#### Rakesh S. Chandran

Extension Specialist and Professor, IPM Coordinator
Asst. Director for Research and Outreach
Extension Service - Agricultural and Natural Resources (ANR)
West Virginia University (WVU)
3417 Agricultural Sciences Building
Morgantown, WV 26506-6108

Tel: 304-293-2603 Fax: 304-293-6954

e-mail: RSChandran@mail.wvu.edu

### **EDUCATION**

**Ph.D. Weed Science.** Virginia Tech. May 1997. Dissertation titled, 'Influence of isoxaben application timing on dissipation and broadleaf weed control in turf'.

**M.S. Environmental Horticulture.** University of Florida. April 1993. Thesis titled, 'Response of St. Augustinegrass [Stenotaphrum secundatum (Walt.) Kuntze.] to composted solid waste and irrigation frequency'.

**Diploma 'International Gardener Training Program'.** Longwood Gardens, Kennett Square, Pennsylvania. August 1990.

B.S. Agriculture. Kerala Agricultural University, India. December 1988.

# **EMPLOYMENT**

August 1999 to present: Extension Weed Specialist and IPM Coordinator, West Virginia University Extension Service-ANR and Davis College of Agriculture, Natural Resources, and Design (DCANRD).

<u>Primary responsibilities:</u> Serve the Land Grant University as the primary source of information for West Virginia farmers and citizens on identification and management of weeds across all commodities. Serve as the Integrated Pest Management (IPM) Coordinator for the University to carry out programming to make judicious use of pesticides. Serve as the Assistant Director for Research and Outreach Develop for Extension Service – ANR. Teach a 3-credit course for DCANRD, titled 'Principles of Weed Science' ('Turfgrass Management' taught till 2013). Serve as a co-author for the annual regional publications titled 'Pest Management Guide for Field Crops' and 'Spray Bulletin Guide for Commercial Tree Fruit Growers'. Publish Extension Newsletters, Fact-Sheets, and web-based publications. Participate in Extension events, programs, and

activities related to weed management. Conduct applied research to manage weeds in tree fruits, turfgrass, field crops, pasture, vegetables, and ornamentals based on local and regional needs and disseminate results in appropriate media. Serve on the editorial board of 'Agronomy', and review manuscripts for various peer-reviewed journals.

Major Accomplishments: Received 'Distinguished Service Award' from the National Association of Agricultural County Agents (NACAA), 2016; 'Distinguished Senior Alumni Award', Department of Plant Pathology, Physiology, and Weed Science, Virginia Tech, 2018; 'Gamma Sigma Delta Extension Faculty Award of Merit', West Virginia University Chapter of Gamma Sigma Delta, 2018; and 'Research Excellence Award' WVU Extension Service, 2019.

Served in several elected capacities at the regional level in professional organizations. Served on grant panels for the USDA-NIFA and regional IPM Centers (Northeast, Southern and Western), and Northeast-SARE. Served as the President of the Northeastern Weed Science Society (2015-'16) and as the Chair of Organizing Committee of the first Northeastern Plant, Pest, and Soils Conference (2016). Served as an International Volunteer for 'Partners of the Americas', to assist with a US-AID supported project in Guyana, South America.

Promoted to the rank of Clinical Associate Professor in 2005, and to the rank of Clinical Professor in 2011. Rank changed to Tenured Professor in 2012. Appointed as ANR Assistant Director for Research and Outreach in 2017. Secured \$1,549,068.00 (as of 2019) as Principal Investigator (PI), in addition to \$129,190 as Co-PI, in extramural funds for the University. Published four peer reviewed book chapters, 17 peer-reviewed journal articles (10 as primary author), three peer-reviewed research reports, 38 abstracts, and 149 extension publications. Served on graduate committees, supervised full-, and part-time employees. Currently serving on the Board of Directors, Weed Science Society of America.

June 1997 to June 1999: Post-Doctoral Research Associate at Citrus Research and Education Center, University of Florida.

May 1993 to May 1997: Graduate Research Assistant at Virginia Tech.

September 1990 to May 1993: Graduate Research Assistant at University of Florida.

September 1989 to August 1990: International Gardener Trainee, Longwood Gardens, Pennsylvania.

