Appendix 1: Extended Citations for:

Hardegree, S.P., T.A. Jones, B.A. Roundy, N.L. Shaw and T.A. Monaco. 2011. Assessment of range planting as a conservation practice. Chapter 4, In. D.D. Briske (ed.). Conservation Benefits of Rangeland Practices: Assessment, Recommendations, and Knowledge Gaps. Allen Press, Lawrence KS. pp 171-212.

Initial reviewers of this synthesis article valued the extensive reference list as a resource for following up on various topics. Approximately 1/3 of the original citations in the text were deleted to improve clarity and flow of the final manuscript. The following supplement provides a more comprehensive list of citations for specific sections in the published version of the book chapter:

1. Variability in weather and climate patterns in North America

- **Location in text:** Page 175, 1st paragraph under the "Climatic Considerations" heading:

- **Published citation:** "Weather and climate patterns in western North America are highly variable in space and time (Rajagopalan and Lall 1998)."

- **Additional references:** (Wernstedt 1960; Currie and Peterson 1966; Carder 1970; Michaud et al. 1995; Balling 1996; Mock 1996; Higgins et al. 1997, 1999; Camargo and Hubbard 1999; Simpson and Colodner 1999; Akinremi et al. 2001; Sheppard et al. 2002; Gershunov and Cayan 2003; Harmel et al. 2003; Hu 2003; Leung et al. 2003a,b; Schubert et al. 2004; Hereford et al. 2006).

2. Relationship between climate and vegetation distribution in North America

- **Location in text:** Page 175, 1st paragraph under the "Climatic Considerations" heading:

- **Published citation:** The relationship between climate and both vegetation distribution and production on western rangelands is well documented (Barbour and Billings 2000; Natural Resources Conservation Service 2006).

- **Additional references:** (Daubenmire 1956; Smoliak 1956, 1986; Sneva and Hyder 1962; Cooper and Hyder 1958; Murphy 1970; Shiflet and Dietz 1974; Duncan and Woodmansee 1975; Eck et al. 1975; Sneva 1977; Bartolome et al. 1980; Fetcher and Trlica 1980; Newbauer et al. 1980; Wight and Hanks 1981; Hanson et al. 1982, 1983; Kindschy 1982; Wight et al. 1984; Hart and Samuel 1985; Olson et al. 1985; White 1985; Powell et al. 1986; Bittman and Simpson 1987; George et al. 1989; Cook and Irwin 1992; Lauenroth and Sala 1992; Sheaffer et al. 1992; Haferkamp et al. 1993; Milchunas et al. 1994; Bork et al. 2001; Mitchell and Csillag 2001; Gillen and Sims 2004; Khumalo and Holechek 2005; Andales et al. 2006; Bradford et al.

2006; Hereford et al. 2006; Nippert et al. 2006; Rehfeldt et al. 2006; Patton et al. 2007; Smart et al. 2007).

3. Observational evidence for plant species/climate suitability

- **Location in text:** Page 176, second paragraph:

- **Published citation:** The strongest evidence for plant materials suitability for a given climatic region is derived from observation of historical relationships between species and climate, experience-based observation, and long-term assessment of persistence of planted species (Harris and Dobrowolski 1986; Shiflet 1994; Barbour and Billings 2000; Natural Resources Conservation Service 2006).

- **Additional references:** (Stewart 1950; Hull and Klomp 1966, 1967; Smoliak et al. 1967; Cable 1971; Hull 1971a, 1972b, 1973; Heady and Bartolome 1977; Rogler and Lorenz 1983; Eck and Sims 1984; Miller et al. 1986; Cox et al. 1988; Heady 1988; McClaran and Anable 1992; Vogel et al. 2005; Schussman et al. 2006; Bock et al. 2007; Vaness and Wilson 2007).

4. Selection and breeding of plant materials with superior characteristics

- **Location in text:** Page 176, first paragraph under the "Plant-Material Development" heading:

- **Published citation:** Selected or bred plant materials deemed to have superior productivity, vigor, establishment, disease resistance and/or seed production characteristics, are then cultivated and released for development as commercial varieties (Schwendiman 1958; Johnson and Asay 1995; Asay et al. 2003).

- **Additional references:** (Kneebone and Cremer 1956; Schwendiman 1956; Hafenrichter 1948; Anderson et al. 1957; Harlan 1951, 1960; Trupp and Carlson 1971; Booth et al. 1980; Asay and Johnson 1980; Johnson et al. 1981; Asay and Johnson 1983a; Berdahl and Barker 1984; Asay et al. 1985a, 1985b; Asay et al. 1986; Asay et al. 1991; Berdahl et al. 1992a, 1992b; Johnson and Asay 1993; Asay et al. 1995a, 1995b; Asay et al. 1996; Asay et al. 1997; Jensen et al. 1998; Jones et al. 1998; Jensen et al. 2002; Jensen et al. 2003; Smart et al. 2004; Coulman 2006a,b).

