



**Publications – Dr Rohan W Rainbow – Managing Director**  
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**Theses and Books:**

- Rainbow, R.W. and Derpsch, R. (2011)** Advances in no-tillage farming technologies and soil compaction management in broad-acre rainfed farming systems. *Chapter 39 in Tow, P., Cooper, I., Partridge, I., and Birch, C. (Eds) Rainfed Farming Systems Springer.*
- Rainbow R.W. (2008)** Integration of no-till and precision agriculture technologies and future challenges to conservation agriculture in Australia. *In World Association of Soil and Water Conservation Special Publication No.3. - No-Till Farming Systems. pp 223-246.*
- Rainbow, R.W., and Slee D. (2005)** The Essential Guide to No-Till Farming. *AGRO-SOYUZ (Russian translation).*
- Rainbow, R.W., and Slee D. (2004)** The Essential Guide to No-Till Farming. *SANTFA*
- Rainbow, R.W. (2000).** Spear soil opener effects on soil physical properties & impact on wheat production. *PhD. Thesis submitted June 2000, Department of Agronomy and Farming Systems, University of Adelaide, Roseworthy Campus.*
- Rainbow, R.W. (2000).** Higher sowing rates can balance low germination. *In Wallwork, S. (Editor) MinTill Drill, Kondinin Group, pp 156-157.*
- Rainbow, R.W. (2000).** Fertiliser placement method can affect yield. *In Wallwork, S. (Editor) MinTill Drill, Kondinin Group, pp 158-160.*
- Rainbow, R.W. and Dare, M.W. (2000).** Banding nitrogen improves crop yield. *In Wallwork, S. (Editor) MinTill Drill, Kondinin Group, pp 161-162.*
- Rainbow, R.W. and Wallwork, S. (2000).** Press wheels promote better crop emergence. *In Wallwork, S. (Editor) MinTill Drill, Kondinin Group, pp 278-283.*
- Rainbow, R.W. (1993)** Press wheels for better production. *(Published in Casey, M.F. and Boyle, S.M. (Eds.) The Seeding Edge 2nd Edition Kondinin Group p 87-89)*
- Rainbow, R.W. (Ed.) (1989)** The Mallee Legume Book. *(Department of Agriculture and Rural Affairs Victoria)*

**Invited speaker conference papers**

- Rainbow, R.W. (2011)** Fungicide strategies for managing the Ug99 stem rust threat - Australian and international perspectives. *Borlaug Global Rust Initiative Technical Workshop 13-16 June 2011 in St. Paul, Minnesota USA.*
- Rainbow, R.W. (2005)** Managing soil compaction in a no-till system. *Proceedings of the 2<sup>nd</sup> International Conference on Sustainable and Effective Agriculture Using a No-Till Systems Approach 17<sup>th</sup>-20<sup>th</sup> August 2005 Dnipropetrovs'k Ukraine. pp 123-138.*

**Editorial reference group for: Proffitt, T., Bramley, R., Lamb, D. and Winter, E. (2006)** Precision Viticulture – A new era in vineyard management and wine production. *Wine Titles.*

**Technical reports:**

- Holloway, R., Rainbow, R.W., Growden, B. (2002).** Improving SA crop productivity with Fluid fertiliser technology. *SAGIT Final report.*
- Rainbow, R.W. (2001).** Optimisation of nitrogen, phosphorus and zinc fertiliser placement for improved grain yield production and quality. *GRDC Final Report DAS 250SR.*

- Rainbow, R.W., Mayfield, A.M. and Gill, G. (2000).** Effective use of soil incorporated herbicides and tillage systems for the control of weeds in a direct drill seeding system. *GRDC Final Report DAS 248SR.*
- Mayfield, A.M. and Rainbow, R.W. (1997).** Weed control and crop production using trifluralin in direct drilling systems. *SA Grains Industry Trust Fund Final Project report AM 1/96.*
- Rainbow, R.W. (2000).** Optimisation of Seeder Design for Improved Field Crop Production. *GRDC Final Report DAS 135SR.*
- Rainbow, R.W. (1998).** Canadian and US Prairie reduced tillage crop production fellowship. *GRDC Senior Fellowship Final Report SF14A.*
- Slattery, M.G. and Rainbow, R.W. (1995)** Investigation of Seeder Related Factors on Seed Placement, crop establishment, Growth and Yield of Wheat. *SARDI Report Series No.1.*

**Computer Models:**

- Krause, M. and Rainbow, R.W. (2001).** Operation FerTill – Whole farm economic model for improved fertiliser placement systems. *SARDI CD-ROM Excel based computer software model.*