December 1988 to August 1989: Worker/Supervisor, Sarachand Nursery, Trivandrum, India.

#### **PUBLICATIONS**

# **Peer Reviewed Book Chapters**

- Chandran, R.S. 2018. Sustainable weed control in orchards. *In* Weed Control: Sustainability, Hazards, and Risks in Cropping Systems Worldwide. Korres, N.E, N. R. Burgos, and S.O. Duke. (Ed.). Boca Raton, FL: CRC Press. *pp* 505-525.
- Chandran, R.S. 2014. Strategies for reduced herbicide use in Integrated Pest Management. *In* Integrated Pest Management: Pesticide Problems, Vol.3 Pimentel, D. and Peshin, R. (Ed.). Springer. *pp* 303-329.
- Chandran, R.S. 2014. Experiences with implementation and adoption of Integrated Pest Management in Northeastern USA. *In* Integrated Pest Management Experiences with Implementation, Global Overview, Vol. 4. Peshin, R and Pimentel, D. (Ed.). Springer. *pp* 37-64.
- Chandran, R.S. 2006. Integrated Turfgrass Weed Management. *In* H.P. Singh, D.R. Bathish, and R.K. Kohli (Ed). *Handbook of Sustainable Weed Management*. (pp 791-812). NY: Haworth Press.

#### Peer Reviewed Journal Articles

- Chandran, R.S., and K.A. Nelson. 2018. Effect of Mulches on *Capsicum Annum* Yield Attributes and Weeds Control. Int. J. Trop. Agri. Volume 36 (4):895-899.
- Park, Y.-L., Gururajan, S., Thistle, H., Chandran, R. and Reardon, R. 2017. Aerial release of Rhinoncomimus latipes (*Coleoptera: Curculionidae*) to control *Persicaria perfoliata* (Polygonaceae) using an unmanned aerial system. Pest Management Sci., doi:10.1002/ps.4670.
- Bhowmik P.C., and R.S. Chandran. 2015. Biology, ecology, distribution and current status of *Heracleum mantegazzianum* Sommier & Levier. J. Crop and Weed, 11:1-17.
- Chandran, R.S. 2015. Effect of glyphosate application rates, timings, and formulations on apple trees. Int. J. Trop. Agri. 33(2:III):1329-1330.
- Mandal, M., R.S. Chandran, and J.C. Sencindiver. 2013. Amending subsoil with composted poultry litter I: Effects on soil physical and chemical properties. Agronomy 3(4):670-684.
- Mandal, M., R.S. Chandran, and J. Balasko. 2013. Amending subsoil with composted poultry litter II: Effects on Kentucky bluegrass (*Poa pratensis*) establishment, root growth, and weed pressure. Agronomy 3(4):657-669.
- Steele, J., D.W. McGill, R.S. Chandran, W.N. Grafton, and C.D. Huebner. 2008.

  Landowner characteristics associated with receiving information about invasive plants and implications for outreach providers. J. Extension. 46(6):6FEA7

- Steele, J., R. S. Chandran, W. N. Grafton, C. D. Huebner, and D. W. McGill. 2006.

  "Awareness and management of invasive plants among West Virginia woodland owners." *J. Forestry* 104:248-253.
- Chandran, R.S., and M. Singh. 2003. Survey and control of Brazil pusley (*Richardia brasiliensis*) in Florida citrus. Proc. of Fl. St. Hort. Soc. 116:211-214.
- Chandran R. S. and M. Singh. 2000. Depletion of an artificial weed seed bank during the dormant period via heating and subsequent chilling of soil. HortSci. 35:1092-1094
- Chandran R. S. and M. Singh. 2000. Antagonistic effect of thiazopyr on azafenidin to control yellow nutsedge (*Cyperus esculentus*). Weed Technol. 14:556-561.
- Chandran R. S., and J. F. Derr. 1999. Isoxaben dissipation in field soil as affected by application timings. J. Environ. Qual. 28:1760-1764.
- Chandran R. S., M. Singh, and S. Salihu. 1999. Thiazopyr stimulates hairy beggarticks (*Bidens pilosa*) germination. Weed Technol. 13:576-580.
- Chandran R. S. and M. Singh. 1999. Reduction of norflurazon leaching in a sandy soil by adjuvants. Bull. Environ. Contam. Toxicol. 62:315-323.
- Chandran, R. S., J. F. Derr, and S. W. Bingham. 1998. Effect of isoxaben application rate and timing on residual broadleaf weed control in turf. Weed Technology. 12:569-574.
- Chandran, R. S., and J. F. Derr. 1998. Duration of broadleaf weed control with isoxaben using bioassays. Weed Technology. 12: 542-547.
- Derr, J. F., R. S. Chandran and W. D. Ward. 1996. Preemergence and postemergence yellow nutsedge (*Cyperus esculentus*) control with MON 12000 in nursery crops. Weed Technology 10:95-99.

