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Number 52

The Protection of Hays: 1979-85

Citations from Agricola Concerning Diseases and Other Environmental Considerations

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The Protection of Hays: 1979-85

Citations from Agricola Concerning Diseases and Other Environmental Considerations

Compiled and Edited by
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FOREWORD

This is the 11th volume in a series of commodity-oriented environmental bibliographies resulting from a memorandum of understanding between the United States Department of Agriculture, National Agricultural Library (USDA-NAL), and the Environmental Protection Agency, Office of Pesticide Programs (EPA-OPP).

This close working relationship between the two agencies will produce a series of bibliographies which will be useful to EPA in the regulation of pesticides, as well as to any researcher in the field of plant or commodity protection. The broad scope of information contained in this series will benefit USDA, EPA, and the agricultural community as a whole.

The sources referenced in these bibliographies include the majority of the latest available information from United States publications involving commodity protection throughout the growing and processing stages for each agricultural commodity.

We welcome the opportunity to join this cooperative effort between USDA and EPA in support of the national agricultural community.

JOSEPH H. HOWARD, Director
National Agricultural Library

DOUGLAS D. CAMPT, Director
Office of Pesticide Programs

INTRODUCTION

The citations in this bibliography are selected from works by U.S. authors on all aspects of conservation tillage. All citations are derived from AGRICOLA (AGRICultural Online Access), the family of databases compiled by the National Agricultural Library and its cooperators.

This is the 11th bibliography included in a series of commodity-oriented environmental databases jointly sponsored by the National Agricultural Library, United States Department of Agriculture (USDA-NAL), and the Office of Pesticides Programs, Environmental Protection Agency (EPA-OPP). Additional volumes issued recently or planned for the immediate future concern protection of corn, soybeans, pome fruits, stone fruits, grain sorghum, rice, and peanuts.

Entries in the bibliography are subdivided into a series of subject headings used in the table of contents of the Bibliography of Agriculture and in the National Agricultural Library Catalog. Each citation appears under the subject heading assigned to the particular item. A complete author index is also included in the publication.

The Office of Pesticide Programs, EPA, has furnished technical assistance to the compiler through members of a commodity-oriented environmental data team which included:

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(PLANT PRODUCTION - FIELD CROPS)

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Progress in selecting for resistance to *Stemphylium botryosum* (cool-temperature biotype) in alfalfa (Cultivars).

Gilchrist, D.G. CRPSA. Teuber, L.R.; Martensen, A.N.; Cowling, W.A. Madison : Crop Science Society of America. Crop science. Nov/Dec 1982. v. 22 (6). p. 1155-1159. ill. 17 ref. (NAL Call No.: 64.8 C883).

0133

Recommended alfalfa varieties for Michigan.

Tesar, M. B. 1978. This publication discusses desirable characteristics for alfalfa varieties in Michigan and includes tables of several test results. Document available from: Michigan State University, Bulletin Office, P.O. Box 231, East Lansing, MI 48824. 6 p. : ill. (NAL Call No.: Not available at NAL.). (NAL Call No.: E 1098).

0134

Red clover cultivar tests (Reaction to southern anthracnose disease, *Colletotrichum trifolii*).

Schoen, J.F. Payne, R.C. (S.l.) : The Association. The Newsletter of the Association of Official Seed Analysts. Feb 1984. v. 58 (1). p. 58-64. Includes references. (NAL Call No.: 61.9 AS7N).

0135

Registration of Daneb I, Daneb I BW1, and Daneb I P2, alfalfa germplasms with multiple pest resistance (*Pseudopeziza medicaginis*, *Pseudopeziza jonesii*, *Cercospora medicaginis*).

Kehr, W.R. Rumbaugh, M.D.; Semeniuk, G.; Barnes, D.K.; Frosheiser, F.I.; Manglitz, G.R.; Boe, A.A. Madison, Wis. : Crop Science Society of America. Crop science. Sept/Oct 1984. v. 24 (5). p. 1001. Includes 1 references. (NAL Call

No.: 64.8 C883).

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CRPSAY. Melton, B. Miller, D.; Teuber, L.; Walton, M. Madison, Wis. : Crop Science Society of America. Crop science. July/Aug 1985. v. 25 (4). p. 705. Includes 2 references. (NAL Call No.: DNAL 64.8 C883).

0137

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CRPSAY. Moutray, J.B. Hartman, W.G.; Haight, J.C. Madison, Wis. : Crop Science Society of America. Crop science. July/Aug 1985. v. 25 (4). p. 705. (NAL Call No.: DNAL 64.8 C883).

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Registration of 'Flare' red clover.
CRPSAY. Moutray, J.B. Harding, J.H. Madison, Wis. : Crop Science Society of America. Crop science. July/Aug 1985. v. 25 (4). p. 707-708. Includes 1 references. (NAL Call No.: DNAL 64.8 C883).

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Registration of 'Morred' red clover.
CRPSAY. Moutray, J.B. Mansfield, J.L.; Haight, J.C. Madison, Wis. : Crop Science Society of America. Crop science. July/Aug 1985. v. 25 (4). p. 708. Includes 1 references. (NAL Call No.: DNAL 64.8 C883).

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Kehr, W.R. Barnes, D.K.; Frosheiser, F.I.; Manglitz, G.R. Madison, Wis. : Crop Science Society of America. Crop science. Sept/Oct 1984. v. 24 (5). p. 1002-1003. Includes 1 references. (NAL Call No.: 64.8 C883).

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Kehr, W.R. Manglitz, G.R. Madison, Wis. : Crop Science Society of America. Crop science. Sept/Oct 1984. v. 24 (5). p. 1003-1004. Includes 1 references. (NAL Call No.: 64.8 C883).

0142

Registration of N.S. 77 SN2AN2 and N.S. 79 SN2AN2 alfalfa germplasms with multiple pest resistance (Empoasca fabae, foliar, viral diseases).
Kehr, W.R. Hartman, B.J.; Hunt, D.J.; Manglitz, G.R.; Thyr, B.D. Madison, Wis. : Crop Science Society of America. Crop science. Sept/Oct 1984. v. 24 (5). p. 1004. Includes 1 references. (NAL Call No.: 64.8 C883).

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Registration of NMP-8 CKS5 nondormant common leaf spot resistant alfalfa germplasm (Medicago sativa, Pseudopeziza medicaginis).
Thyr, B.D. Hunt, D.J.; Hartman, B.J.; McCoy, T.J.; Knous, T.R. Madison, Wis. : Crop Science Society of America. Crop science. Mar/Apr 1982. v. 22 (2). p. 449-450. (NAL Call No.: 64.8 C883).

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Registration of red clover germplasm resistant to bean yellow mosaic virus.
CRPSAY. Taylor, N.L. Diachun, S.; Ghabrial, S.A. Madison, Wis. : Crop Science Society of America. Crop science. July/Aug 1985. v. 25 (4). p. 714-715. Includes 5 references. (NAL Call No.: DNAL 64.8 C883).

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Registration of 'Redland II' red clover.
CRPSAY. Moutray, J.B. Mansfield, J.L. Madison, Wis. : Crop Science Society of America. Crop science. July/Aug 1985. v. 25 (4). p. 708. (NAL Call No.: DNAL 64.8 C883).

0146

Registration of W10AnWfPy3, (B2An4 X Arc)AnWfPy3, and B28 multiple pest resistant alfalfa germplasms (Medicago sativa).
Elgin, J.H. Jr. Ostazeski, S.A. Madison, Wis. : Crop Science Society of America. Crop science. May/June 1984. v. 24 (3). p. 623. Includes references. (NAL Call No.: 64.8 C883).

0147

Resistance in alfalfa to a red form of the pea aphid (Homoptera: Aphididae) (Acyrthosiphon pisum, Medicago sativa).
Kugler, J.L. Ratcliffe, R.H. College Park, Md. : Entomological Society of America. Journal of economic entomology. Feb 1983. v. 76 (1). p. 74-76. Includes references. (NAL Call No.: 421 J822).

(PLANT BREEDING)

0148

Resistance to race 1: a prerequisite for induced resistance to race 2, by race 1 of *Colletotrichum trifolii*, on alfalfa.
Ostazeski, S.A. Elgin, J.H. Jr. (s.l.) : Agricultural Research Service, U.S. Dept. of Agriculture. Report of the ... Alfalfa Improvement Conference. Dec 1983. Includes abstract. Dec 1983. (28th). p. 43. (NAL Call No.: 60.9 AL2).

0149

Resistance to the spotted alfalfa aphid (Homoptera: Aphididae) in glandular-haired *Medicago* species (*Therioaphis maculata*).
Ferguson, S.EVETB. Sorensen, E.L.; Horber, E.K. College Park : Entomological Society of America. Environmental entomology. Dec 1982. v. 11 (6). p. 1229-1232. Includes references. (NAL Call No.: QL461.E532).

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Kadir, M.A. Harville, B.G.; Smith, C.M. Baton Rouge : The Department. Report of projects - Louisiana Agricultural Experiment Station; Department of Agronomy. 1982. 1982. p. 268-269. (NAL Call No.: 100 L936).

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Richard, C. Michaud, R.; Freve, A.; Gagnon, C. Madison, Wis., Crop Science Society of America. Crop science. Nov/Dec 1980. v. 20 (6). p. 691-695. 111. 13 ref. (NAL Call No.: 64.8 C883).

0153

Selection for yellow clover aphid (*Therioaphis trifolii*) and pea aphid (*Acyrtosiphon pisum*) resistance in red clover (Cultivars and strains).
Gorz, H.J. Manglitz, G.R. Madison, Crop Science Society of America. Crop science. Mar/Apr 1979. v. 19 (2). p. 257-260. 111. 10 ref. (NAL Call

No.: 64.8 C883).

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Rodriguez, J.A. Kehr, W.R. St. Paul, Minn., The Region. Agricultural reviews and manuals. ARM-NC - United States Dept. of Agriculture, Science and Education Administration. Agricultural Research. North Central Region. May 1981. May 1981. (19). p. 60. (NAL Call No.: aS21.A75U69).

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DeVries, N.E.L. Manglitz, G.R. Lawrence, Kan., The Society. Journal of the Kansas Entomological Society. Jan 1982. v. 55 (1). p. 57-64. Includes 10 ref. (NAL Call No.: 420 K13).

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0157

Trichomes and field resistance of *Medicago* species to the alfalfa seed chalcid (Hymenoptera: Eurytomidae) (*Bruchophagus roddi*).
Brewer, G.U.EVETB. Sorensen, E.L.; Horber, E.K. College Park : Entomological Society of America. Environmental entomology. Feb 1983. v. 12 (1). p. 247-251. 111. Includes references. (NAL Call No.: QL461.E532).

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USDA protects 11 new seed varieties (Alfalfa, garden beans, soybeans, wheat, clover, ryegrass, tobacco).
Washington, D.C., The Office. Major news releases and speeches - United States Department of Agriculture, Office of Governmental and Public Affairs. Mar 26/Apr 2, 1982. Mar 26/Apr 2, 1982. p. 20-21. (NAL Call No.: aS21.A8U51).

0159

USDA protects 16 new seed varieties (Alfalfa, garden beans, soybeans, wheat).
 Washington, D.C., The Office. Major news releases and speeches - United States Department of Agriculture, Office of Governmental and Public Affairs. Mar 5/12, 1982. Mar 5/12, 1982. p. 18. (NAL Call No.: aS21.A8U51).

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Use of strain crosses in breeding multiple pest resistant alfalfa.

Elgin, J.H. Jr. St. Paul, Minn., The Region. Agricultural reviews and manuals. ARM-NC - United States Dept. of Agriculture, Science and Education Administration. Agricultural Research. North Central Region. May 1981. May 1981. (19). p. 58. (NAL Call No.: aS21.A75U69).