5. Selection for specific traits

- **Location in text:** Page 176, first paragraph under the "Plant-Material Development" heading:

- **Published citation:** The more recent efforts in plant materials development and evaluation focus on selection for, or comparison of, specific ecological and physiological traits (Aguirre and Johnson 1991b; Johnson and Asay 1995; Arredondo et al. 1998; Jensen et al. 2005).

- **Additional references:** (Wright and Jordan 1970; Johnson and Asay 1978; Asay and Johnson 1980; Pitman and Jaymes 1980; Asay and Johnson 1983b; Frank et al. 1987; Asay and Johnson 1990; Johnson and Asay 1993; Kitchen and Monsen 1994; Asay et al. 1996; Bakker and Wilson 2001; Vogel and Jensen 2001; Jones et al. 2003; Erickson et al. 2004).

6. Laboratory, greenhouse and controlled-environment screening

- **Location in text:** Page 176, first paragraph under the "Plant-Material Development" heading:

- **Published citation:** These efforts incorporate and report more detailed experimental design information, but are often based on relatively controlled experimental conditions in the laboratory, greenhouse, or an agricultural field environment (Arredondo et al. 1998; Jones et al. 2003).

- **Additional references:** (Wright and Jordan 1970; Trupp and Carlson 1971; Johnson and Asay 1978; Asay and Johnson 1980; Pitman and Jaymes 1980; Asay and Johnson 1983b; Berdahl and Barker 1984; Asay and Johnson 1990; Aguirre and Johnson 1991b; Kitchen and Monsen 1994; Asay et al. 1996; Bakker and Wilson 2001; Vogel and Jensen 2001; Jensen et al. 2005).

7. Plant material recommendations from non-refereed sources

- **Location in text:** Page 176, first paragraph under the "Plant-Material Development" heading:

- **Published citation:** The majority of current plant material recommendations are based on evaluations of field performance that are not accessible through refereed journal publications (Stewart 1950; Schwendiman 1956; Great Plains Council 1966; Jensen et al. 2001; Lambert 2005; Ogle et al. 2008a,b).

- **Additional references:** (Anderson et al. 1957; McGinnies et al. 1963; Booth et al. 1980; Asay et al. 1985a, 1985b; Asay et al. 1991; Berdahl et al. 1992a, 1992b; Alderson and Sharp 1994; Asay et al. 1995a 1995b; Asay et al. 1997; Jones et al. 1998; Coulman 2006a,b; Ogle et al. 2008a,b).

8. Studies evaluating seed quality

- **Location in text:** Page 176, first paragraph under the "Seed Quality" heading:

- **Published citation:** Seed quality, however, has been evaluated in a number of studies which have correlated seed size and other morphological attributes to seedling emergence, growth rate, nutrient utilization and seedling morphology and yield (Trupp and Carlson 1971; Carren et al. 1987a,b; Limbach and Call 1995a, 1996; Smith et al. 2003).

- **Additional references:** (Rogler 1954; Kneebone and Cremer 1956; Tossell 1960; Kittock and Patterson 1962; Hunt and Miller 1965; Schaaf and Rogler 1963; Lawrence 1957, 1963; Vogel 1963; Thomas 1966; Arnott 1969; Knipe 1970; Kneebone 1972; McKell 1972; Schimpf 1977; Wright 1977; Berdahl and Barker 1984; Wulff 1986; Zhang and Maun 1990b, 1993; Bretagnolle et al. 1995; Griepsson and Davy 1995; Smart and Moser 1999; Boe 2003).

9. Soil surface modification to improve seedbed microclimate

- **Location in text:** Page 177, first paragraph under the "Surface Modification" heading:

- **Published citation:** Soil surface modification is often justified by expectations of increased water availability to the seed, either by improving seed-soil contact, reducing the amount of surface area subject to evaporation, increasing infiltration and water holding capacity, or by creating specific microsites that either receive or retain water more effectively (McGinnies 1959; Roundy et al. 1992).

- **Additional references:** (Anderson and Swanson 1949; Hubbard and Smoliak 1953; Hyder et al. 1955; Hyder and Sneva 1956; Slayback and Cable 1970; Fisser et al. 1974; Tromble 1976; Eckert et al. 1986; Haferkamp et al. 1987; Roundy et al. 1990; Winkel and Roundy 1991b; Winkel et al. 1991a; Whisenant 1999).

10. Seedbed preparation methodologies

- **Location in text:** Page 178, first paragraph:

- **Published citation:** Studies that compare multiple seedbed preparation methodologies often find differences in relative seeding success with different equipment and techniques, but specific inferences can only be made at the treatment level for a given site and year (Hubbard and Smoliak 1953; Hyder et al. 1955).

