

# Contents

|                                                                                                                                         |    |
|-----------------------------------------------------------------------------------------------------------------------------------------|----|
| Forward                                                                                                                                 |    |
| John F. Bradley and Michael D. Mullen .....                                                                                             | v  |
| Tillage and Cover Crop Effects on Nitrate Leaching                                                                                      |    |
| Donald D. Tyler, Glenn V. Wilson, Joanne Logan,<br>Grant W. Thomas, Robert L. Blevins, William E. Caldwell,<br>and Mark Dravillis ..... | 1  |
| Horizontal and Vertical Distributions of Soil C, N, P, K and pH<br>in Continuous No-tillage Corn Production                             |    |
| M.D. Mullen and D.D. Howard ....                                                                                                        | 6  |
| Nitrogen Management of Tropical Corn in a Reseeding Crimson<br>Clover Conservation-tillage System                                       |    |
| D.W. Reeves .....                                                                                                                       | 11 |
| Sustaining Soil Organic Matter in No-tillage Corn Production                                                                            |    |
| W. W. Frye and R. L. Blevins .....                                                                                                      | 15 |
| Cotton Response to Vetch, Pix, and N Rates                                                                                              |    |
| N. W. Buehring and D. B. Reginelli .....                                                                                                | 18 |
| Effect of Nitrogen Rate, Tillage Method and Cover Crop<br>on Biomass Yield of Kenaf                                                     |    |
| C.H. Hovermale .....                                                                                                                    | 26 |
| No-tillage Planted Tropical Corn Yield Response to Nitrogen Fertilizer                                                                  |    |
| R.N. Gallaher, T.A. Lang, K. Gallaher,<br>and E.L. Ashburn .....                                                                        | 30 |
| Overseeding Winter Annuals into Volunteer Summer Annual Sod                                                                             |    |
| Bill Brock, Joey Murphey, Billy Johnson, David Lang,<br>and David Ingram .....                                                          | 34 |
| Farm-scale Validation of Conservation Tillage Systems for Sandy Soils<br>on the Texas High Plains                                       |    |
| J. W. Keeling, W. M. Lyle, J. R. Supak<br>and J. R. Abernathy .....                                                                     | 38 |

|                                                                                                                                                                                                          |    |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| Cotton Response to Cover Crops and Tillage in the Brown Loam<br>of Mississippi<br>H. Bloodworth and J. Johnson .....                                                                                     | 42 |
| Double- and Mono-cropped Corn and Soybean Response to Tillage<br>Glenn R. Bathke, Paul M. Porter, Dan Robinson,<br>and Jacob Gibson .....                                                                | 46 |
| Conservation Tillage Practices for Water-seeded Rice<br>P.K. Bollich .....                                                                                                                               | 53 |
| Canopy Development of Wheat in Conventional, Reduced, and<br>No-till Tillage Systems<br>S. H. Moore, J. L. Kovar, M. P. Braverman, and<br>P. R. Vidrine .....                                            | 56 |
| Influence of Tillage Methods on Wheat Production Following Different Crops<br>D.L. Wright and B.T. Kidd .....                                                                                            | 59 |
| Optimal Plant Spacings for Late Season Tropical Corn Production<br>T.A. Lang and R.N. Gallaher .....                                                                                                     | 63 |
| Using Full-sib Recurrent Selection in a Tropical Open Pollinated Corn<br>Population for Cultivar Use in Sustainable Agricultural Systems<br>J.R. Espaillet and R.N. Gallaher .....                       | 66 |
| Comparison of No-tillage Planted Tropical and Temperate Corn for Yield<br>and Nitrogen Concentration of the Grain Based on Endosperm Type<br>S. Edme, R.N. Gallaher, E.L. Ashburn, and K. Gallaher ..... | 70 |
| Influence of Weed Interactions of Conservation-tillage Systems<br>and Weed Management on Cotton<br>W. K. Vencill and G. W. Langdale .....                                                                | 74 |
| Influence of No-tillage Practices on Tobacco Thrips Infestations in Cotton<br>J. N. All, B. H. Tanner, and P. M. Roberts .....                                                                           | 77 |
| Tillage and Crop Rotation Effects on Sustaining Soybean Yields<br>on a Hapludult<br>J. H. Edwards, D. L. Thurlow, J. T. Eason and M. Ruf .....                                                           | 79 |

|                                                                                                                                                                                      |     |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Multiple Cropping as a Sustainable Agriculture Practice<br>V.L. Jones .....                                                                                                          | 85  |
| Field Changes after 10 Years of Continuous No-till Soybeans<br>J. R. Johnson, Harold Hurst, Gene Stevens .....                                                                       | 88  |
| Establishment of Winter Forages into Summer Annual or Perennial Grass Sods<br>David Lang, David Ingram, Bill Brock, and Billy Johnson .....                                          | 94  |
| Comparison of Crop Rotation Net Returns under No-till and<br>Conventional Tillage<br>Nathan S. Crabtree, Lucas D. Parsch, Lawrence R. Oliver,<br>and Ira L. Eldridge .....           | 98  |
| Wheat Straw Management, Variety Selection, and Row Spacing for<br>Double-cropped Soybean Production<br>H.J. Mascagni, T.C. Keisling, E.D. Vories, Mike May,<br>and L.R. Oliver ..... | 103 |
| Reduced Tillage for Cotton Production in Arkansas<br>T.C. Keisling, Marilyn McClellan, and R.E. Frans .....                                                                          | 108 |
| Fertilizer Solution Placement with a Coulter-nozzle Applicator for No-till<br>J. E. Morrison, Jr. and K. N. Potter .....                                                             | 113 |
| Role of Winter Cover Crops in Reduction of Nitrate Leaching<br>W.L. Hargrove, J.W. Johnson, J.E. Box, Jr. and P.L. Raymer .....                                                      | 114 |
| Effect of Intercropping and Residue Management on Soil Water Depletion,<br>Plant Biomass and Grain Production<br>S. Some, W.L. Hargrove, and D.E. Radcliffe .....                    | 120 |
| Appendix: Milan No-till Crop Production Field Day Program .....                                                                                                                      | 126 |