# Peer Reviewed Research-Reports and Proceedings

- Pomp, J., D. McGill, W. Grafton, R. Chandran, and R. Richardson. 2010. Effects of mechanical and chemical control on *Microstegium vimimeum* and its associates in central West Virginia. *In* Stanturf, J. A., (ed.). Proceedings of the 14th biennial southern silvicultural research conference. Gen. Tech. Rep. SRS–121. Asheville, NC: U.S. Dept. Ag, For. Ser., South. Res. Stn. 109-115.
- Chandran, R.S., J.F. Baniecki, A. Wilson, and M. Mandal. 2005. Susceptibility of Kentucky bluegrass under different regimes of composted poultry litter to *Drechslera* leaf spot, 2004. Biol. Cultural Tests. 20:T005.
- Chandran, R.S., J. Baniecki, R.W. Wallbrown, E.S. Hagood, and S. King. 2001. Incidence and severity of MDMV in a transgenic corn due to johnsongrass control methods. Biol. Cultural Tests. 16:C6.

#### **Abstracts**

Chandran, R., and B.M. Loyd. 2019. Herbicide application timing to control bulbous buttercup (Ranunculus bulbosus) in a pasture. Weed Sci. Soc. Amer. Abstracts. 59:111.

- R. S. Chandran, D. Shipman, B. M. Loyd. 2019. Japanese stiltgrass (*Microstegium vimineum*) management in a pasture: Using a GDD model to apply pendimethalin. Proc. Northeast. Plant, Pest, Soils Conf. 4:29.
- Chandran, R.S. 2018. Herbicide resistance and management— Changing our mindset. Proc. 9th International IPM Symposium. 9:21.
- Chandran, R., M.L. Flessner, Q. Johnson, B.M. Loyd, and S. Starcher. 2017.

  Pendimethalin controls joint-head arthraxon (*Arthraxon hisp*idus). Proc.