- **Additional references:** (Hyder and Sneva 1956; Bement et al. 1965; Eckert and Evans 1967; Young et al. 1969a; Hull 1970; Klomp and Hull 1972; McGinnies 1972;

Slayback and Renney 1972; Lavin et al. 1973; Gonzalez and Dodd 1979; Mueller et al. 1985; Haferkamp et al. 1987; Ott et al. 2003).

11. Seeding depth benefits

- **Location in text:** Page 179, first paragraph under the "Seeding Depth" heading:

- **Published citation:** A major assumption of many site preparation treatments is that they increase the number of potential safe sites for germination and establishment either by covering the seed, reducing soil water loss from around the seed, or by redistributing and concentrating resources (Anderson and Swanson 1949; Hubbard and Smoliak 1953).

- **Additional references:** (Hyder et al. 1955; Hyder and Sneva 1956; McGinnies 1959; Hull 1970; Slayback and Cable 1970; Fisser et al. 1974; Tromble 1976; Bragg and Stephens 1979; Hauser 1982; Eckert et al. 1986; Haferkamp et al. 1987; Roundy et al. 1990; Winkel and Roundy 1991a; Winkel et al. 1991b; Roundy et al. 1992; Call and Roundy 1991; Whisenant 1999; Ott et al. 2003).

12. Water availability versus energy requirements for germination

- **Location in text:** Page 179, the second paragraph under the "Seeding Depth" heading:

- **Published citation:** The physical rationale for depth recommendations usually assumes a tradeoff between increased water availability and increased energy requirements for emergence as a function of depth (Roundy and Call 1988; Call and Roundy 1991).

- **Additional references:** (Hyder et al. 1955; Kinsinger 1962; Mutz and Scifres 1975; Jordan 1981; Carren et al. 1987a,b; Jacobson et al. 1987; Winkel et al. 1991a, Winkel and Roundy 1991b; Roundy et al. 1993; Johnson and Asay 1995; Grundy et al. 2003).

13. Control studies for seed depth effects

- **Location in text:** Page 179, third paragraph under the "Seeding Depth" heading:

- **Published citation:** Evidence for depth effects is generally limited to studies conducted in a controlled environment, or over very small spatial scales in the field (Kinsinger 1962; Vogel 1963; Hull 1964).

- **Additional references:** (Mutz and Scifres 1975; Evans et al. 1977; Cox and Martin 1984; Fulbright et al. 1985; Carren et al. 1987a,b; Jacobson et al. 1987; De Alba-Avila and Cox 1988; Newman and Moser 1988; Young et al. 1990; Zhang and Maun 1990a; Charles et al. 1991; Lawrence et al. 1991; Winkel et al. 1991a; Winkel and

Roundy 1991a; Redmann and Qi 1992; Roundy et al. 1993; Kitchen and Monsen 1994; Aiken and Springer 1995; Limbach and Call 1995b; Ries and Hofmann 1995; Heckman et al. 2002; Sanderson and Elwinger 2004; Traba et al. 2004).

14. Seeding depth versus size

- **Location in text:** Page 180, first paragraph:

- **Published citation:** Laboratory, greenhouse and field comparisons of surface-sown versus planted seeds generally confirm that very small seeds establish more frequently from near-surface seed placement, larger seeds require soil cover for maximal performance, and seed performance drops dramatically below some threshold depth (Hull 1948; Stewart 1950; Douglas et al. 1960).

- **Additional references:** (Gomm 1964; Bement et al. 1965; Currie 1967; Springfield and Bell 1967; Robertson and Box 1969; McGinnies 1972, 1973, 1974; Drawe et al. 1975; Mutz and Scifres 1975; Wood et al. 1982; Cox and Martin 1984; Haferkamp et al. 1987; Newman and Moser 1988; Marietta and Britton 1989; Young et al. 1990; Zhang and Maun 1990a; Winkel and Roundy 1991b; Roundy et al. 1993; Young et al. 1994; Ries and Hofmann 1995; Ott et al. 2003; Grundy et al. 2003; Cox and Anderson 2004; Sanderson and Elwinger 2004).

15. Rangeland cover and soil stability

- **Location in text:** Page 184, first paragraph under the "Water Quality and Erosion" heading:

- **Published citation:** There is an extensive literature, however, documenting the relationship between rangeland soil cover and soil stability (Nearing et al. 2005; Bartley et al. 2006; Gimeno-Garcia et al. 2007).