**Conference/ Workshop papers:**

- Rainbow, R.W. (2005).** Use of controlled traffic systems with auto-steer to enhance inter-row cropping and opportunities for introduction of non-chemical weed control systems. *Proceedings of the Third Australian Conference on Controlled Traffic Farming 20<sup>th</sup>-22<sup>nd</sup> July 2005 The University of Queensland, Gatton Queensland. pp 39-41.*
- Rainbow, R.W. (2003).** Stubble Management in no-till – Overcoming the issues with adoption. *Proceedings of the WA No-Till farmers Association Conference, 6<sup>th</sup>-7<sup>th</sup> March 2003 Perth WA. pp 29-34.*
- Rainbow, R.W. (2003).** Advances in no-till – Improving the seedbed environment. *Proceedings of the WA No-Till farmers Association Conference, 6<sup>th</sup>-7<sup>th</sup> March 2003 Perth WA. pp 51-57.*
- Rainbow, R.W. (2000).** Fertiliser placement research. *Fertiliser Technology Workshop Manual pp 20-22, Conservation Farmers Inc. Queensland, 28 February - 9 March 2000, Queensland.*
- Rainbow, R.W. (2000).** Seed drill soil opener design and effects of fertiliser placement for optimum crop production. *Proceedings 'SEAg 2000 Growing Links' Conference on Engineering in Agriculture 2-5 April 2000 Adelaide SA.*
- Rainbow, R.W., Cass, A.M., Bellotti, W.D. and Riley, T.W. (2000).** Spear soil opener effects on soil physical properties and impact on wheat production. *Proceedings of 4th International Conference on Soil Dynamics (ICSD-IV) 26-30 March 2000 Adelaide SA.*
- Mayfield, A., Rainbow, R.W., Dare, M.W., Presser, R. Nairn, T.J. (1997)** Weed control and crop production using trifluralin in direct drilling systems. *(Proc. Workshop on Farming Systems Developments 1997, Waite Inst., Adelaide, SA, Mar. 1997 98-99).*
- Rainbow, R.W., Bellotti, W.D., Cass, A. and Riley, T.W. (1997)** Spear soil opener impact on soil physical properties and development of wheat. *(Proc. Workshop on Farming Systems Developments 1997, Waite Inst., Adelaide, SA, Mar. 1997.155-156).*
- Rainbow, R.W. and Dare, M.W. (1997)** Summary of nitrogen and phosphorus fertiliser placement research 1993-1995. *(Proc. Workshop on Farming Systems Developments 1997, Waite Inst., Adelaide, SA, Mar. 1997.128-129).*
- Rainbow, R.W., Bellotti, W.D., Cass, A. and Riley, T.W. (1996)** The effect of spear type seeding point shape and combined deep row aligned preceding tillage on soil physical properties, plant emergence, growth and

