

INTERPLANTING SECONDARY CROPS DOES NOT AFFECT STRAWBERRY YIELD

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Abstract. To increase the utility of land preparation, existing plastic mulch and microirrigation, secondary crops are planted in beds with winter annual strawberries (*Fragaria ananassa* Duch). This practice allows for earlier harvesting of the secondary crop. Planting takes place up to 5-6 weeks before the end of the strawberry production season dependant on strawberry variety. Common secondary crops are squash (*Cucurbita pepo* L.), muskmelon (cantaloupe, *Cucumis melo* Naud.), pickles (*Cucumis sativus* L.), and peppers (*Capsicum annuum* L.). A study was instituted that examined the effect of interplanting squash, muskmelon, and pickles from seed, and muskmelon and pepper from transplants, on yield of strawberry. Plantings of secondary crops occurred on 28 Feb., 7 Mar., 14 Mar., and 21 Mar., 2003 into a stand of 'Strawberry Festival' strawberries. Data were collected for marketable yield, number of marketable berries, and cull fruit until 31 Mar., 2003. No significant differences were detected among treatments.

To increase the utility of land preparation, existing plastic mulch, and microirrigation, secondary crops are planted alongside winter annual strawberries (*Fragaria ananassa* Duch.) near the end of the season. Planting takes place 5-6 weeks before the end of the strawberry production season dependant on strawberry variety. This practice allows for earlier harvesting of the secondary crop, enabling producers to take advantage of a marketing window when few other regions are producing cucurbits or peppers. The effect of these secondary crops on marketable yield of strawberry has not been investigated. Common secondary crops are squash (*Cucurbita pepo* L.), cantaloupe (*Cucumis melo*, var. *reticulatus* Naud.), pickles (*Cucumis sativus* L.), and peppers (*Capsicum annuum* L.).

Strawberry is an insurable crop. However, insurance policies do not allow for intercropping of strawberry with secondary crops. Double cropping, under current guidelines, invalidates policies. Strawberry producers typically double crop strawberries when there has been a poor strawberry production season. The purpose of this study was to determine the effect of intercropping strawberry with the most common secondary crops.

Material and Methods

A study was instituted that examined the effect of interplanting squash, cantaloupe, and pickles from seed, and cantaloupe and pepper from transplants, on yield of strawberry. Plantings of secondary crops occurred on 28 Feb., 7 Mar., 14 Mar., and 21 Mar. 2003 into a stand of 'Strawberry Festival' strawberries spaced 15 inches apart in row and 12 inches be-

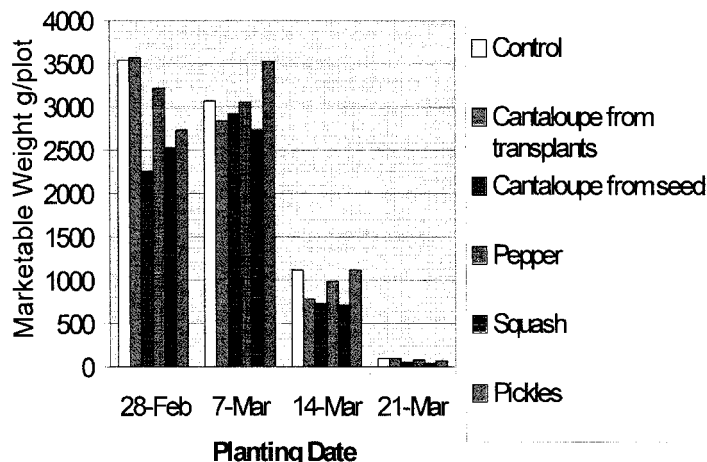


Fig. 1. Effect of interplanting four crops on marketable yield of strawberry.

tween rows. Treatments were replicated three times. Cantaloupe spacing was 30 inches down the middle of the bed, squash and pickle spacing was 15 inches in the middle of the bed, and pepper spacing was a double row on the bed 15 inches between plants and 10 inches between rows. Nitrogen fertilization was increased from 0.75 lb/acre per d (IFAS recommendation, Maynard and Olson, 2002) to 0.83 lb/acre per d, a 10% increase to compensate for additional plants in the field. Data was collected from the time of planting the second crop into the plots until the end of the harvest period. Data were collected for marketable yield, number of marketable berries, and cull fruit until 31 Mar. 2003. Data was subjected to ANOVA procedures using SAS statistical software.

Results and Discussion

No significant differences were detected among treatments ($p < 0.05$) for yield (Fig. 1), number of berries (Fig. 2), or number of cull fruit (data not presented). Ease of harvest

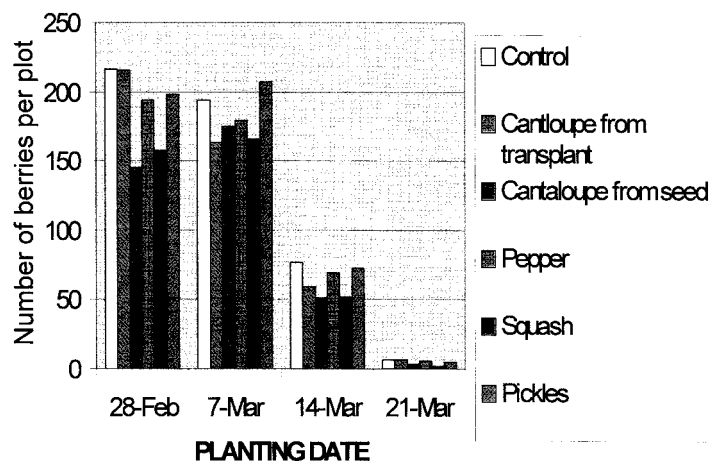


Fig. 2. Effect of interplanting four second crops on number of marketable berries.

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for strawberries was not affected by any secondary crop. These data suggest that there is no detriment to strawberry fruit yield from interplanting with squash, pickles, cantaloupe, or peppers planted up to 31 d before the end of fruit harvest. This is only true when the strawberry population of the field has been maintained and no plants removed for the planting of the second crop. Great care should be taken to apply pesticides that are labeled for both crops planted together in the field. Therefore, this practice should not be a reason to inval-

idate strawberry producers crop insurance as long as strawberry planting density is not reduced and proper pesticide selection is used.

Literature Cited

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