0161

Use of strain crosses in the development of multiple pest resistant alfalfa with improved field performance (Medicago sativa, breeding methods, diseases, insects, nematodes).

Elgin, J.H. Jr. CRPSA. McMurtrey, J.E. III; Hartman, B.J.; Thyr, B.O.; Sorensen, E.L. Madison : Crop Science Society of America. Crop science. Jan/Feb 1983. v. 23 (1). p. 57-64. ill. Includes references. (NAL Call No.: 64.8 C883).

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Method of breeding clover for resistance to stem rot, Sclerotinia trifoliorum Erikss. I. Basic investigations and phytopathological methodology in the breeding of clover for resistance to Sclerotinia trifoliorum Erikss.
 Wierzbicka, B. Warszawa, Panstwowe Wydawn. Rolnicze i Lesne. Hodowla roslin aklimatyzacja i nasiennictwo. Plant breeding, acclimatization and seed production. 1977. v. 21 (6). p. 511-536. ill. Bibliography p. 534-535. (NAL Call No.: 64.8 H66).

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Hill, R.R. Jr. CRPSAY. Baylor, J.E. Madison : Crop Science Society of America. Crop science. Sept/Oct 1983. v. 23 (5). p. 811-815. Includes references. (NAL Call No.: 64.8 C883).

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The causes of yellows in alfalfa (*Medicago sativa* L.) and comparisons of green and yellow plants for their growth, vegetative establishment, mortality and chemical composition / by Om Parkash Vadhwa.

Vadhwa, Om Parkash, 1941. 1970. Thesis (Ph.D.)--Utah State University, 1970. Photocopy. Ann Arbor, Mich. : University Microfilms, 1972. xix, 133 leaves ; 21 cm. Bibliography: leaves 106-110. (NAL Call No.: DISS 72-4,744).

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The chemical identification of the glandular hair exudate from *Medicago scutellata* (Resistant to alfalfa weevils).

Triebe, D.C. Meloan, C.E.; Sorensen, E.L. St. Paul, Minn., The Region. Agricultural reviews and manuals. ARM-NC - United States Dept. of Agriculture, Science and Education Administration. Agricultural Research. North Central Region. May 1981. May 1981. (19). p. 52. (NAL Call No.: aS21.A75U69).

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Electron microscopy of developing *Aphanomyces oogonia* and oospores (in alfalfa roots, Fungi).

Traquair, J.A. McKeen, W.E. Bronx, N.Y., The New York Botanical Garden. Mycologia. Mar/Apr 1980. v. 72 (2). p. 378-394. ill. 32 ref. (NAL Call No.: 450 M99).

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Histological examination of larval clover root curculio (Coleoptera: Curculionidae) damage to ladino white clover (*Trifolium repens*, *Sitona hispidulus*).

Powell, G.S. JEENA. Campbell, W.V. College Park : Entomological Society of America. Journal of economic entomology. Aug 1983. v. 76 (4). p. 741-743. ill. Includes references. (NAL Call No.: 421 J822).

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Structure of the keel-locking mechanism in insect pollinated and self-pollinated alfalfa species.

CRPSAY. Kreitner, G.L. Sorensen, E.L. Madison, Wis. : Crop Science Society of America. Crop science. July/Aug 1985. v. 25 (4). p. 631-634. ill. Includes references. (NAL Call No.: DNAL 64.8 C883).

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Napatipulu, J.A. Smith, D. New York, Dekker. Communications in soil science and plant analysis. 1979. v. 10 (3). p. 565-577. ill. 20 ref. (NAL Call No.: S590.C63).

0171

Degradation of phenoxyalkylcarboxylic acids by white clover (*Trifolium repens*) cell suspensions (Herbicide tolerance, phytotoxicity).
Smith, A.E. Oswald, T.H. Champaign, Ill., Weed Science Society of America. Weed science. July 1979. v. 27 (2). p. 389-391. ill. 11 ref. (NAL Call No.: 79.8 W41).

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Smith, D. Greenfield, S.B. New York, Marcel Dekker. Journal of plant nutrition. 1979. v. 1 (1). p. 81-99. (NAL Call No.: QK867.J67).

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Peters, E.J. Ben Zbiba, M. Champaign, Ill., Weed Science Society of America. Weed science. Jan 1979. v. 27 (1). p. 18-21. ill. 7 ref. (NAL Call No.: 79.8 W41).

0174

Effects of sulfur-coated (slow-release) urea on California annual grassland yield and chemical composition (*Bromus* sp., *Avena barbata*, *Erodium botrys*, clover).
Vaughn, C.E. Jones, M.B. Madison. Agronomy journal American Society of Agronomy. Mar/Apr 1979. v. 71 (2). p. 297-300. ill. 14 ref. (NAL Call No.: 4 AM34P).

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Jones, M.B. Rendig, V.V.; Torell, D.T.; Inouye, T.S. Madison, Wis., American Society of Agronomy. Agronomy journal. Sept/Oct 1982. v. 74 (5). p. 775-780. ill. 19 ref. (NAL Call No.: 4 AM34P).

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Influence of P and K fertilization on phytophthora root rot or excess soil water injury of alfalfa cultivars.
CSOSA2. Alva, A.K. Lanyon, L.E.; Leath, K.T. New York, N.Y. : Marcel Dekker. Communications in soil science and plant analysis. Feb 1985. v. 16 (2). p. 229-243. Includes 15 references. (NAL Call No.: DNAL S590.C63).

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Phillips, G.C. Collins, G.B. Madison, Crop Science Society of America. Crop science. Mar/Apr 1979. v. 19 (2). p. 213-216. ill. 15 ref. (NAL Call No.: 64.8 C883).

PLANT PHYSIOLOGY AND BIOCHEMISTRY

0178

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JAFCAU. Natelson, S. Washington, D.C. : American Chemical Society. Journal of agricultural and food chemistry. May/June 1985. v. 33 (3). p. 413-419. ill. Includes references. (NAL Call No.: DNAL 381 J8223).

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The causes of yellows in alfalfa (*Medicago sativa* L.) and comparisons of green and yellow plants for their growth, vegetative establishment, mortality and chemical composition / by Om Parkash Vadhwa.
Vadhwa, Om Parkash, 1941. 1970. Thesis (Ph.D.)--Utah State University, 1970. Photocopy. Ann Arbor, Mich. : University Microfilms, 1972. xix, 133 leaves ; 21 cm. Bibliography: leaves 106-110. (NAL Call No.: DISS 72-4,744).

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A comparison of methods to distinguish seeds of yellow sweetclover (*Melilotus officinalis* (L.) Lam.) and white sweetclover (*Melilotus alba* Medik.) (Chemical test).
Maxon, S.R.AOSNA. Hurst, S.J. (s.l.) : The Association. The Newsletter of the Association of Official Seed Analysts. Feb 1983. v. 57 (1). p. 46-53. Includes references. (NAL Call No.: 61.9 AS7N).

0181

Hard seeds in legumes.

Kinch, R. C. Sanderson, Elmer E. document available from: South Dakota State University, Ag. Information Bulletin Room, Extension Building, Brookings, South Dakota 57007 19--?. Hardseeds or seeds that have a waxy, protective coating is discussed in the publication. Alfalfa, sweet clover and red clover are the plant examples used. 1 sheet : ill. (NAL Call No.: Document available from source.). (NAL Call No.: FS 16).

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Influence of changes in temperature on the growth and chemical composition of alfalfa (*Medicago sativa* L.) / by P.L. Greenfield.
Greenfield, P. L. (Peter Lorimer), 1945. 1972. Thesis (Ph.D.)--University of Wisconsin, 1972. Photocopy. Ann Arbor, Mich. : University Microfilms, 1973. vii, 136 leaves ; 22 cm. Bibliography: leaves 132-136. (NAL Call No.: DISS 72-33,852).

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Dutt, T.E.AGJDA. Harvey, R.G.; Fawcett, R.S. Madison : American Society of Agronomy. Agronomy journal. Mar/Apr 1983. v. 75 (2). p. 229-233. Includes references. (NAL Call No.: 4 AM34P).

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Influence of nitrogen and potassium fertilization and temperature on growth and chemical composition of switchgrass (*Panicum virgatum* L.) and timothy (*Phleum pratense* L.) / by John Allan Balasko.
Balasko, John Allan, 1941. 1971. Thesis (Ph.D.)--University of Wisconsin, 1971. Photocopy. Ann Arbor, Mich. : University Microfilms, 1971. iv, 90 leaves ; 21 cm. Bibliography: leaves 84-90. (NAL Call No.: DISS 71-5,625).

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Reduction in photosynthetic and transpiration rates of alfalfa caused by potato leafhopper (*Homoptera: Cicadellidae*) infestations (*Empoasca fabae*, *Medicago sativa*).
Womack, C.L. College Park, Md. : Entomological Society of America. Journal of economic entomology. Apr 1984. v. 77 (2). p. 508-513. Includes references. (NAL Call No.: 421 J822).

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0188

Seasonal trends of nonstructural root carbohydrates, physiological development, and control by herbicides in *Medicago sativa*, of *Barbarea vulgaris*, *Lychnis alba* and *Berteroa incana* / by Robert Edwin Hastings.

Hastings, Robert Edwin, 1938. 1969. Thesis (Ph.D.)--University of Wisconsin, 1969. Photocopy. Ann Arbor, Mich. : University Microfilms, 1970. vii, 93 leaves : ill. ; 21 cm. Bibliography: leaves 88-93. (NAL Call No.: DISS 69-16,958).

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Variation in coumestrol content of alfalfa as related to location, variety, cutting, year, stage of growth, and disease (by C.H. Hanson ... et al).

Hanson, C. H. Washington, D.C. Agricultural Research Service, U.S. Dept. of Agriculture 1965. ii, 72 p. : ill. -. Bibliography: p. 43-45. (NAL Call No.: Fiche S-69 no.1333).

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Volatile components of alfalfa: possible insect host plant attractants (Tested with the alfalfa seed chalcid *Bruchophagus rodii*).

Buttery, R.G. AR-WRRRC-AR-W. Kamm, J.A. Washington, D.C., American Chemical Society. Journal of agricultural and food chemistry. Sept/Oct 1980. v. 28 (5). p 978-981. ill. 7 ref. (NAL Call No.: 381 J8223).

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Volatile components of red clover leaves, flowers, and seed pods: possible insect attractants.

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Phytophthora clandestina sp. nov. in roots of
subterranean clover.

MYXNAE. Taylor, P.A. Pascoe, I.G.; Greenhalgh,
F.C. Ithaca, N.Y. : Mycotaxon, Ltd. Mycotaxon.
Jan/Mar 1985. v. 22 (1). p. 77-85. ill.

Includes 21 references. (NAL Call No.: DNAL
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PROTECTION OF PLANTS

0193

Alfalfa : a guide to production and integrated pest management in the Midwest / by C.R. Edwards ... (et al.).
Edwards, C. R. (S.I. s.n.) (1981?). 1 v. (loose-leaf) : ill. (some col.) ; 28 cm. -
Bibliography: p. 223-224. (NAL Call No.: S544.N6 no.113).

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Alfalfa for the Southern Region--problems and promises: Alfalfa breeding problems and solutions for Alabama.
Haaland, R.L. Hoveland, C.S. New Orleans, Agricultural Research (Southern Region), Science and Education Administration, U.S. Dept. of Agriculture. Proceedings.Southern Pasture and Forage Crop Improvement Conference. 1979. 1979. (36th). p. 93-94. ill. (NAL Call No.: 60.19 S083).

