

A Comparison of Three Non-Migratory Systems for Managing Honey Bees (*Apis mellifera* L.) in Minnesota

Part I: Management and Productivity^{1,2,3}

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Revised Manuscript Received for Publication Sept. 22, 1989

ABSTRACT

The management practices and productivity of 3 treatments (package colonies, vertical 2-queen, and horizontal 2-queen) were compared on a 2-queen unit basis. Treatments (management systems) were compared at one location in 1986 and at 2 locations in 1987. There were no significant differences in queen acceptance among the treatments. Survival of queens in the vertical 2-queen treatment was significantly lower than in the package colony and horizontal 2-queen treatments. Significantly less brood area was found in the package colony treatment than in the vertical and horizontal 2-queen treatments in mid May. The combined main flow net productivity differed significantly among treatments, with the horizontal 2-queen treatment exhibiting the greatest weight gain.

INTRODUCTION

MANAGING HONEY bees for honey production has interested people for centuries. The advent of modern hives in the mid to late 1800's gave beekeepers more control over the activities of honey bee colonies, which in turn led to increased productivity.

Several non-migratory approaches to honey production have evolved in Canada and the north central United States. Among these, package colonies, overwintered colonies, and



Figure 1. One of the circles in Apiary II containing nine, 2-queen experimental units.