

Abstract

A study was conducted to determine effects of four mulches (cut grass, clear polyjilm, black polyjilm, and none) on productivity of four strawberry (*Fragaria x ananassa* Duch) cultivars (Pajaro, Aiko, Fern and Douglas) under tropical highland conditions. It was hypothesized that polyjilm would hasten growth and increase yield more than cut stargrass (*Cynodon dactylon*), or no mulch, through warming soil, improving nutrient uptake and conserving moisture. The experiment was set up as split plots in randomised complete block design; mulches were assigned to main plots, whereas cultivars were assigned to sub-plots. Each of the sixteen treatments was replicated three times. Cultivars were planted at the beginning of long rains in March 2002. Data were recorded from the fourth month after planting (MAP) and analysed. Polyjilm hastened growth from 2 to over 5 stolons, 18 to 30 leaves, 31 cm to 35cm diameter at 4 MAP, and increased flowering and yield from 9 to 12 flower stalks, 22 to 29 berries, and 30 g to 35 g berry fresh weight at 9 MAP. Most of the time, black polyjilm growth and yield parameters were higher than those for cut grass or no mulch. Positive effects of cut grass mulch developed slowly, while those of clear polyjilm mulch diminished over time. Nine months after planting, black polyjilm gave significantly ($P < 0.05$) interact with cultivar, implying that it does not alter the potential of cultivars grown under tropical highland conditions.