EFFECT OF WEED COMPETITION AT DIFFERENT PERIODS
THROUGHOUT THE GROWTH OF SOYBEAN
ON GROWING AND YIELD

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ABSTRACT

Two field experiments were carried out at the
Agricultural Research and Experiment Station, Fac. of Agric.
at Noisehor in 1979 and 1980 seasons. This experiment
included 8 treatments which were weedy for 21, 42, 63,
84, 105 days from planting beside weedy throughout the
growing season, hoeing and weed-free throughout the grown
season. The tallest plants were obtained by weed-free
throughout the growing season and hoeing treatments followed
by weedy for 21 days from sowing. Seed yield was reduced
by leaving weeds to compete soybean plants over 21 days
from planting. The depression reached to 50% approximately
or more by weedy periods at 63 days from planting.

INTRODUCTION

Soybean plants are severely affected by weed compe-
tition. Many investigators reported that weed competition
reduced soybean yield by 50-75% (Hammerton, 1974; Makarov
and Vatahki, 1976 and Michael, 1976). The first 50-60
days after emergence are the critical period for weed compe-
tition for soybean (Harrison and Oliver, 1977; Kolesnikova
and Blokhi, 1977; Sing and Min, 1977; Burnsise, 1978,

Keeping the soybean row-free from weeds for about
one month after planting gave soybean yields equal to those
from plots kept weed-free throughout the growing season
competed effectively with wild cane (Sorghum bicolor),
where plots were maintained free from other weeds during
the first 4 weeks after planting (Zaveskey and Russ, 1970).
Moreover, soybean yield was reduced when sick lepod (Cassia
obtusifolia, L.) was allowed to compete for as little 4
weeks. The aim of this study is to investigate the effect
of duration of weed competition in soybean to determine
the critical periods of weed crop competition as well as
to estimate the loss in soybean seed yield due to weed
competition.

MATERIALS AND METHODS

Two field experiments were conducted at the Research
and Experimental Station of the Faculty of Agriculture
Noisehor, Zagazig University in 1979 and 1980 seasons.