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Alfalfa for the Southern Region--problems and promises: Panel discussion: An industry viewpoint.
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Reinhardt, L.R. Brooks, H.L. Manhattan, Kan., The Service. C.Kansas State University. Cooperative Extension Service. Oct 1978. Oct 1978. (478). 27 p. ill. (NAL Call No.: 275.29 K13EX).

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Toai, T.V. Linscott, D.L. Beltsville, Md. Proceedings of the ... annual meetingNortheastern Weed Science Society. 1979. v. 33. p. 331. ill. (NAL Call No.: 79.9 N814).

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Sullins, G.L. Verts, B.J. Washington, Wildlife Society. Journal of wildlife management. Oct 1978. v. 42 (4). p. 891-896. ill. 9 ref. (NAL Call No.: 410 J827).

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Concentrations of coumestrol and 4', 7-dihydroxyflavone in four alfalfa cultivars after exposure to ozone (Injuries, effects of air pollution).

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Robertson, R.L. Raleigh, N.C. : The Service. AG - North Carolina Agricultural Extension Service, North Carolina State University. June 1984. (345). 3 p. (NAL Call No.: DNAL S544.3.N6N62).

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0450

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0460

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0467

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EN82).

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Bisabri-Ershadi, B. Ehler, L.E. Berkeley, Calif., The Station. Hilgardia - California Agricultural Experiment Station. Dec 1981. v. 49 (5). 23 p. Bibliography p. 20-23. (NAL Call No.: 100 C12H).

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Nielson, M.W. Fort Atkinson, W. D. Hoard & Sons Co. Hoard's dairyman. Mar 25, 1979. v. 124 (6). p. 465. ill. (NAL Call No.: 44.8 H65).

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Madison, Wis. : American Society of Agronomy. Crops and soils magazine. Feb 1984. v. 36 (5). p. 28-30. ill. (NAL Call No.: 6 W55).

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Summers, C.G. Garrett, R.E.; Zalom, F.G. College Park, Md. : Entomological Society of America. Journal of economic entomology. June 1984. v. 77 (3). p. 817-823. ill. Includes references. (NAL Call No.: 421 J822).

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Ovipositional preferences of the alfalfa blotch leafminer (Diptera: Agromyzidae) among some simple and glandular-haired *Medicago* species.
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0487

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0489

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Yeagan, K.V. College Park, Md., Entomological Society of America. Environmental entomology. Aug 1979. v. 8 (4). p. 715-719. ill. 10 ref. (NAL Call No.: QL461.E532).

0490

Parasitization by *Patasson luna* (Hymenoptera: Mymaridae) of alfalfa weevil (Coleoptera: Curculionidae) eggs laid in green alfalfa stems and in litter (*Hypera postica*).

Hogg, D.B. Kingsley, P.C. College Park, Md. Entomological Society of America. Journal of economic entomology. Feb 1983. v. 76 (1). p. 54-56. Includes references. (NAL Call No.: 421 J822).

0491

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Shade, R.E. EVE TB. Kitch, L.W. College Park : Entomological Society of America. Environmental entomology. Feb 1983. v. 12 (1). p. 237-240. Includes references. (NAL Call No.: QL461.E532).

0493

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0494

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Armbrust, E.J. Boca Raton, Fla., CRC Press. CRC handbook of pest management in agriculture. 1981. v. 3. p. 285-292. 14 ref. (NAL Call No.: SB950.C7).

0495

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Caddel, J.L. Porter, D.R. Lexington, Ky. : American Forage and Grassland Council. Proceedings of the Forage and Grassland Conference. 1984. Paper presented at the 1984 Forage and Grassland Conference on Forage Systems: Leading U.S. Agriculture into the Future, January 23-26, 1984, Houston, Texas. 1984. p. 104-108. Includes references. (NAL Call No.: 60.19 J66).

0496

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0497

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Burgess, Edward Eugene, 1937. 1969. Thesis--University of Tennessee. Photocopy of typescript. Ann Arbor: University Microfilms, 1971. xii, 125 leaves. Bibliography: leaves 92-96. (NAL Call No.: DISS 70-17,802).

0498

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Kugler, J.L. St. Paul, Minn., The Region. Agricultural reviews and manuals. ARM-NC - United States Dept. of Agriculture, Science and Education Administration. Agricultural Research. North Central Region. May 1981. May 1981. (19). p. 68. 1 ref. (NAL Call No.: aS21.A75U69).

0499

Plant bug (Heteroptera: Miridae) damage to first-crop alfalfa in South Dakota (*Lygus lineolaris*, *Lygus elisus*, *Adelphocoris lineolatus*).

Walstrom, R.U. JEENAI. College Park : Entomological Society of America. Journal of economic entomology. Dec 1983. v. 76 (6). p. 1309-1311. Includes references. (NAL Call No.: 421 J822).

0500

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0501

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Harcourt, D.G. East Lansing, Michigan Entomological Society. The Great Lakes entomologist. Spring 1982. v. 15 (1). p. 49-54. ill. Includes 7 ref. (NAL Call No.: QL461.M5).

0502

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Eves, Jack Darrell. Ann Arbor, Mich. University Microfilms 1973. Thesis--Washington State University, 1973. viii, 58 leaves. Bibliography: leaves 29-30. (NAL Call No.: DISS 73-14,748).

0503

Population dynamics of the alfalfa blotch leafminer, *Agromyza frontella*, and its influence on alfalfa yield in Massachusetts.

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0504

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0505

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Ridland, P.M. Halloran, G.M. Madison, Wis., Crop Science Society of America. Crop science. Nov/Dec 1980. v. 20 (6). p. 755-757. ill. 3 ref. (NAL Call No.: 64.8 C883).

0506

Potato leafhopper / Ohio State University, Cooperative Extension Service, Columbus, Ohio.

1981. This publication discusses the potato leafhopper's distribution, appearance, life cycle, damage, scouting methods, and chemical controls. Also included are instructions on making a sweep net. Document available from: Ext. Office of Information, Ohio State University, 2120 Fyffe Road, Columbus, OH 43210. 3 p. : ill. (NAL Call No.: Not available at NAL.).(NAL Call No.: Field Ent Series 18).

0507

Potato leafhopper and alfalfa blotch leafminer control, 1981 (*Empoasca fabae*, *Agromyza frontella*).

Hower, A.A. Jr. College Park : Entomological Society of America. Insecticide and acaricide tests. 1982. v. 7. p. 137-138. (NAL Call No.: SB950.A1149).

0508

Potato leafhopper control on alfalfa.

Edwards, Richard C. Matthew, David L.& Field crops insects. Document available from: Purdue University, Publication Mailing Room, 301 South Second Street, Lafayette, Indiana 47905 1980. Lists the advantages of leafhopper control and spray suggestions. 3 p. : ill. (NAL Call No.: Document available from source.).(NAL Call No.: E-36).

0509

Potato leafhopper (*Empoasca fabae*) resistance in glandular-haired alfalfa species.

Shade, R.E. Doskocil, M.J. Madison, Crop Science Society of America. Crop science. Mar/Apr 1979. v. 19 (2). p. 287-289. ill. 7 ref. (NAL Call No.: 64.8 C883).

0510

Potential insect pest invasion of alfalfa seedings on wildlands in the Great Basin.

Tiernan, C.F. St. Paul, Minn., The Region. Agricultural reviews and manuals. ARM-NC.United States. Dept. of Agriculture. Science and Education Administration. Agricultural Research. North Central Region. July 1979. July 1979. (7). p. 12. (NAL Call No.: aS21.A75U69).

0511

Preliminary evidence for a microorganismal cause of cytoplasmic incompatibility in the alfalfa weevil (*Hypera postica*).

Klostermeyer, L.E. Manglitz, G.R. East Lansing. Proceedings Forage Insect Research Conference. 1978. 1978. (19th). p. 7. ill. (NAL Call No.:

423.9 F74).

No.: QL461.G4).

0512

Present status of blue alfalfa aphid (*Acyrtosiphon kondoi*) and research in the Central States.

Horber, E. East Lansing. Proceedings Forage Insect Research Conference. 1978. 1978. (19th). p. 8-9. (NAL Call No.: 423.9 F74).

0513

Prevention and control of alfalfa weevil damage by J.C. Hamlin ... et al. . -.

Hamlin, J. C. Washington, D.C. : U.S. Dept. of Agriculture, 1943. ii, 13 p. : ill., map -. Includes bibliographical references. (NAL Call No.: DNAL Fiche S-70 no.1930).

0514

Productivity of the alfalfa weevil parasite *Microctonus aethiops* (Nees) in relation to various environmental, host and parasite factors / by Robert A. Fusco.

Fusco, Robert A. (Robert Angelo), 1941. 1971. Thesis (Ph.D.)--Pennsylvania State University, 1971. Photocopy of typescript. Ann Arbor: University Microfilms, 1972. iv, 98 leaves ; 21 cm. Bibliography: leaves (93)-98. (NAL Call No.: DISS 72-9,463).

0515

Protecting legume hays from meadow spittlebug.

MUCBA. Ruppel, R.F. Parker, K.A. East Lansing, Mich. : The Service. Extension bulletin E - Cooperative Extension Service, Michigan State University. Apr 1985. (1795). 2 p. ill. (NAL Call No.: DNAL 275.29 M58B).

0516

Rapid, inexpensive technique for extracting Egyptian alfalfa weevil (*Coleoptera:Curculionidae*) adults from sample trash (*Hypera brunneipennis*).

Summers, C.G. JEENA. Newton, A.S. College Park : Entomological Society of America. Journal of economic entomology. Oct 1983. v. 76 (5). p. 1199-1200. ill. Includes references. (NAL Call No.: 421 J822).

0517

Recovery of *Bathyplectes curculionis* from alfalfa weevil (*Hypera postica*) larvae in South Carolina (Biological control).

Hearn, L.C. Skelton, T.E. Athens. Journal Georgia Entomological Society. Apr 1979. v. 14 (2). p. 126-131. ill. 5 ref. (NAL Call

0518

The red imported fire ant, *Solenopsis invicta* Buren: cultural control and effect on hay meadows (*Cynodon dactylon*, *Paspalum dilatatum*, Louisiana, soil fertility).

Blust, W.E. Wilson, B.H.; Koonce, K.L.; Nelson, B.D.; Sedberry, J.E. Jr. Baton Rouge, La., The Station. Bulletin - Louisiana Agricultural Experiment Station. June 1982. June 1982. (738). 27 p. ill. 19 ref. (NAL Call No.: 100 L93 (1)).

0519

Red imported fire ant (*Solenopsis invicta*) predation on the alfalfa weevil (*Hypera postica*) and pea aphid (*Acyrtosiphon pisum*, biological control).

Morrill, W.L. Baltimore, Entomological Society of America. Journal of economic entomology. Dec 1978. v. 71 (6). p. 867-868. 8 ref. (NAL Call No.: 421 J822).

0520

Reduction in photosynthetic and transpiration rates of alfalfa caused by potato leafhopper (*Homoptera: Cicadellidae*) infestations (*Empoasca fabae*, *Medicago sativa*).

Womack, C.L. College Park, Md. : Entomological Society of America. Journal of economic entomology. Apr 1984. v. 77 (2). p. 508-513. Includes references. (NAL Call No.: 421 J822).

0521

Registration of N.S. 72 P2, N.S. 75 P2, N.S. 78 P2, and N.S. 81 P2PA1SAA1 alfalfa germplasms with multiple pest resistance (Breeding for resistance to insect pests).

Kehr, W.R. Barnes, D.K.; Frosheiser, F.I.; Manglitz, G.R. Madison, Wis. : Crop Science Society of America. Crop science. Sept/Oct 1984. v. 24 (5). p. 1002-1003. Includes 1 references. (NAL Call No.: 64.8 C883).