- **Additional references:** (Kincaid and Williams 1966; Meeuwig 1970; Wright et al. 1976, 1982; Dadkhah and Gifford 1980; Tromble 1976, 1980; Roundy et al. 1978; Hofmann et al. 1983; Knight et al. 1983; Balliette et al. 1986; Rogers and Schumm 1991; Goff et al. 1993; Wilcox 1994; Gutierrez and Hernandez 1996; Hester et al. 1997; Quinton et al. 1997; Davenport et al. 1998; Devine et al. 1998; Pimentel and Kounang 1998; Benavides-Solorio and MacDonald 2001; Johansen et al. 2001; Mergen et al. 2001; Aguilera et al. 2003; O'dea and Guertin 2003).

16. Minimum vegetation cover requirements for erosion control

- **Location in text:** Page 184, first paragraph under the "Water Quality and Erosion" heading:

- **Published citation:** In most cases, the nature of this cover is less relevant than the issue of soil surface protection above some threshold level (Mergen et al. 2001; Aguilera et al. 2003; Descheemaeker et al. 2006).

- **Additional references:** (Wright et al. 1976, 1982; Dadkhah and Gifford 1980; Rogers and Schumm 1991; Simanton et al. 1991; Gutierrez and Hernandez 1996; Quinton et al. 1997; Davenport et al. 1998; Johansen et al. 2001).

17. Variability in hydrologic effects under adjacent plant communities

- **Location in text:** Page 184, first paragraph under the "Water Quality and Erosion" heading:

- **Published citation:** Some studies, however, have shown differential hydrologic effects under adjacent plant communities due to differences in growth and litter production, interception, water use efficiency, or rooting depth and spread (Dunkerley 2002; Bhark and Small 2003; Kulmatiski et al. 2006).

- **Additional references:** (Meeuwig 1970; Aase and Wight 1973; Balliette et al. 1986; Thurow et al. 1987; Wilcox et al. 1988; Wilcox 1989; Abbot et al. 1991; Abrahams et al. 1993; Hester et al. 1997; Devine et al. 1998; Wood et al. 1998).

18. Weather, slope and soil effects on erosion and runoff

- **Location in text:** Page 184, first paragraph under the "Water Quality and Erosion" heading:

- **Published citation:** The relative impact of vegetation cover on erosion and runoff is also highly dependent on weather, slope and soil type (Aguilera et al. 2003; Bartley et al. 2006; Nichols 2006).

- **Additional references:** (Meeuwig 1970; Gifford 1972; Blackburn 1975; Wright et al. 1976; 1982; Ueckert et al. 1978; McGinty et al. 1979; Balliette et al. 1986; Wilcox et al. 1988; Wilcox and Wood 1989; Takar et al. 1990; Emmerich and Cox 1992).

19. Conceptual models for dynamic rangeland systems

- **Location in text:** Page 186, first paragraph under the "Explicit Testing of New Conceptual Models for Dynamic Rangeland Systems" heading:

- **Published citation:** A more general scientific understanding of vegetation change may now be achievable using more recently developed conceptual models for understanding dynamic rangeland systems (Westoby et al. 1989; Bestelmeyer et al. 2003; Sheley et al. 2006).

- **Additional references:** (Bellamy and Brown 1994; Brown 1994; Sheley et al. 1996; Allen-Diaz and Bartolome 1998; Jones and Johnson 1998; Whisenant 1999; Masters and Sheley 2001; Batabyal and Godfrey 2002; Sheley and Krueger-Mangold 2003; Stringham et al. 2003; Svejcar 2003; Briske et al. 2003, 2005, 2006, 2008; Roundy, 2005; Krueger-Mangold et al. 2006).

20. Long-range weather forecast technology for rangeland planting applications

- **Location in text:** Page 186, second paragraph under the "Development and Utilization of Weather and Forecasting Tools" heading:

- **Published citation:** The most useful potential technology for enhancing establishment success lies in development and utilization of relatively-long-range weather forecast technology specific to rangeland planting applications (Barnston et al. 1994, 2005; Garbrecht and Schneider 2007).

- **Additional references:** (Briggs and Wilks 1996; Goddard et al. 2001, 2003; Hartmann et al. 2002; Leetmaa 2003; Zebiak 2003; Klopper et al. 2006; Power et al. 2007; Schubert et al. 2008).

21. Current agricultural applications of forecast technology

- **Location in text:** Page 186, second paragraph under the "Development and Utilization of Weather and Forecasting Tools" heading:

- **Published citation:** Similar technology is in relatively common use for more traditional agricultural applications and for some rangeland applications (Schneider et al. 2003, 2006; Doblas-Reyes et al. 2006; Baigorria et al. 2008; O'Lenic et al. 2008).

- **Additional references:** (Abawi et al. 1995; Fox et al. 1999; Mjelde et al. 2000; Ogallo et al. 2000; Hammer et al. 2001; Garbrecht et al. 2006a; Hansen and Sivakumar 2006; Sivakumar 2006; Hansen et al. 2006; Ash et al. 2007; Hayman et al. 2007; Meinke et al. 2007).

Appendix 1 - Literature Cited

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