- grain yield of wheat (*Proc. Workshop on Farming Systems Developments 1997, Waite Inst., Adelaide, SA, Mar. 1996. 111-112*).
- Rainbow, R.W., Stevens, M.J. and Parkinson, A.J. (1995)** Seed Drill Design Field Research (*Proc. Cropping Zone Technical Update, Longerenong College, November 1995. 109-110*).
- Rainbow, R.W., Bull, B.C., Stevens, M.J. and Kearsley, B.A. (1994)** Effects of N and P placement on cereal crop emergence and grain yield. (*Proc. Tillage. Syst., Rotatn., Nutrtn. and Assoc. Root Diseases Workshop, Waite Inst., Adelaide, SA, Mar. 1994. 74-75*)
- Rainbow, R.W. and Slattery M.G. (1994)** Modification of seed drill design and point selection effects on cereal crop establishment and grain yield. (*Proc. National workshop on Narrow Sowing Points, Adelaide September 1994, 17-20*).
- Rainbow, R.W., Slattery, M.G. and Stevens, M.J. (1994)** Modification of seed drill design improves crop establishment and grain yields. (*Conference on Engineering in Agriculture, 1994 Lincoln University, Christchurch, NZ, 21-24 Aug. 1994 Paper No SEAg 94/024*).
- Rainbow, R.W., Stevens, M.J. and Slattery, M.G. (1994)** Seed drill modifications for improved field crop production. (*Proc. Tillage. Syst., Rotatn., Nutrtn. and Assoc. Root Diseases Workshop, Waite Inst., Adelaide, SA, Mar. 1994. 20-21*)
- Rainbow, R.W. and Yeatman, T. (1994)** Improving the Seeding System. (*Proc. National workshop on Narrow Sowing Points, Adelaide September 1994, 33-36*).
- Rainbow, R.W. (1993)** Plant sampling methods for seed drill research. (*Proc. 7th Aust. Agron. Conf. Adelaide 1993. 397*)
- Rainbow, R.W. (1993)** Development of a new tine for deep cultivation and accurate seed placement (*Proc. Tillage. Syst., Rotatn., Nutrtn. and Assoc. Root Diseases Workshop, Waite Inst., Adelaide, SA, Mar. 1993.30-31*)
- Rainbow, R.W. and Slattery M.G. (1993)** Crop establishment improvement from narrow spear points in South Australia. (*Proc. 7th Aust. Agron. Conf. Adelaide 1993. 396*)
- Rainbow, R.W. and Slattery, M.G. (1993)** Seeder design field research. (*Proc. Tillage. Syst., Rotatn., Nutrtn. and Assoc. Root Diseases Workshop, Waite Inst., Adelaide, SA, Mar. 1993.26-27*)
- Rainbow, R.W., Slattery, M.G. and Norris, C.P. (1992)** Effects of seeder design specification on emergence and early growth of wheat. (*Proc. Conf. Eng. in Ag., Albury, NSW, Oct. 1992. I.E. Aust. NCP92/11:13-20*)
- Rainbow, R.W. and Slattery, M.G. (1992)** Seeder ground tool effects on the emergence and early growth of wheat. (*Proc. Tillage. Syst., Rotatn., Nutrtn. and Assoc. Root Diseases Workshop, Waite Inst., Adelaide, SA, Mar. 1992. 27-28*)
- Rainbow, R.W. and Slattery, M.G. (1992)** The effects of press wheel type and set on the emergence and early growth of Wheat. (*Proc. Tillage. Syst., Rotatn., Nutrtn. and Assoc. Root Diseases Workshop, Waite Inst., Adelaide, SA, Mar. 1992. 29-30*)
- Slattery, M.G., Rainbow, R.W. and Burge, A.W. (1993)** Machinery factors influencing seed placement in a sandy soil. (*ASAE/CSAE Summer Meeting Spokane, Washington. Paper No. 931075*)
- Slattery, M.G. and Rainbow, R.W. (1993)** Comparison of seed distribution of four narrow points. (*Proc. Tillage. Syst., Rotatn., Nutrtn. and Assoc. Root Diseases Workshop, Waite Inst., Adelaide, SA, Mar. 1993.32-33*)
- Slattery, M.G. and Rainbow, R.W. (1992)** Development of a seed placement test rig. (*Proc. Conf. Eng. in Ag., Albury, NSW, Oct. 1992. . I.E. Aust. NCP92/11:365*)

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- Slattery, M.G. and Rainbow, R.W. (1991)** The University of South Australia seed placement testing for the evaluation of wheat planting equipment. (*Proc. Tillage. Syst., Rotatn., Nutrtn. and Assoc. Root Diseases Workshop, Waite Inst., Adelaide, SA, Mar. 1991. 18-19*)
- Slattery, M.G. and Rainbow, R.W. (1990)** Investigation of seeder related factors on seed placement, crop establishment, growth and yield of wheat. *Proc. Conf. Eng. in Agric. 1990. Toowoomba. I.E. Aust. NCP 90/13; (Conf. brief).*
- Smith, D.B., Rainbow, R.W., Faulkner, M., Chigwidden, S.J., Braunack-Mayer, E.T. (1995)** Row Spacing - Do wider seed rows reduce yield? (*Proc. Tillage. Syst., Rotatn., Nutrtn. and Assoc. Root Diseases Workshop, Waite Inst., Adelaide, SA, Mar. 1995. 40-41*).
- Wilhelm, N. & Rainbow, R.W. (2000).** *Avoiding toxicity from fertilizer placed with the seed.* SA Cropping Systems Update pp 41-45, 16-17 February 2000, Adelaide SA.

**Fact sheets:**

- Rainbow, R.W. (2004)** Preparing for no-till grain growing. *SA Grain Industry Trust Fact Sheet.*
- Rainbow, R.W. (2003)** Getting Into precision agriculture. *SA Grain Industry Trust Fact Sheet.*
- Rainbow, R.W. (2003)** Getting Into no-till cropping. *SA Grain Industry Trust Fact Sheet.*
- Rainbow, R.W. (1994)** Press wheels and their use in seeding. (*Fact Sheet AGDEX 137/33 Primary Industries SA. June 1994.*)

