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III.10 Passion fruit under slash-and-mulch land preparation - a sustainable crop?

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The passion fruit crop (\textit{Passiflora edulis}) became an alternative for the small holders to diversify their production and to increase their income, in part of the Northeastern Pará State, Brazil, and particularly in the municipality of Igarapé Açu. At present, it is the most important semi-permanent crop in this area, where is exclusively cultivated as a cash crop. The slash-and-burn land preparation associated with intensive mechanization use is contributing to increase soil degradation, reducing the potential of regeneration of the secondary vegetation and consequently affecting the biodiversity, and the nutrient availability, as well as exposing the soil to surface erosion. Aiming at evaluating the performance of this crop under the slash-and-mulch system, as a way to mitigate the problems associated to the traditional system, three land preparation methods are being tested, i.e. slash-and-burning; slash-and-burning + plowing; and slash-and-mulching, with and without intercropping. The work is being carried out under a participatory approach, with the farmers taking part of the decision making process. Besides of production data, are also being monitored: fruit quality, incidence of pests and diseases, socio economic aspects, and recently, biophysical aspects. The socio economic assessment is being approached by applying semi structured questionnaires, to some passion fruit producers, trying to understand the process of introduction of this region, how is it affecting their financial budget, and how sustainable is being the crop under the traditional system.
Passion fruit is the third most popular fruit in Kenya after mangoes and bananas respectively, and this enterprise already boasts an area of 6000 hectares under production. Passion fruit is only growing in popularity as the hottest new gold mine, and that’s why in 2010, passion fruit made Hit Wise’s list of the top most lucrative fruit ventures in Kenya, currently sitting at #3 and beating out big names like papaya and avocados (Christopher Makomere 2017). Growing passion fruit step by step. Yellow passion fruit is suitable for low altitudes such as coastal lowlands. It’s more hardy and vigorous as compared to the purple passion. The fruit is bigger with a diameter of 5-7 cm, relatively acidic and used for juice extraction. Of course, it’s also yellow, ha. In addition, slash-and-mulch technology may prevent loss of nutrients due to burning and mulch decomposition may serve as a slow-release source of nutrients. This study in Pará, Brazil, in a 7-year-old secondary forest following slashing and mulching of the vegetation, involved two main plot treatments (with and without P and K fertilizers) and two sub-plot treatments (with or without a N fixer Inga edulis). A mixed-culture of trees and manioc was planted in all plots. Montagnini F, Sancho F (1994) Net nitrogen mineralization in soils under six indigenous tree species, an abandoned pasture and a secondary forest in the Atlantic lowlands of Costa Rica. Plant Soil 162(1):117–124. CAS Article Google Scholar. Both passion fruit and maypops are egg-shaped, and filled with seedy pulp that is both sweet and sour in flavor. Underripe maypops can be particularly sour. The aroma of a ripe purple passion fruit smells like you died and went to tropical heaven! Passion fruit and maypops can grow up to 20 feet per year under ideal growing conditions! If allowed, they will wrap up and smother other plants and even trees. Plan a location with ample space, and easy access for pruning as needed. This vine had bark mulch around its base when it was young, with rocks mulching the greater around it for moisture retention. With time, passion vines mulch themselves with leaf litter and a heavy canopy. The main stem that is growing from the ground is somewhere in the middle. Planting Time. Purple passion fruit is commonly cultivated in northeasren region, whereas yellow and hybrid (Kavery) is common in south India. The edible fruits are produced under two subgenera Passiflora and Tacsonia of the family Passifloraceae. The subgenus Passiflora is further divided into sections. The most common are the Incarnatae (including P. edulis, P. edulis f. flavicarpa, and P. incarnata), Tiliaefoliae (including P. ligularis), Quadrangulares (including P. quadrangularis, and P. alata), and Laurifoliae (including P. laurifolia...