0522

Registration of N.S. 76 P2PA1 and N.S. 86 alfalfa germplasms resistant to potato leafhopper yellowing.

Kehr, W.R. Manglitz, G.R. Madison, Wis. : Crop Science Society of America. Crop science. Sept/Oct 1984. v. 24 (5). p. 1003-1004. Includes 1 references. (NAL Call No.: 64.8 C883).

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0523

Relationship between absolute density and sticky trap catches of adult potato leafhoppers in alfalfa (*Empoasca fabae*).

Fleischer, S.J.GENSA. Allen, W.A.; Pienkowski, R.L. Athens : The Society. Journal of the Georgia Entomological Society. Apr 1983. v. 18 (2). p. 213-218. Includes references. (NAL Call No.: QL461.G4).

0524

Relative toxicity of insecticides to alfalfa weevil larvae (*Hypera postica*).

Mullins, W.GENSA. Kowalski, E.; Andrew, V. Athens : The Society. Journal of the Georgia Entomological Society. Oct 1982. v. 17 (4). p. 438-441. Includes references. (NAL Call No.: QL461.G4).

0525

Resistance in alfalfa to a red form of the pea aphid (Homoptera: Aphididae) (*Acyrtosiphon pisum*, *Medicago sativa*).

Kugler, J.L. Ratcliffe, R.H. College Park, Md. : Entomological Society of America. Journal of economic entomology. Feb 1983. v. 76 (1). p. 74-76. Includes references. (NAL Call No.: 421 J822).

0526

Resistance in diploid and tetraploid annual *Medicago* species to leaf feeding by adult alfalfa weevils (*Hypera postica* Gyl).

Johnson, K.J.R. Sorensen, E.L. East Lansing. Proceedings Forage Insect Research Conference. 1978. 1978. (19th). p. 5-6. (NAL Call No.: 423.9 F74).

0527

Resistance in glandular-haired annual *Medicago* species to feeding by adult alfalfa weevils (*Hypera postica*).

Johnson, K.J.F. AR-NC. Sorensen, E.L.; Horber, E.K. College Park, Md., Entomological Society of America. Environmental entomology. Feb 1980. v. 9 (1). p. 133-136. ill. 12 ref. (NAL Call No.: QL461.E532).

0528

Resistance of glandular-haired *Medicago* species to oviposition by alfalfa weevils (*Hypera postica*).

Johnson, K.J.R. AR-NC. Sorensen, E.L.; Horber, E.K. College Park, Md., Entomological Society of America. Environmental entomology. Apr 15, 1980. v. 9 (2). p. 241-244. ill. 7 ref. (NAL Call No.: QL461.E532).

0529

Resistance to alfalfa weevil (*Hypera postica*) and potato leafhopper increased by glandular and simple hairs.

Horber, E.K. Sorensen, E.L.; Johnson, K.J.R. St. Paul, Minn., The Region. Agricultural reviews and manuals. ARM-NC - United States Dept. of Agriculture, Science and Education Administration. Agricultural Research. North Central Region. May 1981. May 1981. (19). p. 51. (NAL Call No.: aS21.A75U69).

0530

Resistance to spotted alfalfa aphid (Homoptera: Aphididae) in alfalfa seedlings of two plant introductions (*Therioaphis maculata*).

Manglitz, G.R. Kehr, W.R. College Park, Md. : Entomological Society of America. Journal of economic entomology. Apr 1984. v. 77 (2). p. 357-359. Includes references. (NAL Call No.: 421 J822).

0531

Resistance to the spotted alfalfa aphid (Homoptera: Aphididae) in glandular-haired *Medicago* species (*Therioaphis maculata*).

Ferguson, S.EVETB. Sorensen, E.L.; Horber, E.K. College Park : Entomological Society of America. Environmental entomology. Dec 1982. v. 11 (6). p. 1229-1232. Includes references. (NAL Call No.: QL461.E532).

0532

Root volatile components of red clover: identification and bioassay with the clover root borer (Coleoptera: Scolytidae).

EVETEX. Kamm, J.A. Buttery, R.G. College Park, Md. : Entomological Society of America. Environmental entomology. Oct 1984. v. 13 (5). p. 1427-1430. Includes references. (NAL Call No.: DNAL QL461.E532).

0533

A sampling program developed for potato leafhopper nymphs, *Empoasca fabae* (Homoptera: Cicadellidae), on alfalfa.

Simonet, D.E. Pienkowski, R.L. Ottawa. Canadian entomologist. Apr 1979. v. 111 (4). p. 481-486. ill. Bibliography p. 485-486. (NAL Call No.: 421 C16).

0534

Sampling techniques for the soil-borne stages of *Agromyza frontella* (Diptera: Agromyzidae) (Alfalfa blotch leafminer).

Harcourt, D.G. Binns, M.R. East Lansing, Michigan Entomological Society. The Great Lakes entomologist. Autumn 1980. v. 13 (3). p.

159-164. 7 ref. (NAL Call No.: QL461.M5).

0535

Screening efficacy of spotted alfalfa aphid biotypes and genic systems for resistance in alfalfa (*Therioaphis maculata*).
Nielson, M.W. EVETB. Kuehl, R.O. College Park : Entomological Society of America. Environmental entomology. Oct 1982. v. 11 (5). p. 989-996. Includes references. (NAL Call No.: QL461.E532).

0536

Screening for three-cornered alfalfa hopper resistance (*Spissistilus festinus*, cultivar resistance).
Kadir, M.A. Harville, B.G.; Smith, C.M. Baton Rouge : The Department. Report of projects - Louisiana Agricultural Experiment Station, Department of Agronomy. 1982. 1982. p. 268-269. (NAL Call No.: 100 L936).

0537

Searching behavior of *Hippodamia convergens* larvae (Coccinellidae: Coleoptera) (before and after feeding on the spotted alfalfa aphid, *Therioaphis maculata*).
Hunter, K.W. Jr. Cambridge, Cambridge Entomological Club. Psyche. June/Sept 1978. v. 85 (2/3). p. 249-253. ill. 8 ref. (NAL Call No.: 421 P95).

0538

Seasonal abundance and activity of *Sitona hispidulus* adults in Kentucky (Alfalfa, red clover).
Leibee, G.L. Pass, B.C.; Yeargan, K.V. College Park, Md., Entomological Society of America. Environmental entomology. Feb 1981. v. 10 (1). p. 27-30. 11 ref. (NAL Call No.: QL461.E532).

0539

Seasonal abundance and parasites of the alfalfa blotch leafminer, *Agromyza frontella*, in central Pennsylvania (Biological control).
Plummer, J.A. Byers, R.A. College Park, Md., Entomological Society of America. Environmental entomology. Feb 1981. v. 10 (1). p. 105-110. 16 ref. (NAL Call No.: QL461.E532).

0540

Seasonal history and habits of the European alfalfa beetle, *Subcoccinella vigintiquatuorpunktata* (L.) (Coleoptera: Coccinellidae) (Ecological aspects, phytophage, Pennsylvania).
Wheeler, A.G. Jr. Henry, T.J. Washington, D.C., Coleopterists Society. The Coleopterists bulletin. June 1981. v. 35 (2). p. 197-203. ill. Includes 16 ref. (NAL Call No.: 421 C674).

0541

Seasonal incidence of the fungus *Entomophthora phytonomi* infecting (the alfalfa weevil) *Hypera postica* larvae in central Missouri.
Puttler, B. AR-NC. Hostetter, D.L.; Long, S.H.; Borski, A.A. Jr. New York, Academic Press. Journal of invertebrate pathology. Jan 1980. v. 35 (1). p. 99-100. ill. (NAL Call No.: 421 J826).

0542

Seasonal occurrence of *Rachiplusia* ou, *Autographa biloba*, and associated entomophages in clover (Lady beetles).
Martin, P.B. Lingren, P.D.; Greene, G.L.; Baumhover, A.H. Athens, Ga., The Society. Journal of the Georgia Entomological Society. July 1981. v. 16 (3). p. 288-295. Bibliography p. 294-295. (NAL Call No.: QL461.G4).

0543

Seasonal population census of the alfalfa weevil (*Hypera postica*), clover root curculio (*Sitona hispidula*), and clover leaf weevil (*Hypera punctata*) (Coleoptera: Curculionidae) in southern Illinois.
Roberts, S.J. Armbrust, E.J. East Lansing, Michigan Entomological Society. The Great Lakes entomologist. Winter 1979. v. 12 (4). p. 141-148. ill., map. 13 ref. (NAL Call No.: QL461.M5).

0544

Second cutting alfalfa insect control study, 1980 (*Acyrtosiphon pisum*, *Empoasca fabae*, *Lygus lineolaris*, *Adelphocoris lineolatus*).
Cuperus, G.W. Radcliffe, E.B. College Park : Entomological Society of America. Insecticide and acaricide tests. 1982. v. 7. p. 132-133. (NAL Call No.: SB950.A1I49).

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0545

Selection for yellow clover aphid (*Therioaphis trifolii*) and pea aphid (*Acyrtosiphon pisum*) resistance in red clover (Cultivars and strains).

Gorz, H.J. Manglitz, G.R. Madison, Crop Science Society of America. Crop science. Mar/Apr 1979. v. 19 (2). p. 257-260. ill. 10 ref. (NAL Call No.: 64.8 C883).

0546

Selective weed control in spring-planted alfalfa: effect on leafhoppers and planthoppers (Homoptera:Auchenorrhyncha), with emphasis on potato leafhopper (*Empoasca fabae*).

Lamp, W.D. Barney, R.U.; Armbrust, E.U.; Kapusta, G. College Park, Md. : Entomological Society of America. Environmental entomology. Feb 1984. v. 13 (1). p. 207-213. Includes references. (NAL Call No.: QL461.E532).

0547

Selectivity of insecticides that kill the potato leafhopper (Homoptera: Cicadellidae) and alfalfa weevil (Coleoptera: Curculionidae) and protect the parasite *Microctonus aethiopoides* Loan (Hymenoptera: Braconidae)

Carbophenothion .
JEENAI. Hower, A.A. Davis, G.A. College Park, Md. : Entomological Society of America. Journal of economic entomology. Dec 1984. v. 77 (6). p. 1601-1607. Includes references. (NAL Call No.: DNAL 421 J822).

0548

Sex attractant for male alfalfa looper moths, *Autographa californica*.

Steck, W.F. Underhill, E.W. College Park, Md., Entomological Society of America. Environmental entomology. Apr 1979. v. 8 (2). p. 373-375. ill. 7 ref. (NAL Call No.: QL461.E532).

0549

Simulating alfalfa weevil effects by defoliation (*Medicago sativa*, *Hypera postica*).

Fick, G.W. Madison, Wis., American Society of Agronomy. Agronomy journal. Sept/Oct 1982. v. 74 (5). p. 835-840. ill. 19 ref. (NAL Call No.: 4 AM34P).

0550

Simulation of adult emergence for the alfalfa blotch leafminer (Diptera: Agromyzidae): interaction of environmental temperature and individual developmental rate variation (*Agromyza frontella*).

Mellors, W.K. EVETB. Helgesen, R.G. College Park : Entomological Society of America.

Environmental entomology. Feb 1983. v. 12 (1). p. 178-185. Includes references. (NAL Call No.: QL461.E532).

0551

Socio-economic factors relating to the IFA (Imported Fire Ant) and its management (*Solenopsis*, pests of livestock, fruits, vegetables, hay, soybeans, agricultural losses).

Headley, J.C. Aspelin, A.; Adams, C.T.; Brooks, T.; Brown, R.E. (Washington, D.C.?) : U.S. Dept. of Agriculture, APHIS, 1982. Proceedings of the Symposium on the Imported Fire Ant, June 7-10, 1982, Atlanta American Hotel, Atlanta, Georgia / editor S.L. Battenfield. p. 41-50.5. Includes references. (NAL Call No.: SB945.F535S9 1982).

