Institute, Washington D.C. 48 p.

- Trenbath, B. R. 1984. Decline of soil fertility and the collapse of shifting cultivation systems under intensification. In: *The Tropical Rain Forest: The Leeds Symposium*, edited by A.C. Chadwick and S.L. Suttun. Pp. 279-292. UK: Leeds Philosophical and Literary Society.
- Trenbath, B. R., Conway, G. R. and Craig, I. 1990. Threats to sustainability in intensified agriculture systems: Analysis and implications for management. In: S. R. Gliessman (Ed.) *Agroecology: Researching the Ecological Basis of Sustainable Agriculture*. Pp. 337-366. New York: Springer-Verlag.
- Unruh, J.D. 1990. Iterative increases of economic tree species in managed swidden fallow of the Amazon. *Agroforestry Systems* 11: 175-197.
- Van Keer, K. Trebuil, G. and Goze, E. 2000. Identifying and grading limiting factor of upland rice yields in farmers' field of Northern Thailand. *Int. Rice Res. Notes* 25: 31-33.
- Van Keer K and Trebuil G. 2006. On-farm crop diagnosis of upland rice yield in Northern Thailand. www.ricethailand.org.
- Wanatabe, F.S. and Olsen S.R. 1962. Colorimetric determination of phosphorus in water extracts of soil. *Soil Science* 93: 183-188.
- Wangpakapattanawong, P. 2001. Ecological studies of reduced forest-fallow shifting cultivation of Karen people in Mae Chaem watershed, Northern Thailand, and Implication for sustainability. Ph.D. thesis. The University of British Columbia. 234p.
- Warner, K. 1991. *Shifting cultivation: local technical knowledge and natural resource management in the humid tropics*. Community Forestry Note 8. FAO. Rome. 80 p.

- Whitmore, T. C. 1982. On pattern and process in forest. In: E. I. Newman (Ed.) *The Plant Community as Working Mechanism: Special Publication of the British Ecological Society Produced to a Tribute to A. S. Watt*. Pp. 45-59. Oxford: Blackwell Scientific Publication.
- Woomer, P.L., and Ingram, J.S.I., 1990. *The Biology and Fertility of Tropical Soil: The Tropical Soil Biology and Fertility report*. Nairobi, Kenya.
- Woomer, P.L., Martin, A., Albrecht, A., Resch, D.V.S. and Scharpenseel, H.W. 1994. The importance and management of soil organic matter in the tropical. In: Woomer, P.L., Swift, J. (Eds.). *The Biological Management of Soil Fertility*. Pp. 47-80. Wiley, Chi Chester.
- Young, G. 1961. *The Hill Tribes of Northern Thailand: A Socio-Ethnological Report*. Monograph No. 1. Bangkok: The Siam Society.
- Young, T.P. 2000. Restoration ecology and conservation biology. *Biology Conservation* 92: 73-83.
- Youpensuk, S. and Lumyong, S., Bernie, D. and Rerkasem, B. 2004. Arbuscular mycorrhizal fungi in the rhizosphere of *Macaranga denticulata* Muell. Arg., and their effect on the host plant. *Agroforestry System*. 60: 239-246.
- Zinke, P. J., Sabhasri, S. and Kunstader, P. 1978. Soil fertility aspects of the Lua forest fallow system of shifting cultivation. In: Kunstader, P., Chapman, E. C. and Sabhasri, S. (Eds.). *Farmers in the Forest: Economic development and marginal agriculture in Northern Thailand*. University Press of Hawaii, Honolulu. Pp 134-159.