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Potato (Solanum tuberosum), is a temperate subtropical crop, is one of the major root crops in the world. It is appreciated as a food and provides appreciable revenue to farmers, particularly where temperatures are suitably low for tuberization and the cold night temperatures permit successful culture. Mixed and relay cropping are the most widespread cropping systems in the peasant agriculture of Africa. Cereals and legumes are the major staples that dominate such mixtures. The intercropping of potato with other crop species in the tropics is a prevalent practice of increasing importance, but largely based upon nondocumented farmer experience. Improvement of the indigenous system and the creation of systems appropriate to future potato production zone in hot areas require a clear understanding of their physical and biological interactions.

This knowledge may be obtained from research on temporal and spatial demands by intercrops. In Central Africa, 8% of the potato is grown as sole crop, whereas 46% is intercropped with maize, 15% with maize and sorghum mixtures, 23% as maize/cowpea mixtures and 8% with millet alone. In South America, long before the Spaniards arrived, the potato was often found growing in associations with other food crops. But after the Spaniards arrival, the crop was taken to Europe and ever since it has been grown in single stands. However in the tropical areas of South America, farmers customary grow the potato crop mixed with other crops. This is because potato single stands require high levels of technology and inputs which are in most
instances beyond the skill and economic capability of farmers. Given that the high production in multiple cropping systems sustains a high likelihood of success.

This thesis, however, describes the main features of potato-based multiple cropping systems, and it assesses their main attributes and constraints and outlines crop management practices for improved productivity and expanding growing potato in marginal areas and times for potato production. The aim of this study was to evaluate the limitation of potato production in the warm summer season of Egypt where there is greater consumer demand for potato.