**Technical Publications:**

- Rainbow, R.W. and Bennet, M. (2006).** Long term impact of no-till on crop nitrogen. *SANTFA The No-Till Journal Vol 3 (2) pp30-31.*
- Rainbow, R.W. (2006).** Variable rate fungicide application. *SANTFA The No-Till Journal Vol 3 (2) pp35-36.*
- Rainbow, R.W. (2006).** Holistic approach to weed management in no-till. *SANTFA The No-Till Journal Vol 3 (2) pp 43-45.*
- Rainbow, R.W. (2006).** Alternate crop sowing options with autosteer. *SANTFA The No-Till Journal Vol 2 (1) p18.*
- Rainbow, R.W. (2004).** DGPS signal update. *PrecisionAgNews Vol 2 (2) p 29.*
- Rainbow, R.W. (2004).** Australia's national maritime DGPS network. *PrecisionAgNews Vol 2 (2) p 30.*
- Rainbow, R.W. (2004).** Geocentric Datum of Australia. *PrecisionAgNews Vol 2 (2) pp 31-32.*
- Rainbow, R.W. (2004).** CANBus ISO 11783 - An emerging standard. *PrecisionAgNews Vol 2 (2) pp 33-35.*
- Rainbow, R.W. (2004).** Can we re-think the way herbicides are applied?. *SANTFA The No-Till Journal Vol 1 (1) p 18.*
- Rainbow, R.W. (2004).** Preparing for no-till grain growing. *SANTFA The No-Till Journal Vol 1 (1) pp 19-20.*
- Rainbow, R.W. (2003).** *Drive towards no-till. Power Farming One-Pass Report 2003 113 (1): pp 30-32.*
- Rainbow, R.W. (2003).** Getting into precision agriculture - The basics. *PrecisionAgNews Vol 2 (1) pp 4-5.*
- Rainbow, R.W. (2003).** Getting into no-till cropping. *SANTFA Newsletter Vol 2 (5) p 68.*
- Rainbow, R.W. (2003).** Understanding SBU and fertiliser toxicity. *SANTFA Newsletter Vol 2 (5) pp 69-71.*

- Rainbow, R.W. (2002).** Advances in no-till. *PIRSA Rural Solutions & SARDI Crop Harvest report 2002/03 pp 187-189.*
- Rainbow, R.W. (2002).** Mechanics of root growth and emergence. *SANTFA Newsletter Vol 2 (3) p 40.*
- Rainbow, R.W. (2002).** What is an ideal seedbed? *SANTFA Newsletter Vol 2 (3) pp 41-43.*
- Rainbow, R.W. (2002).** Measuring soil compaction and hardpans. *SANTFA Newsletter Vol 2 (1) p 4.*
- Rainbow, R.W., Mayfield, A.M., Gill, G. (2002).** Soil incorporated herbicides enhance weed control. *Farming Ahead Vol 122 (February) pp 46-48.*
- Rainbow, R.W. (2001).** Improving no-till sowing systems. *PIRSA Rural Solutions & SARDI Crop Harvest report 2001/02 pp 213-215.*
- Rainbow, R.W. (2001).** Reducing energy inputs in crop production. *PIRSA Rural Solutions & SARDI Crop Harvest report 2001/02 p 220.*
- Rainbow, R.W., Long, W. (2001).** Controlled traffic farming. *SANTFA Newsletter Vol 1 (5) p 87.*
- Rainbow, R.W., Mayfield, A.M., Gill, G. (2001).** Effective use of soil incorporated herbicides in a no-till seeding system *SANTFA Newsletter Vol 1 (5) pp 90-92.*
- Rainbow, R.W. (2001).** Yearly zinc application offers yield benefits. *Farming Ahead Vol 116 (August) pp 40-42.*
- Rainbow, R.W. (2001).** Banded urea improves brome grass control. *Farming Ahead Vol 110 (February) pp 47-48.*
- Rainbow, R.W. (2001).** Residual fertiliser placement benefits. *SANTFA Newsletter Vol 1 (3) pp 54-56.*
- Rainbow, R.W. (2000).** Tillage and urea placement effects on brome grass populations. *SANTFA Newsletter Vol 1 (2) p 42.*
- Rainbow, R.W. (2000).** Seedbed utilisation for better fertiliser use. *Australian Grain 9 (6): pp 46-49.*
- Rainbow, R.W. (2000).** Calculating safe spread rates. *Power Farming One-Pass Report 2000 109 (3): pp 2-3.*
- Rainbow, R.W. (2000).** Closer to the perfect placement. *Power Farming One-Pass Report 2000 109 (3): pp 4-5.*
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- Rainbow, R.W. (2000).** Five steps to minimum tillage. *PIRSA Rural Solutions & SARDI Crop Harvest report 1999/2000 p 177.*
- Rainbow, R.W. (2000).** Effect of seeder design on the seeding system. *PIRSA Rural Solutions & SARDI Crop Harvest report 1999/2000 pp 179-180.*
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- Rainbow, R.W. and Dare, M.W. (1999).** Deep banding nitrogen improves yields. *Farming Ahead, Vol 88 (April) pp 59-60.*
- Rainbow, R.W., Dare, M.W., and Nairn, T.J. (1999).** Operation FerTill. *PIRSA Rural Solutions & SARDI Crop Harvest report 1998/1999 pp 132-133.*
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- E. Tescher-Johnston and R.W. Rainbow (1997).** Soil Porosity Can Affect Your Opener Performance. *Seeding Today December 1997 pp 5-6.*
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