0552

Some important chewing insect pests of alfalfa.
Hellenenthal, Ronald A. Baker, Norman T. Document available from: University of Minnesota, Bulletin Room, 1420 Eckles Avenue, St. Paul, Minnesota 55108 1971. Lists the chewing insect pests of alfalfa. 1 sheet : ill. (NAL Call No.: Document available from source.). (NAL Call No.: Folder 260).

0553

Spatial distribution of clover root curculio, *Sitona hispidulus* (Fabricius) (Coleoptera:Curculionidae), eggs in relation to alfalfa crowns.

JKESA. Elvin, M.K. Yeargan, K.V. Lawrence, Kan. : The Society. Journal of the Kansas Entomological Society. Apr 1985. v. 58 (2). p. 346-348. Includes references. (NAL Call No.: DNAL 420 K13).

0554

Spore load of *Ascosphaera* species on emerging adults of the alfalfa leafcutting bee, *Megachile rotundata*.

Vandenberg, J.D. USDA. Fichter, B.L.; Stephen, W.P. Washington, D.C., American Society for Microbiology. Applied and environmental microbiology. Apr 1980. v. 35 (4). p. 650-655. ill. 8 ref. (NAL Call No.: 448.3 AP5).

0555

Sporulation and mode of infection of *Entomophthora phytonomi* (fungus), a pathogen of the alfalfa weevil (*Hypera postica*, biological control).

Watson, P.L. Barney, R.U.; Maddox, J.V.; Armbrust, E.U. College Park, Md., Entomological Society of America. Environmental entomology. June 1981. v. 10 (3). p. 305-306. 3 ref. (NAL

Call No.: QL461.E532).

0556

Spotted alfalfa aphid (*Therioaphis maculata* (Buckton)) (Homoptera: Aphididae): water stress, amino acid content, and resistance (Alfalfa varieties).

DeVries, N.E.L. Manglitz, G.R. Lawrence, Kan., The Society. Journal of the Kansas Entomological Society. Jan 1982. v. 55 (1). p. 57-64. Includes 10 ref. (NAL Call No.: 420 K13).

0557

Spraying for the alfalfa weevil Geo. I. Reeves, T.R. Chamberlin, and K.M. Pack . -.
Reeves, George I. Washington, D.C. : U.S. Dept. of Agriculture, 1920. 20 p. : ill. -. (NAL Call No.: DNAL Fiche S-70 no.1185).

0558

Studies on the control of the clover root borer *Hylastinus obscurus* (Marshall) in Ohio with notes on coincidental control of the meadow spittlebug / by Bernard Auman App.

App, Bernard Auman, 1906. Ann Arbor, Mich. University Microfilms International 1980. Thesis--Ohio State University, 1953. Facsimile produced by microfilm-xerography. ii, 64 leaves. Bibliography: leaves 61-63. (NAL Call No.: DISS 59-05,346).

0559

Studies on the use of carbofuran to enhance alfalfa stand establishment (Insect pest control).

Hogg, D.B.AFGCA. Wedberg, J.L. Lexington : The Council. Proceedings - American Forage and Grassland Council. 1983. Paper presented at the Forage and Grassland Conference on "Use Home Grown Forages for Profit and Conservation", Civic Center, Eau Claire, Wisconsin, Jan 23-26, 1983. 1983. p. 97-101. (NAL Call No.: 60.19 J66).

0560

A study of *Microctonus aethiops* (Nees), a braconid parasite of the alfalfa weevil, *Hypera postica* (Gyllenhal) / by John William Neal.

Neal, John William, 1937. 1970. Thesis (Ph.D.)--University of Maryland, 1970. Photocopy. Ann Arbor, Mich. : University Microfilms, 1971. vii, 92 leaves ; 21 cm. Bibliography: leaves 81-87. (NAL Call No.: DISS 71-4,040).

0561

A study of the arthropod fauna of alfalfa / by Alfred George Wheeler.

Wheeler, Alfred George, 1944. 1971. Thesis (Ph.D.)--Cornell University, 1971. Photocopy. Ann Arbor, Mich. : University Microfilms, 1972. x, 332 leaves ; 21 cm. Bibliography: leaves 191-213. (NAL Call No.: DISS 71-27,404).

0562

A study of ultrastructural changes in tolerant and susceptible lines of alfalfa induced by stem nematode (*Ditylenchus dipsaci* Kuhn).

Chang, Doris C. N., 1942. Ann Arbor, Mich. University Microfilms 1973. Thesis--Utah State University, 1971. ix, 78 leaves. Bibliography: leaves 68-77. (NAL Call No.: DISS 73-876).

0563

Summer diapause of the clover leaf weevil, *Hypera punctata*, and lesser clover leaf weevil, *Hypera nigrirostris*, in Wisconsin.

Litsinger, J.A. Apple, J.W. East Lansing, Mich. : Michigan Entomological Society. The Great Lakes entomologist. Summer 1984. v. 17 (2). p. 83-86. Includes references. (NAL Call No.: QL461.M5).

0564

Survival of *Verticillium albo-atrum* from alfalfa in feces of leaf-chewing insects.

PHYTAJ. Huang, H.C. Harper, A.M. St. Paul, Minn. : American Phytopathological Society. Phytopathology. Feb 1985. v. 75 (2). p. 206-208. Includes 20 references. (NAL Call No.: DNAL 464.8 P56).

0565

Susceptibility of the alfalfa weevil to a *Bacillus thuringiensis* exotoxin (*Hypera postica*, biological control).

Wilson, M.C. Chen, F.C.; Shaw, M.C. Athens, Ga. : The Society. Journal of the Georgia Entomological Society. July 1984. v. 19 (3). p. 366-371. ill. Includes 3 references. (NAL Call No.: QL461.G4).

0566

Temperature effect on development and morphometrics of the potato leafhopper (*Empoasca fabae*, alfalfa).

Simonet, D.E. Pienkowski, R.L. College Park, Md., Entomological Society of America. Environmental entomology. Dec 1980. v. 9 (6). p. 798-800. 8 ref. (NAL Call No.: QL461.E532).

(PESTS OF PLANTS - INSECTS)

0567

Temperature requirements for development of *Autographa californica* (Lepidoptera: Noctuidae) (Alfalfa looper).

Miller, J.C. West, K.J.; Hanson, P.E. College Park, Md. : Entomological Society of America. Environmental entomology. Apr 1984. v. 13 (2). p. 593-594. Includes references. (NAL Call No.: QL461.E532).

0568

Thermal requirements for development of the parasite *Microctonus aethipoides* (on the alfalfa weevil, *Hypera postica*, integrated control).

Morales, J. Hower, A.A. College Park, Md., Entomological Society of America. Environmental entomology. June 1981. v. 10 (3). p. 279-284. Bibliography p. 283-284. (NAL Call No.: QL461.E532).

0569

Three species of the genus *Lygus* and their relation to alfalfa seed production in southern Arizona and California by Loyd L. Stitt.

Stitt, Loyd L. Washington, D.C. U.S. Dept. of Agriculture 1940. 19 p. : ill. -. Bibliography: p. 19. (NAL Call No.: Fiche S-69 no.741).

0570

Timothy hay--Japan market reopens (following export fumigation to prevent introduction of *Mayetiola destructor* from Washington).

Martin, W.W. Washington, D.C., Science and Education Administration, U.S. Dept. of Agriculture. Agricultural research. United States. Dept. of Agriculture. Oct 1979. v. 28 (4). p. 12-13. ill. (NAL Call No.: 1.98 AG84).

0571

Toxicity of nitro compounds from *Lotus pedunculatus* to grass grub (*Costelytra zealandica*) (Coleoptera: Scarabaeidae) (Includes questionable suitability of *Coronilla varia* and *Astragalus* for pasture and hay).

Hutchins, R.F.N. Sutherland, O.R.W.; Gnanasunderam, C.; Greenfield, W.J.; Williams, E.M.; Wright, H.J. New York, N.Y. : Plenum Press. Journal of chemical ecology. Jan 1984. v. 10 (1). p. 81-93. Includes references. (NAL Call No.: QD415.A1J6).

0572

Trap and synthetic lure for the checkered flower beetle (*Trichodes ornatus*), a serious predator of alfalfa leafcutting bees (*Megachile pacifica*).

Davis, H.G. Eves, J.D. College Park, Md., Entomological Society of America. Environmental entomology. Feb 15, 1979. v. 8 (1). p. 147-149. ill. 6 ref. (NAL Call No.: QL461.E532).

0573

Trichomes and field resistance of *Medicago* species to the alfalfa seed chalcid (Hymenoptera: Eurytomidae) (*Bruchophagus rodii*).

Brewer, G.J. EVETB. Sorensen, E.L.; Horber, E.K. College Park : Entomological Society of America. Environmental entomology. Feb 1983. v. 12 (1). p. 247-251. ill. Includes references. (NAL Call No.: QL461.E532).

0574

Use of integrated pest management in alfalfa (*Medicago sativa*, University of California).

Flint, M.L. Klonsky, K.; Zalom, F.G. Berkeley : The Station. California agriculture - California Agricultural Experiment Station. Jan/Feb 1984. v. 38 (1/2). p. 28-30. maps. (NAL Call No.: 100 C12CAG).

0575

Variegated cutworm (Lepidoptera: Noctuidae) foliage consumption and larvae development on alfalfa.

JEENAI. Buntin, G.D. Pedigo, L.P. College Park, Md. : Entomological Society of America. Journal of economic entomology. Apr 1985. v. 78 (2). p. 482-484. Includes references. (NAL Call No.: DNAL 421 J822).

0576

Virulence of *Autographa californica* (alfalfa looper) baculovirus preparations fed with different food sources to cabbage loopers (*Trichoplusia ni*, biological control).

Baughner, D.G. Yendol, W.G. College Park, Md., Entomological Society of America. Journal of economic entomology. June 1981. v. 74 (3). p. 309-313. Bibliography p. 313. (NAL Call No.: 421 J822).

0577

Visual technique for determining presence and stage of *Zoophthora phytonomi* in dead alfalfa weevil larvae (*Hypera postica*, natural control by fungus, Virginia).

Los, L.M. Allen, W.A. College Park, Md., Entomological Society of America. Journal of

economic entomology. Apr 1982. v. 75 (2). p. 375-377. ill. 8 ref. (NAL Call No.: 421 J822).

0578

Volatile components of alfalfa: possible insect host plant attractants (Tested with the alfalfa seed chalcid *Bruchophagus roddi*).

Buttery, R.G. AR-WRRC-AR-W. Kamm, J.A. Washington, D.C., American Chemical Society. Journal of agricultural and food chemistry. Sept/Oct 1980. v. 28 (5). p 978-981. ill. 7 ref. (NAL Call No.: 381 J8223).

0579

1980 Kansas field crop insect control recommendations.

Brooks, Leroy. Gates, Dell E. 1980. First this publication discusses some safety tips for using insecticides, then it discusses the control of insects attacking alfalfa, corn, sorghum, wheat, and soybeans. It also includes a list of the Poison Control Information Centers in Kansas. Document available from: Distribution Center, Umberger Hall, Kansas State University, Manhattan, KS 66506. 27 p. (NAL Call No.: C 431).

0580

1981 Kansas field crops insect control recommendations.

Brooks, Leroy. Gates, Dell E. 1981. First this publication discusses some safety tips for using insecticides, then it discusses the control of insects attacking alfalfa, corn, sorghum, wheat, and soybeans. It also includes a list of the Poison Control Information Centers in Kansas. Document available from: Distribution Center, Umberger Hall, Kansas State University, Manhattan, KS 66506. 28 p. (NAL Call No.: C 431).

