

## TABLE OF CONTENTS

TABLE OF CONTENTS.....	iv
LIST OF TABLES.....	vii
LIST OF FIGURES.....	ix
LITERATURE REVIEW.....	1
DOUBLE-CROPPED CORN.....	1
RATIONALE FOR DOUBLE-CROPPED CORN IN VIRGINIA.....	1
DOUBLE-CROPPED CORN HYBRID TRIALS.....	2
MAJOR INSECTS AND DISEASES IN CORN PRODUCTION.....	3
EUROPEAN CORN BORER.....	3
STALK ROTS.....	4
EAR ROTS.....	6
CONTROL OF EUROPEAN CORN BORER INDUCED DISEASE.....	6
MAIZE DWARF MOSAIC VIRUS AND MAIZE CHLOROTIC DWARF VIRUS.....	8
INSECT VECTORS OF MDMV AND MCDV.....	10
JOHNSONGRASS.....	10
FACTORS INFLUENCING MDMV AND MCDV IN DOUBLE-CROPPED CORN.....	10
HISTORICAL CORN YIELDS.....	12
THE INFLUENCE OF WEATHER AT SPECIFIC STAGES OF CORN DEVELOPMENT.....	13

DEGREE-DAY MODELS FOR IPM.....	14
FIELD EXPERIMENTS FOR EVALUATION OF INSECTS AND DISEASES IN A DOUBLE-CROPPED CORN SYSTEM FOR VIRGINIA.....	16
MATERIALS AND METHODS.....	16
RESULTS AND DISCUSSION.....	19
1998 DOUBLE-CROPPED CORN EXPERIMENT AT BLACKSBURG.....	19
1998 DOUBLE-CROPPED CORN EXPERIEMENT AT WHITETHORNE.....	19
1999 FULL SEASON CORN EXPERIMENT AT WHITETHORNE.....	23
1999 DOUBLE-CROPPED CORN AT WHITETHORNE.....	24
2000 FULL SEASON CORN EXPERIMENT AT WHITETHORNE.....	25
2000 DOUBLE-CROPPED CORN AT WHITETHORNE.....	27
CONCLUSIONS.....	29
SITE SUITABILITY FOR FULL SEASON AND DOUBLE-CROPPED CORN IN VIRGINIA.....	30
INTRODUCTION.....	30
SCORING METHOD.....	30
PLANTING AND HARVEST DATES.....	32
GROWING SEASON LENGTH.....	33
CORN MODIFIED GROWING DEGREE DAY (MGDD) MODEL.....	35
POTENTIAL EVAPOTRANSPIRATION AND POTENTIAL EVAPOTRANSPIRATION MINUS PRECIPITATION.....	37

PHOTOPERIOD.....	39
SOIL CHARACTERISTICS.....	40
SLOPE AND ASPECT.....	40
RESULTS.....	49
CONCLUSIONS.....	61
LITERATURE CITED.....	62