The third block in each field can be planted with temporary summer pastures, and cool season forages for the first two years. During the third and fourth years, forages planted in block three the first two years will be planted in block four (Figure 7.2). The block designed for cropping the first two years will be planted in block three during the third and fourth years. Blocks designed for cropping can be planted to selected and alternative green and yellow vegetables. This system should allow for:

- An excellent means of utilizing crop residues and by-products to add to total farm production.
- A means of maintaining soil fertility by returning these products to the soil as manure after being fed.
- Improved control of plant pests.

Block five can be planted to new or selected traditional small fruits that are adapted to the environmental conditions of the area (Figure 7.1). This block can be planted to Christmas trees or ornamentals (Figure 7.2). Strategies for the successful implementation of cropping alternatives will involve orderly scheduling of crops to guarantee continuity in the supply. Implementation considerations will be processing facilities, transportation and marketing, production resources available, and plant characteristics.

USE OF MEAT GOATS IN MULTISPECIES GRAZING

Good pasture management is not possible without cash inputs. Regular use of fertilizer, pesticides, genetically improved forages, and mechanical manipulation are recommended to develop the land's potential to produce maximum yields of high quality forage. Without frequent inputs, pasture production declines both in terms of forage quantity and quality. A mixture of native grasses, forbs, shrubs and trees soon begins to invade the less intensively-managed pasture. When production costs decline, so does animal output. The bottom line of this shift in pasture composition is that the differences between improved pasture and native range become less obvious, and such range management practices as multispecies grazing become more relevant.

Using goats within a multispecies grazing system or within another production system (such as agro-forestry) is an alternative to increase the efficiency of the production system simply because previously unused resources are being marketed. For example, goats eat forage that would not normally be used under land management systems that do not involve livestock or that contain only a simple species. Marketing products from goats (meat) is an indirect way of harvesting and marketing forage.

The use of meat goats has for a long time been considered as a good range management tool. They can be used not only to produce saleable animals but also to control brush. The suppression or near elimination of brushy species, weeds and other undesirable plants by goats will reduce competition for scare soil nutrients and moisture, and over time, improve carrying capacity of pastures. But, using goats in pasture improvement programs will likely result in reduced kidding rates and/or kid weaning weights. Also, the methodology and cost-benefit ratios of using goats to control competing plant species in pine plantations, and also in naturally regenerating pine and hard wood forests are inadequately known.

Technical and economic coefficients need to be developed before any set of recommendations can be formulated for meat goats for brush control. Research needs on the economics of multispecies grazing that can be suggested in a related area of production are the following: a) impact of stocking rates in different kinds of pasture; b) offtake rates under multispecies grazing systems; c) alternative methods of multispecies grazing, particularly labor-saving technologies; d) technological barriers to efficient production of goats under multispecies grazing systems; e) and comparative cost of using goats versus herbicides versus mechanics versus fire for understory control. These factors can be evaluated by using the cost and returns program developed by Simpson (1992).

REPRODUCTION AND BREEDING MANAGEMENT

Many meat goat owners run their bucks with the does more or less on a continuous basis during the year. While this may be convenient and result in the maximum number of kids born during the year, it may also produce kids at different times of the year. Year round breeding makes it difficult to target certain specialty markets, avoid seasonal bad weather, or take maximum advantage of seasonal feed supplies. Also, it may lead to premature mating of kids which may