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Yarris, L. SEA-WO~AR-W. Washington, D.C., The Administration. Agricultural research - U.S. Department of Agriculture, Science and Education Administration. Aug 1980. v. 29 (2). p. 16. (NAL Call No.: 1.98 AG84).

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Welty, R.E. Barker, K.R.; Lindsey, D.L. St. Paul, Minn., American Phytopathological Society. Plant disease. Dec 1980. v. 64 (12). p. 1097-1099. 26 ref. (NAL Call No.: 1.9 P69P).

0584

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PLANT DISEASES - GENERAL

0586

Alfalfa analyst.

Frosheiser, F. I. Munson, R. D.; Wilson, M. Curtis. 1972. This publication discusses how to identify the diseases, deficiencies, and insects that attack alfalfa and what areas of the nation that need to be concerned with each. Document available from: Ext. Office of Information, Ohio State Univ., 2120 Fyffe Road, Columbus, OH 43210. 10 p. : ill. (NAL Call No.: Not available at NAL.). (NAL Call No.: Bulletin 547).

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The causes of yellows in alfalfa (*Medicago sativa* L.) and comparisons of green and yellow plants for their growth, vegetative establishment, mortality and chemical composition / by Om Parkash Vadhw.

Vadhw, Om Parkash, 1941. 1970. Thesis (Ph.D.)--Utah State University, 1970. Photocopy. Ann Arbor, Mich. : University Microfilms, 1972. xix, 133 leaves ; 21 cm. Bibliography: leaves 106-110. (NAL Call No.: DISS 72-4,744).

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0591

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Crocker, Timothy Eugene, 1944. 1970. Thesis (Ph.D.)--Michigan State University, 1970. Photocopy. Ann Arbor, Mich. : University Microfilms, 1971. vi, 71 leaves ; 21 cm. Bibliography: leaves 67-71. (NAL Call No.: DISS 71-2,051).

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0595

Registration of Daneb I, Daneb I BW1, and Daneb I P2, alfalfa germplasms with multiple pest resistance (*Pseudopeziza medicaginis*, *Pseudopeziza jonesii*, *Cercospora medicaginis*).

Kehr, W.R. Rumbaugh, M.D.; Semeniuk, G.; Barnes, D.K.; Frosheiser, F.I.; Manglitz, G.R.; Boe, A.A. Madison, Wis. : Crop Science Society of America. Crop science. Sept/Oct 1984. v. 24 (5). p. 1001. Includes 1 references. (NAL Call No.: 64.8 C883).

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Frosheiser, F.I. Morrison, R.H.; Welty, R.E. St. Paul, Minn., American Phytopathological Society. Plant disease. Oct 1981. v. 65 (10). p. 844-845. 9 ref. (NAL Call No.: 1.9 P69P).

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Anthracnose resistance increases alfalfa yields (Colletotrichum trifolii).
Elgin, J.H. Jr. Barnes, D.K.; Busbice, T.H.; Buss, G.R.; Clark, N.A.; Cleveland, R.W.; Ditterline, R.L.; Evans, D.W.; Fransen, S.C.; Horrocks, R.D. Madison, Wis., Crop Science Society of America. Crop science. May/June 1981. v. 21 (3). p. 457-460. map. 15 ref. (NAL Call No.: 64.8 C883).

0608

Aphelenchus avenae (a mycophagous nematode) as a potential biological control agent for control of fungi causing root and crown rots of alfalfa.
Barnes, G.L. Russell, C.C. St. Paul, Minn., The Region. Agricultural reviews and manuals. ARM-NC. United States. Dept. of Agriculture. Science and Education Administration. Agricultural Research. North Central Region. July 1979. July 1979. (7). p. 31. (NAL Call No.: aS21.A75U69).

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Christen, A.A. Peadar, R.N. St. Paul, Minn., American Phytopathological Society. Phytopathology. Aug 1979. Aug 1979. . 69 (8). p. 914. (NAL Call No.: 464.8 P56).

0616

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Monteith, John. Washington, D.C. U.S. Dept. of Agriculture 1928. 27 p., 7 leaves of plates : ill. -. Bibliography: p. 25-26. (NAL Call No.: Fiche S-69 no.28).

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0619

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0622

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Pratt, R.G. Knight, W.E. St. Paul, American Phytopathological Society. Plant disease. Feb 1984. v. 68 (2). p. 131-134. Includes references. (NAL Call No.: 1.9 P69P).

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Buss, G.R. AR. Beltsville, Md., The Region. ARS-NE - United States Agricultural Research Service, Northeastern Region. Feb 1978. Feb 1978. (90). p. 37. (NAL Call No.: aS21.A75U45).

0626

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0627

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Clark, E.M. Donnelly, E.D. Auburn, Ala., The Station. Highlights of agricultural research - Alabama, Agricultural Experiment Station. Summer 1982. v. 29 (2). p. 17. ill. (NAL Call No.: 100 AL1H).

0629

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0630

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Vaziri, A. Keen, N.T.; Erwin, D.C. St. Paul, Minn., American Phytopathological Society. Phytopathology. Dec 1981. v. 71 (12). p. 1235-1238. Includes 20 ref. (NAL Call No.: 464.8 P56).

0631

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0632

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0633

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0634

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0635

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0636

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Christen, A.A. St. Paul, Minn., American Phytopathological Society. Phytopathology. Apr 1982. v. 72 (4). p. 412-414. ill. Includes 11 ref. (NAL Call No.: 464.8 P56).

0637

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Arny, D. C. (Wisconsin? Wisconsin Agricultural Experiment Station?) 1983. Cover title ~"Final report April, 1983. ~At head of title: Specific Cooperative Agreement no. 58-519B-1-978 between the Wisconsin Agricultural Experiment Station and ARS, USDA (Period of agreement - June 11,

1981 to May 31, 1982). 6 leaves : ill. ; 28 cm. (NAL Call No.: SB608.A5D48).

0638

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Pratt, R.G. Knight, W.E.; Barnett, D.W. St. Paul, Minn., American Phytopathological Society. Phytopathology. Aug 1981. v. 71 (8). p. 900. (NAL Call No.: 464.8 P56).

0639

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Pratt, R.G. Madison, Wis., The Department. Progress report, clovers and special purpose legumes research - Univ. of Wisconsin, Dept. of Agronomy. 1981. v. 14. p. 43-44. 1 ref. (NAL Call No.: SB193.P72).

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Pratt, R.G. Knight, W.E. Madison : The Department. Progress report, clovers and special purpose legumes research - Univ. of Wisconsin, Dept. of Agronomy. 1983. v. 16. p. 45-46. Includes references. (NAL Call No.: SB193.P72).

0641

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Welty, R.E. AR-AR-SO. Beltsville, Md., The Region. ARS-NE - United States Agricultural Research Service, Northeastern Region. Feb 1978. Feb 1978. (90). p. 38. (NAL Call No.: aS21.A75U45).

0642

Effect of benomyl on *Sclerotinia* crown and stem rot of alfalfa (*Medicago sativa*, *Sclerotinia trifoliorum*, spray schedule).
Welty, R.E. Rawlings, J.O. St. Paul, Minn. : American Phytopathological Society. Plant disease. Apr 1984. v. 68 (4). p. 294-296. Includes references. (NAL Call No.: 1.9 P69P).

0643

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Stuteville, D.L. (s.l.), The Society. Fungicide and nematocide tests; results - American Phytopathological Society. 1980. v. 35. p. 171. (NAL Call No.: 464.9 AM31R).

0644

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Cowling, W.A. Gilchrist, D.G. St. Paul, Minn., American Phytopathological Society. Plant disease. Apr 1982. v. 66 (4). p. 291-294. Includes 24 ref. (NAL Call No.: 1.9 P69P).

0645

Effect of light on the development of *Leptosphaerulina* leaf spot on alfalfa / by Mahesh Chandra Pandey.

Pandey, Mahesh Chandra, 1942. 1969. Thesis (Ph.D.)--University of Minnesota, 1969. Photocopy. Ann Arbor, Mich. : University Microfilms, 1970. 51 leaves : ill. ; 21 cm. Bibliography: leaves 49-51. (NAL Call No.: DISS 69-20,043).

0646

Effect of metalaxyl on *Phytophthora* root rot and yield of alfalfa.

Welty, R.E. Campbell, C.L. (s.l.) : Agricultural Research Service, U.S. Dept. of Agriculture. Report of the ... Alfalfa Improvement Conference. Dec 1983. Includes abstract. Dec 1983. (28th). p. 38. (NAL Call No.: 60.9 AL2).

0647

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Thyr, B.D. Hartman, B.J. St. Paul, Minn., American Phytopathological Society. Phytopathology. Aug 1979. Aug 1979. . 69 (8). p. 921. (NAL Call No.: 464.8 P56).

0648

Effect of soil fertilization on *Phytophthora* root rot and *Verticillium* wilt of alfalfa.

Kelling, K.A. AFGCA. Grau, C.R.; Arny, D.C.; Jarman, J.K.D.; Wolkowski, R.P. Lexington : The Council. Proceedings - American Forage and Grassland Council. 1983. Paper presented at the Forage and Grassland Conference on "Use Home Grown Forages for Profit and Conservation", Civic Center, Eau Claire, Wisconsin, Jan 23-26, 1983. 1983. p. 183-191. ill. (NAL Call No.: 60.19 J66).

0649

Effect of soil matric potential on *Phytophthora* root rot of alfalfa (*Phytophthora megasperma* f. sp. *medicaginis* on *Medicago sativa*).

Kuan, T.L. Erwin, D.C. St. Paul, Minn., American Phytopathological Society. Phytopathology. May 1982. v. 72 (5). p. 543-548. ill. Includes 31 ref. (NAL Call No.: 464.8 P56).

0650

Effect of soil water matric potential on resistance to *Fusarium oxysporum* f. sp. *medicaginis* in alfalfa (*Medicago sativa*, wilt).

Emberger, G. PHYTA. Welty, R.E. St. Paul : American Phytopathological Society. Phytopathology. Feb 1983. v. 73 (2). p. 208-212. 18 ref. (NAL Call No.: 464.8 P56).

0651

Effect of spring black stem on yield and growth of alfalfa in the greenhouse (*Phoma medicaginis*, Fungi).

Hijano, E.H. St. Paul, Minn., American Phytopathological Society. Plant disease. Sept 1981. v. 65 (9). p. 725-726. 14 ref. (NAL Call No.: 1.9 P69P).

0652

Effect of spring black stem (*Phoma medicaginis*) on alfalfa forage yield in the greenhouse and possible selection methodology.

Hijano, E.H. Frosheiser, F.I. St. Paul, Minn., The Region. Agricultural reviews and manuals. ARM-NC - United States Dept. of Agriculture, Science and Education Administration. Agricultural Research. North Central Region. May 1981. May 1981. (19). p. 37. 3 ref. (NAL Call No.: aS21.A75U69).

0653

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0715

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0716

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0717

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Kenerley, C.M. PHYTAJ. Bruck, R.I. St. Paul : American Phytopathological Society. Phytopathology. Dec 1983. v. 73 (12). p. 1643-1647. Includes references. (NAL Call No.: 464.8 P56).

0718

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0719

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Leath, K.T. Kendall, W.A. St. Paul, Minn., The Region. Agricultural reviews and manuals. ARM-NC. United States. Dept. of Agriculture. Science and Education Administration. Agricultural Research. North Central Region. July 1979. July 1979. (7). p. 46-47. (NAL Call No.: aS21.A75U69).

(PLANT DISEASES - FUNGAL)

0721

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Includes 21 references. (NAL Call No.: DNAL QK603.2.M9).

