## Table of Contents

**Features**

134  
Editorial: Why a special issue?  
By Max Schnepf

136  
Viewpoint: Why conservation tillage?  
By Peter C. Myers

140  
What is conservation tillage?  
By Jerry V. Mannering and Charles R. Fenster

144  
Conservation tillage for erosion control  

152  
Soil suitability for conservation tillage  
By Harold R. Cosper

156  
Conservation tillage use  
By Lee A. Christensen and Richard S. Magleby

158  
Sharing conservation tillage information  
By James E. Lake

160  
Progress in no-till  
By Arnold D. King

162  
Obstacles to adoption of conservation tillage  
By Peter J. Nowak

166  
Land tenure and adoption of conservation tillage  
By Linda K. Lee

169  
Selling conservation tillage

182  
Equipment modification and innovation for conservation tillage  
By D. C. Erbach, J. E. Morrison, and D. E. Wilkins

186  
Water quality consequences of conservation tillage  
By J. L. Baker and J. M. Laflen

194  
Weed control: A panel discussion

201  
Problems with conservation tillage  
By Maureen K. Hinkle

207  
Energy implications of conservation tillage  
By William Lockeretz

212  
Conservation tillage impacts on wildlife  
By Randy D. Rodgers and James B. Wooley

214  
Legumes as a cover crop and source of nitrogen  
By G. W. Martin and J. T. Touchton

217  
Legumes in conservation tillage systems: A research perspective  
By J. F. Power, R. F. Follett, and G. E. Carlson

219  
Conservation tillage in Appalachia  
By J. N. Jones, Jr., H. D. Perry, E. L. Mathias, M. C. Carter, R. J. Wright, J. L. Hern, and O. L. Bennett

222  
No-till pasture renovation  
By L. R. Vough and A. M. Decker

224  
Insect and slug pests in forage legume seedlings  
By R. A. Byers, R. L. Mangan, and W. C. Templeton, Jr.

227  
Conservation tillage for forage Brassicas  
By Gerald A. Jung, Willis L. McClellan, Robert A. Byers, Robert E. Kocher, Lynn D. Hoffman, and Harold J. Donley

231  
Wide beds with conservation tillage  
By John E. Morrison, Jr., and Thomas J. Gerik

233  
Irrigation + dryland farming + limited tillage: A profitable combination  
By Allen F. Wiese and Paul W. Unger

237  
Conservation tillage for wind erosion control  
By John A. Knapp

239  
Atrazine carryover in conservation tillage systems  
By D. E. Smika and E. David Sharman

240  
Conservation tillage in small grain production  
By John D. Walker

244  
STEPP, an interagency, multidisciplinary approach to soil conservation  
By Robert E. McDole and Stephen A. Reinertson

246  
Fertilizer placement: A primer  
By Larry Murphy
Research reports

250 Fertilizer placement for cereal root access
By Betty Klepper, Paul E. Rasmussen, and Ron W. Rickman

253 Conservation tillage in Ontario
By J. W. Ketcheson and D. P. Stonehouse

255 Changing farmer attitudes: An Ontario experience
By Jane Sadler Richards

258 Farmer experience with conservation tillage

267 Conservation tillage: Where to from here?
By Jerry C. Ritchie and Ronald F. Follett

281 Factors affecting farmers' adoption of conservation tillage
Gordon L. Bultena and Eric O. Hoiberg

284 Conservation tillage in an Iowa county
Betty L. Wells, Timothy O. Borich, and Jack D. Frus

287 Impact of tenure status on economic incentives for conservation tillage
Herbert R. Hinman, Steve G. Mohasci, and Douglas L. Young

291 Economics of conservation tillage in Iowa
Robert W. Jolly, William M. Edwards, and Donald C. Erbach

294 Economics of conservation tillage systems for winter wheat production in Oklahoma
Francis M. Epplin, Thomas F. Tice, Steven J. Handke, Thomas F. Peeper, and Eugene G. Krenzer, Jr.

297 Soil and nutrient runoff losses with in-row, chisel-planted soybeans

301 Influence of conservation tillage on soil properties
R. L. Blevins, M. S. Smith, G. W. Thomas, and W. W. Frye

305 Conservation tillage for long-term amelioration of plow pan soils

307 Soil compaction constraints on conservation tillage in the northern Corn Belt
W. B. Voorhees and M. J. Lindstrom

312 Residue management and cultural practices for a semiarid region
J. D. Bilbro and D. W. Fryrear

315 Long-term annual runoff and soil loss from conventional and conservation tillage of corn
Robert E. Burwell and Larry A. Kramer

Cover
Chisel plowing small grain stubble. Photo and cover design courtesy of Deere & Company.