CONSERVATION TILLAGE CONSERVATION TILLAGE
ECONOMIC PERFORMANCE ECONOMIC PERFORMANCE
2004

Dr. Karen Klonsky Dr. Karen Klonsky
Dept. of Ag. & Resource Economics Dept. of Ag. & Resource Economics
University of CA, Davis University of CA, Davis

TOMATO TREATMENTS REATMENTS

• Standard tilage Standard tilage
• Conventional Conventional
• Organic
• Winter legume cover crop Winter legume cover crop

• Conservation tilage Conservation tilage
• Conventional Conventional
• Organic
• Winter legume cover crop Winter legume cover crop

TOMATO CULTURAL ULTURAL COSTS
$ PER ACRE 2004 $ PER ACRE 2004

TOMATO FUEL USE 2004
Galons per Acre Galons per Acre

TOMATO MACHINE LABOR 2004 ABOR 2004
Hours per Acre Hours per Acre

TOMATO HAND LABOR 2004 ABOR 2004
Hours per Acre Hours per Acre

TOMATO CULTURAL ULTURAL COSTS
Conventional System 2004 Conventional System 2004

TOMATO CULTURAL ULTURAL COSTS
Winter Cover Crop System 2004 Winter Cover Crop System 2004
$ 665 $ 645

TOMATO CULTURAL ULTURAL COSTS
Organic System 2004 Organic System 2004

$ 800

$ 973

DIFFERENCE IFFERENCE inOPERATING PERATING COSTS BETWEEN
CONSERVATION ONSERVATION andSTANDARD TANDARD TILLAGE
Tomato 2004, Conventional Tomato 2004, Conventional

SAVINGS $ 18 SAVINGS $ 18 ADDITIONAL COSTS $ 4 ADDITIONAL COSTS $ 4

DIFFERENCE IFFERENCE inOPERATING PERATING COSTS BETWEEN
CONSERVATION ONSERVATION andSTANDARD TANDARD TILLAGE
Tomato 2004, Winter Cover Crop Tomato 2004, Winter Cover Crop

SAVINGS $ 38 SAVINGS $ 38 ADDITIONAL COSTS $ 18 ADDITIONAL COSTS $ 18

DIFFERENCE IFFERENCE inOPERATING PERATING COSTS BETWEEN
CONSERVATION ONSERVATION andSTANDARD TANDARD TILLAGE
Tomato 2004, Organic Tomato 2004, Organic

Residue

management, $12 management, $12

Hand weeding, $199 Hand weeding, $199
Ground prep, $ 22 Ground prep, $ 22

SAVINGS $ 41 SAVINGS $ 41 ADDITIONAL COSTS $ 210 ADDITIONAL COSTS $ 210

Cover crop, $7 Cover crop, $7

CORN TREATMENTS REATMENTS

• Standard tilage Standard tilage
• Conventional Conventional
• Organic
• Winter legume cover crop Winter legume cover crop

• Conservation tilage Conservation tilage
• Conventional Conventional
• Organic
• Winter legume cover crop Winter legume cover crop

CORN CULTURAL ULTURAL COSTS perACRE 2004 CRE 2004

CORN FUEL USE 2004
Galons per Acre Galons per Acre

CORN MACHINE LABOR 2004 ABOR 2004
Hours per Acre Hours per Acre

CORN HAND LABOR 2004 ABOR 2004
Hours per Acre Hours per Acre

CORN CULTURAL ULTURAL COSTS per ACRE Conventional System 2004 Conventional System 2004

$ 416

$ 271

CORN CULTURAL ULTURAL COSTS per ACRE Winter Cover Crop System 2004 Winter Cover Crop System 2004

$ 393
$332

CORN CULTURAL ULTURAL COSTS per ACRE Organic System 2004 Organic System 2004

$ 510
$ 437
$10

DIFFERENCE IFFERENCE inOPERATING PERATING COSTS BETWEEN
CONSERVATION ONSERVATION andSTANDARD TANDARD TILLAGE
Corn 2004, Conventional 2004, Conventional

Residue management, $54 Residue management, $54

Ground prep, $16 Ground prep, $16

SAVINGS $145 SAVINGS $145 ADDITIONAL COSTS $ 1 ADDITIONAL COSTS $ 1

Weed control, $75

DIFFERENCE IFFERENCE inOPERATING PERATING COSTS BETWEEN
CONSERVATION ONSERVATION andSTANDARD TANDARD TILLAGE
Corn 2004, Winter Cover Crop System 2004, Winter Cover Crop System

Residue management, $ 58 Residue management, $ 58

Ground prep, $14 Ground prep, $14

SAVINGS $ 87 SAVINGS $ 87 ADDITIONAL COSTS $ 0 ADDITIONAL COSTS $ 0

Cover crop, $ 8

Weed control $7

DIFFERENCE IFFERENCE inOPERATING PERATING COSTS BETWEEN
CONSERVATION ONSERVATION andSTANDARD TANDARD TILLAGE
Corn 2004, Organic System 2004, Organic System

Residue management, $ 42 Residue management, $ 42

Ground prep, $26 Ground prep, $26

SAVINGS $ 75 SAVINGS $ 75 ADDITIONAL COSTS $3 ADDITIONAL COSTS $3

Cover crop, $ 7

Irigation $3

TAKE HOME IDEAS

(same as 2003 results) (same as 2003 results)

• There was more diference in yields There was more diference in yields
among the management systems than among the management systems than
between the two tilage systems. between the two tilage systems.

• The tomato yields were low in al The tomato yields were low in al
systems, the corn yields were low in al systems, the corn yields were low in al
but the conventional system. but the conventional system.

TAKE HOME IDEAS

• Conservation tilage has the potential to reduce Conservation tilage has the potential to reduce
costs for corn and tomato. costs for corn and tomato.
• Specificaly ground prep, residue management, Specificaly ground prep, residue management,
and weed control costs can be reduced. and weed control costs can be reduced.
• The cost savings for tomato were ofset by extra The cost savings for tomato were ofset by extra
ground prep operations to shape beds. ground prep operations to shape beds.
• Weed control costs were lower in CT than ST Weed control costs were lower in CT than ST
for al systems except organic tomato. for al systems except organic tomato.
• Residue management was lower for CT in al Residue management was lower for CT in al
systems and both crops. systems and both crops.