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Tesar, M.B. East Lansing : The Station. Research report - Michigan State University, Agricultural Experiment Station. Jan 1983. Jan 1983. (444). p. 213-223. ill. 9 ref. (NAL Call No.: 284.9 M58).

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0728

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Kuan, T.L. Erwin, D.C. St. Paul, Minn., American Phytopathological Society. Phytopathology. Oct 1980. v. 70 (10). p. 981-986. ill. 32 ref. (NAL Call No.: 464.8 P56).

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(PLANT DISEASES - VIRAL)

0803

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Burmester, C.H. Adams, F. Atlanta : Potash & Phosphate Institute. Better crops with plant food. Winter 1983/1984. v. 68. p. 18-19. (NAL Call No.: 6 B46).

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0848

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MISCELLANEOUS PLANT DISORDERS

0850

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0851

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0853

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0854

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0858

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Tolerance of alfalfa (Medicago sativa) to EPTC (Herbicide injury in crops).

Dawson, J.H. WEESA. Champaign : Weed Science Society of America. Weed science. Jan 1983. v. 31 (1). p. 103-108. ill. 8 ref. (NAL Call No.: 79.8 W41).

PROTECTION OF PLANT PRODUCTS - GENERAL AND MISC.

0861

Changes in round bales during storage (Ryegrass, alfalfa, losses).

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Lechtenberg, V.L. Hendrix, K.S.; Petritz, D.C.; Parsons, S.D. State College, Pa., American Forage and Grassland Council. Forage and grassland progress. Spring 1980. v. 21. p. 2. ill. (NAL Call No.: SB193.F6).

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0864

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0865

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Wood, Garnett E. Ames, Iowa, International Association of Milk, Food, and Environmental Sanitarians. Abstract: The concentration of certain compounds that are natural constituents of plants may increase to toxic levels under various stress conditions. The stress compounds produced in the following plants consumed directly in the United States are discussed: green beans; lima beans; broad beans; lentils; garden peas; soybeans; alfalfa; groundnuts; cowpeas; sugar beets; grapes and grapevine leaves; parsnips; parsley; celery; safflower; and mulberry plants. A multidisciplinary effort is needed to establish a monitoring system for stress compounds in food. Many plants have not yet been investigated and little consideration has been given to environmental stress from temperature, rainfall, agronomic practices, etc. In-depth toxicological studies are needed. Journal of food protection. June 1979. v. 42 (6). p. 496-501,475. ill. 68 ref.

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0868

Alfalfa and herbicides (Increase of root-knot nematode damage).
Yarris, L. SEA-WO-AR-W. Washington, D.C., The Administration. Agricultural research - U.S. Department of Agriculture, Science and Education Administration. Aug 1980. v. 29 (2). p. 16. (NAL Call No.: 1.98 AG84).

0869

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Howell, Don R. Heathman, E. S. Tucson University of Arizona, Cooperative Extension Service 1979. Caption title ~Pesticide Applicator Training collection ~"Q367.". 3 p. ill. ; 28 cm. (NAL Call No.: SB608.A5H68).

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0871

Altering the composition of legume-grass pastures with pronamide (Herbicide, Ladino clover, Trifolium repens, orchardgrass, Dactylis glomerata, cows grazing).
Heinrichs, A.J. Conrad, H.R.; VanKeuren, R.W.; Triplett, G.B. Lexington, Ky., The Council. Proceedings - American Forage and Grassland Council. 1982. 1982. (15th). p. 37-46. 6 ref. (NAL Call No.: 60.19 J66).

0872

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Bowes, G.G. Denver, Society for Range Management. Journal of range management. Mar 1982. v. 35 (2). p. 246-248. Includes 8 ref. (NAL Call No.: 60.18 J82).

0873

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Peeper, T.F. Champaign, Ill. : Weed Science Society of America. Weed science. 1984. Literature review. v. 32 (suppl.). p. 18-25. Includes references. (NAL Call No.: 79.8 W41).

0874

Chemical control of dandelion (Taraxacum officinale) and perennial sowthistle (Sonchus arvensis) in alfalfa (Medicago sativa) grown for seed.
Waddington, J. Champaign, Ill., Weed Science Society of America. Weed science. Mar 1980. v. 28 (2). p. 164-167. ill. 9 ref. (NAL Call No.: 79.8 W41).

0875

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Lee, William O., 1911. Washington, D.C. Agricultural Research Service, U.S. Dept. of Agriculture (Eugene, Or.?) Oregon Agricultural Experiment Station 1964. 21 p. : ill. -. Bibliography: p. 21. (NAL Call No.: Fiche S-69 no.1302).

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Comparison of three postemergence grass herbicides on a new alfalfa seeding (Echinochloa crusgalli, Paspalum boscianum, Digitaria sanguinalis).
Himmelstein, F.J. Peters, R.A. Beltsville, Md., The Society. Proceedings - annual meeting of the Northeastern Weed Science Society. p. 70-73. 2 ref. (NAL Call No.: 79.9 N814).

0878

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Peters, R.A. Beltsville, Md. Proceedings of the ... annual meetingNortheastern Weed Science Society. 1979. v. 33. p. 20-23. ill. 2 ref. (NAL Call No.: 79.9 N814).

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Dernoeden, P.H. Nash, A.S. Beltsville, Md., The Society. Proceedings - annual meeting of the Northeastern Weed Science Society. 1982. v. 36. p. 321-325. Includes 2 ref. (NAL Call No.: 79.9

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0880

Conventional and no-till establishment of ladino clover as influenced by time of seeding and insect and grass suppression.

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Smith, A.E. Oswald, T.H. Champaign, Ill., Weed Science Society of America. Weed science. July 1979. v. 27 (2). p. 389-391. ill. 11 ref. (NAL Call No.: 79.8 W41).

0883

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Effect of timing and herbicides on the no-tillage establishment of red clover, alfalfa, and birdsfoot trefoil.

Nichols, R.L. Peters, R.A. Beltsville, Md., The Society. Proceedings - annual meeting of the Northeastern Weed Science Society. Northeastern Weed Science Society. 1980. Abstract only. v. 34. p. 91. (NAL Call No.: 79.9 N814).

0885

Effects of annual weed control on alfalfa forage quality (Herbicides).

Temme, D.G. Harvey, R.G. Madison. Agronomy journal American Society of Agronomy. Jan/Feb 1979. v. 71 (1). p. 51-54. ill. 14 ref. (NAL Call No.: 4 AM34P).

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(PESTICIDES - GENERAL)

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Dawson, J.H.WEESA. Champaign : Weed Science Society of America. Weed science. Jan 1983. v. 31 (1). p. 103-108. ill. 8 ref. (NAL Call No.: 79.8 W41).

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SOIL SCIENCE

0968

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Call No.: 79.8 W41).

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0972

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0974

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0975

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0976

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Blust, W.E. Wilson, B.H.; Koonce, K.L.; Nelson, B.D.; Sedberry, J.E. Jr. Baton Rouge, La., The Station. Bulletin - Louisiana Agricultural Experiment Station. June 1982. June 1982. (738). 27 p. ill. 19 ref. (NAL Call No.: 100 L93 (1)).

0977

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Ream, H.W. Smith, D. St. Paul, Minn., The Region. Agricultural reviews and manuals. ARM-NC. United States. Dept. of Agriculture. Science and Education Administration. Agricultural Research. North Central Region. July 1979. July 1979. (7). p. 44-45. 1 ref. (NAL Call No.: aS21.A75U69).

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Farming without chemicals (Rotation of oats/legumes and grasses-hay-maise-soybeans-maize, organic farming, Iowa).

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0980

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SOIL EROSION AND RECLAMATION

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farming, Iowa).**

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Hamm, P.B. Hansen, E.M. St. Paul, Minn.,

American Phytopathological Society.

Phytopathology. Jan 1981. v. 71 (1). p. 65-68.

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0985

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Impact of alfalfa harvest on *Microctonus aethiopoides* and *Microctonus colesi* parasites of the alfalfa weevil, *Hypera postica* : final report October 1, 1978 - September 30, 1981 / prepared by Arthur A. Hower, Jr.

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Inhibition of chalkbrood spore germination in vitro (*Ascosphaera aggregata*: *Ascosphaerales*) / W.P. Stephen ... (et al.).

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1014

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Fusco, Robert A. (Robert Angelo), 1941. 1971. Thesis (Ph.D.)--Pennsylvania State University, 1971. Photocopy of typescript. Ann Arbor:

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1022

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1023

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Reeves, George I. Washington, D.C. : U.S. Dept. of Agriculture, 1920. 20 p. : ill. -. (NAL Call No.: DNAL Fiche S-70 no.1185).

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Volatile components of red clover leaves, flowers, and seed pods: possible insect attractants.

Buttery, R.G. Kamm, J.A.; Ling, L.C. Washington, D.C. : American Chemical Society. Journal of agricultural and food chemistry. Mar/Apr 1984. v. 32 (2). p. 254-256. Includes references. (NAL Call No.: 381 J8223).

APICULTURE RELATED

1025

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Moffett, J.O. Stoner, A.; Ahring, R.M. College Station, Tex., Southwestern Entomological Society. The Southwestern entomologist. June, 1982. v. 7 (2). p. 111-115. 9 ref. (NAL Call No.: QL461.S65).

1026

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1028

Persistence of fenvalerate in alfalfa: effect of growth dilution and heat units on residue half-life (Insecticides, residues, toxicity to bees, *Apis mellifera*, *Megachile rotundata*, southern Alberta).

Hill, B.D. Charnetski, W.A.; Schaalje, G.B.; Schaber, B.D. Washington, D.C., American Chemical Society. Journal of agricultural and food chemistry. July/Aug 1982. v. 30 (4). p. 653-657. ill. Ref. (NAL Call No.: 381 J8223).

1029

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Ahmad, Zahoor, 1942. 1971. Thesis (Ph.D.)--Washington State University, 1971. Photocopy. Ann Arbor, Mich. : University Microfilms, 1972. viii, 56 leaves ; 21 cm. Bibliography: leaves 53-56. (NAL Call No.: DISS 72-7,630).

1030

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1031

Toxicity to honey bees of two formulations of methyl parathion sprayed on flowering alfalfa (*Apis mellifera*).

Moffett, J.O. SENTD. Harvey, J.; Stoner, A. College Station : Southwestern Entomological Society. The Southwestern entomologist. June 1983. v. 8 (2). p. 113-117. Includes references. (NAL Call No.: QL461.S65).

SERICULTURE RELATED

1032

Purification and characterization of the infectious entities of alfalfa looper nuclear polyhedrosis virus produced in cells cultured in vitro / by William A. Ramoska.

Ramoska, William A., 1949. Ann Arbor, Mich.

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1033

The effect of pesticides on the alfalfa
leafcutting bee / (Carl Johansen, E.R. Jaycox,
Robert Hutt).
Johansen, Carl (Carl A.). (Pullman?) Washington
Agricultural Experiment Stations, Institute of
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University 1963. Integrated Pest
Management/Pesticide Applicator Training
Collection ~Cover title ~"May 1963.". ii, 12 p.
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1034

Effects of gamma radiation on the reproduction of the alfalfa weevil *Hypera postica* (Gyllenhal) (Coleoptera: Curculionidae) / by Francisco R. Ferrer.

Ferrer, Francisco R. (Francisco Ramon), 1937. 1971. Thesis (Ph.D.)--Pennsylvania State University, 1971. Photocopy. Ann Arbor, Mich. : University Microfilms, 1972. x, 147 leaves ; 21 cm. Bibliography: leaves (111)-119. (NAL Call No.: DISS 71-28,685).

1035

Effects of the insect growth regulator hydroprene on diapausing alfalfa weevils (*Hypera postica*).

Ascerno, M.E. Smilowitz, Z.; Hower, A.A. Jr. College Park, Md., Entomological Society of America. Environmental entomology. Aug 1981. v. 10 (4). p. 501-505. 13 ref. (NAL Call No.: QL461.E532).

1036

Incidence of nonfunctional ovaries in *Bathyplectes anurus* and *Bathyplectes curculionis* (Hymenoptera: Ichneumonidae), parasites of the alfalfa weevil (Coleoptera: Curculionidae) in the northeastern United States (*Hypera postica*).

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1107

WATERSHED PLAN FOR TURKEY CREEK WATERSHED IN ALFALFA, GARFIELD, KINGFISHER, AND MAJOR COUNTIES, OKLAHOMA.

ALFALFA COUNTY CONSERVATION DISTRICT. STILLWATER, OKLAHOMA DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE JUNE 1983 (EPA: JUNE 20, 1983). (PUR)IMPLEMENTATION OF A FLOOD CONTROL AND WATERSHED PROTECTION PLAN FOR THE 244,006-ACRE TURKEY CREEK WATERSHED IN ALFALFA, GARFIELD, KINGFISHER, AND MAJOR COUNTIES OF NORTH CENTRAL OKLAHOMA IS PROPOSED. THE PLAN WOULD INVOLVE CONSTRUCTION OF 11 FLOODWATER-RETARDING STRUCTURES AND DEVELOPMENT OF WILDLIFE MITIGATION MEASURES ON 43.5 ACRES OF LAND OVER A SIX-YEAR PERIOD. APPROXIMATELY 62 STAFF-YEARS OF TECHNICAL ASSISTANCE WOULD BE PROVIDED TO FURTHER PLANNING GOALS. THE FLOODWATER-RETARDING STRUCTURES WOULD BE COMPACTED EARTH FILL EMBANKMENTS; BORDOW MATERIAL WOULD BE TAKEN MOSTLY FROM AREAS BELOW THE SPILLWAY CREST. ALL PRINCIPAL SPILLWAYS WOULD CONSIST OF DROP-INLET STRUCTURES WITH STANDARD OPEN-TOP CONCRETE RISERS AND CONCRETE CONDUITS. EMERGENCY SPILLWAYS WOULD BE FORMED OF ROCK OR VEGETATED EARTH. ALL STRUCTURES WOULD OPERATE AUTOMATICALLY, WITH FLOODWATER BEING TEMPORARILY STORED IN DETENTION POOLS AND RELEASED AT A CONTROLLED RATE THROUGH THE PRINCIPAL SPILLWAYS. NINE OF THE STRUCTURES WOULD CONTROL THE 25-YEAR FREQUENCY STORM, WHILE THE REMAINING STRUCTURES WOULD CONTROL THE 50-YEAR FREQUENCY STORM. WATER INITIALLY RETAINED IN THE SEDIMENT POOLS WOULD BE DISPLACED BY SEDIMENT OVER THE 100-YEAR LIFE OF EACH STRUCTURE. LAND RIGHTS WOULD BE ACQUIRED ON THE 43.5 ACRES TO BE MANAGED FOR MITIGATION

OF IMPACTS TO WILDLIFE HABITAT. MITIGATION LANDS WOULD INCLUDE 13 ACRES OF RANGELAND, 18 ACRES OF TIMBERLAND, AND 12.5 ACRES OF CROPLAND AND/OR PASTURE. COST OF THE PROJECT IS ESTIMATED AT \$4.6 MILLION, AND THE ESTIMATED BENEFIT-COST RATIO IS 1.24. (PDS) OPERATION OF THE FLOOD CONTROL STRUCTURES WOULD REDUCE FLOODWATER DAMAGE TO 17,598 ACRES OF AGRICULTURAL LAND, REDUCE FLOODING IN THE TOWN OF OVER, REDUCE SEDIMENT DEPOSITION DOWNSTREAM OF THE STRUCTURES, AND MAINTAIN THE ENVIRONMENTAL QUALITY OF THE WATERSHED. AVERAGE ANNUAL SAVINGS RESULTING FROM FLOOD PROTECTION PROVIDED TO THE TOWN WOULD AMOUNT TO \$7,790, WHILE AVERAGE ANNUAL SAVINGS RESULTING FROM AGRICULTURAL FLOOD. USDA EMPLOYEES REQUEST DOCUMENTS FROM NATIONAL AGRICULTURAL LIBRARY OTHERS ORDER FROM INFORMATION RESOURCES PRESS, 1700 NORTH MIDDLE STREET, SUITE 700, ARLINGTON, VA 22209.

1108

WATERSHED PLAN FOR TURKEY CREEK WATERSHED IN ALFALFA, GARFIELD, KINGFISHER, AND MAJOR COUNTIES, OKLAHOMA.

ALFALFA COUNTY CONSERVATION DISTRICT. STILLWATER, OKLAHOMA DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE APRIL 1982 (EPA: APRIL 20, 1982). (PUR)IMPLEMENTATION OF A FLOOD CONTROL AND WATERSHED PROTECTION PLAN ON THE 244,006-ACRE TURKEY CREEK WATERSHED IN ALFALFA, GARFIELD, KINGFISHER, AND MAJOR COUNTIES OF NORTH CENTRAL OKLAHOMA IS PROPOSED. THE PLAN WOULD INVOLVE CONSTRUCTION OF 11 FLOODWATER-RETARDING STRUCTURES AND DEVELOPMENT OF WILDLIFE MITIGATION MEASURES ON 43.5 ACRES OF LAND OVER A SIX-YEAR PERIOD. APPROXIMATELY 62 STAFF-YEARS OF TECHNICAL ASSISTANCE WOULD BE PROVIDED TO FURTHER PLANNING GOALS. THE FLOODWATER-RETARDING STRUCTURES WOULD BE COMPACTED EARTH FILL EMBANKMENTS, AND BORDOW MATERIAL WOULD BE TAKEN MOSTLY FROM AREAS BELOW THE SPILLWAY CREST. ALL PRINCIPAL SPILLWAYS WOULD CONSIST OF DROP-INLET STRUCTURES WITH STANDARD OPEN-TOP CONCRETE RISERS AND CONCRETE CONDUITS. EMERGENCY SPILLWAYS WOULD BE FORMED OF ROCK OR VEGETATED EARTH. ALL STRUCTURES WOULD OPERATE AUTOMATICALLY, WITH FLOODWATER BEING TEMPORARILY STORED IN DETENTION POOLS AND RELEASED AT A CONTROLLED RATE THROUGH THE PRINCIPAL SPILLWAYS. NINE OF THE STRUCTURES WOULD CONTROL THE 25-YEAR FREQUENCY STORM, WHILE THE REMAINING STRUCTURES WOULD CONTROL THE 50-YEAR FREQUENCY STORM. WATER INITIALLY RETAINED IN THE SEDIMENT POOLS WOULD BE DISPLACED BY SEDIMENT OVER THE 100-YEAR LIFE OF EACH STRUCTURE. LAND RIGHTS WOULD BE ACQUIRED ON THE 43.5 ACRES TO BE MANAGED FOR MITIGATION OF IMPACTS TO WILDLIFE HABITAT. MITIGATION LANDS WOULD INCLUDE 13 ACRES OF RANGELAND, 18 ACRES OF TIMBERLAND, AND 12.5 ACRES OF CROPLAND AND/OR PASTURE. COST OF THE PROJECT IS ESTIMATED AT \$4.3 MILLION, AND THE ESTIMATED BENEFIT-COST RATIO IS 1.27. (PDS) OPERATION OF THE FLOOD CONTROL STRUCTURES WOULD REDUCE FLOODWATER DAMAGE TO 17,598 ACRES OF AGRICULTURAL LAND, REDUCE FLOODING IN THE TOWN OF OVER, REDUCE SEDIMENT DEPOSITION DOWNSTREAM OF THE STRUCTURES, AND MAINTAIN THE ENVIRONMENTAL QUALITY OF THE WATERSHED. AVERAGE ANNUAL SAVINGS RESULTING FROM FLOOD PROTECTION

(WATER RESOURCES AND MANAGEMENT)

PROVIDED TO THE TOWN WOULD AMOUNT TO \$7,790,
WHILE AVERAGE ANNUAL SAVINGS RESULTING FROM
AGRICULTURA. USOA EMPLOYEES REQUEST DOCUMENTS
FROM NATIONAL AGRICULTURAL LIBRARY OTHERS ORDER
FROM INFORMATION RESOURCES PRESS, 1700 NORTH
MOORE STREET, SUITE 700, ARLINGTON, VA 22209.

DRAINAGE AND IRRIGATION

1109

Volatilization of S-ethyl

N,N-dipropylthiocarbamate from water and wet soil during and after flood irrigation of an alfalfa field.

Clath, M.M. AR-W. Spencer, W.F.; Farmer, W.J.; Shoup, T.D.; Grover, R. Washington, D.C., American Chemical Society. Journal of agricultural and food chemistry. May/June 1980. v. 28. May/June 1980. v. 28 (3). p. 610-613. 111. 18 ref. (NAL Call No.: 381 J8223).

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**Chemical preservation of alfalfa juice protein
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Paper - American Society of Agricultural
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Telephone the Order Dept. at (616) 429-0300 for
information and prices. 1982. (fiche no.
82-1539). 1 microfiche : ill. Includes
references. (NAL Call No.: FICHE S-72).

FOOD COMPOSITION, FIELD CROP

1111

Yield, chemical composition, and feeding value
for milk production of alfalfa hay cut at three
stages of maturity by J.R. Dawson, D.V.
Kopland, and R.R. Graves.

Dawson, J. R. Washington, D.C. U.S. Dept. of
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p. 50-51. (NAL Call No.: Fiche S-69 no.739).

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Quality of alfalfa hay chemically treated at cutting to hasten field drying.

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Bovine salmonellosis attributed to *Salmonella anatum*-contaminated haylage and dietary stress.
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W.M.; Harris, T.M. Washington, D.C. : American Society for Microbiology. Applied and environmental microbiology. Aug 1984. v. 48 (2). p. 386-388. ill. Includes references. (NAL Call No.: DNAL 448.3 AP5).
- 1118
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Panciera, R.J. Santa Barbara, Calif. : American Veterinary Publications, 1982. Equine medicine and surgery, 3rd ed. / edited by R.A. Mansmann, E.S. McAllister ; P.W. Pratt, book editor. p. 203-204. ill. 7 ref. (NAL Call No.: SF951.E6 1982).
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Cantharidin toxicosis in horses (Alfalfa hay, *Harpalus*, *Epicauta pennsylvanica*).
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- 1120
Development of an analytical procedure for an insect growth regulator (EL-494) (N-(((5-(4-bromophenyl)-6-methyl-2-pyrazinyl)amino)carbonyl)-2,6-dichlorobenzamide) employing high-pressure liquid chromatography and its application on residues in alfalfa.
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Identification of swainsonine as a probable contributory mycotoxin in moldy forage mycotoxicoses *Rhizoctonia leguminicola*, Slobber syndrome, red clover hay, slaframine, *Swainsona canescens*.
APMBA. Broquist, H.P. Mason, P.S.; Hagler,

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Chemical composition and in vivo nutrient digestibility of guinea and merker grass hays (*Panicum maximum*, *Pennisetum purpureum*, steers, and goat and sheep wethers).

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Chemical preservation of alfalfa juice protein (Food or feed material).

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Quality of alfalfa hay chemically treated at cutting to hasten field drying.

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A computer simulation model for the alfalfa blotch leafminer (*Agromyza fontella*).

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INSECT PESTS AND CONTROL, ANIMALS AND MAN

1137

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