  Northeast. Plant, Pest, Soils Conf. 2:90.
- Johnson, Q., M. VanGessel, R. Chandran, and M.L. Flessner. 2017. Efficacy of pendimethalin and quinclorac for control of large crabgrass (*Digitaria sanguinalis* L.) in orchardgrass. Proc. Northeast. Plant, Pest, Soils Conf. 2:81.
- Flessner, M.L., R.S. Randhawa, Q. Johnson, and R. Chandran. 2017. Efficacy of quinclorac and pendimethalin for giant foxtail (*Setaria faberi*) control in hayfields. Proc. Northeast. Plant, Pest, Soils Conf. 2:85.
- Chandran, R.S. 2016. Herbicide banding in corn and associated floral diversity: yield dynamics over a five-year period. *In* A. Gover (Ed.). Proc. Northeast. Plant, Pest, Soils Conf. 1:70.
- Chandran, R.S. 2016. Does directed application of glyphosate injure apple trees in one year? *In* A. Gover (Ed.). Proc. Northeast. Plant, Pest, Soils Conf. 1:123.
- Chandran, R.S. 2013. Herbicide banding in *Zea mays* A sustainable weed management solution? J. Ecosys. Ecograph. 3:4.
- Chandran, R.S., D.P. Friend. 2013. Aminocyclopyrachlor application timings to control perennial pasture-weeds. Weed Sci. Soc. Amer. Abstracts. 53:64.
- Chandran, R., R. Wallbrown, D. Workman and C. Yohn. 2012. Herbicide banding in corn An improved pest management practice? 7<sup>th</sup> International Integrated Pest Management Symposium IPM on the World Stage. Proceedings p-126. <a href="http://www.ipmcenters.org/ipmsymposium12/IPM">http://www.ipmcenters.org/ipmsymposium12/IPM</a> 12 Proceedings final.pdf (accessed December 12, 2012).
- Chandran, R.S., C.W. Yohn, and C.W. Coburn. 2011. Effect of herbicide banding on yield and biodiversity levels of field corn. Proc. Northeast. Weed Sci. Soc. 65:93.
- Chandran, R.S. 2011. Effect of indaziflam application timing on residual weed control in an apple orchard. Proc. Northeast. Weed Sci. Soc. 65:6.
- Chandran, R.S. 2011. Response of butterfly bush, Japanese barberry, and rose to foliar applications of sulfosulfuron. Proc. Northeast. Weed Sci. Soc. 65:5.
- Chandran, R.S. 2011. Pros and cons of genetically modified crops Introduction to GE crops session. BIT's Annual World Congress Ag. Biotechnol. 1:041.
- Chandran, R.S. and E.S. Hagood. 2010. A fresh look at herbicide banding in corn. Proc. Northeast. Weed Sci. Soc. 64:4.
- Chandran, R.S. 2009. Selective burndown of common milkweed (*Asclepias syriaca*) and hemp dogbane (*Apocynum cannabinum*) in a legume-rich tall fescue (*Festuca arundinacea*) hayfield. Weed Sci. Soc. Amer. Abstracts. 49:149.
- Chandran, R.S. and J. Leather. 2009. Chemical mowing to reduce row-middle management costs in orchards. Proc. Northeast. Weed Sci. Soc. 63:9.

- Chandran, R.S., E.B. Smolder, and R.M. Wallbrown. 2009. Herbicide application using a weed wiper for pasture weed management. Proc. Northeast. Weed Sci. Soc. 63:10.
- Chandran, R.S. and J.L. Miller. 2009. Management of cut-leaf blackberry in pastures. Proc. Northeast. Weed Sci. Soc. 63:11.
- Chandran, R.S. and R.J. Keese. 2008. Evaluation of at-seeding granular herbicides in Kentucky bluegrass turf. Proc. Northeast. Weed Sci. Soc. 62:20.
- Chandran, R.S. 2008. Weed Management in Guyana Vegetable Production: An Assessment and Preliminary Recommendations. Fifth International Weed Sci. Congress Proceedings. 5:106.
- Mandal, M. and R.S. Chandran, 2006. Amending subsoil with composted poultry litter: effect on turf cover, soil physical and chemical properties, and weed pressure. Proc. Northeast. Weed Sci. Soc. 60:13.
- Chandran, R.S. 2006. Management of multiflora rose in West Virginia with grazing and herbicides. Proc. North Central Weed Sci. Soc. 61:241.
- Steele, J. and R. S. Chandran. 2005. Opportunities and challenges for engaging private woodlot owners in invasive plant management. Proc. Northeast. Weed Sci. Soc. 59:25.
- Mandal, M. and R.S. Chandran, 2005. Turfgrass cover and weed pressure in subsoil amended with composted poultry litter. Proc. Northeast. Weed Sci. Soc. 59:94.
- Loyd, B.M. and R.S. Chandran. 2005. Control of autumn olive using basal herbicide applications. Proc. National. Assoc. County Ag. Agents. 90:51.
- Chandran, R.S., D. Workman, M. Mandal, D. Beasley, S. Harper, and J. Hale. 2004.

  Confirmation of ALS-resistant johnsongrass in the Northeastern United States.

  Proc. Northeast. Weed Sci. Soc. 58:24.
- Chandran, R.S., M. Stenger, and M. Mandal. 2004. Effect of vinegar on potato weed control. Proc. Northeast. Weed Sci. Soc. 58:82.
- Chandran, R.S., A. Nandeshwar, V.M. Zachariahs, and M. Mandal. 2004. BLOW©: Biology and life cycle to weeds prototype of an educational tool on weed growth and life cycles. Proc. Northeast. Weed Sci. Soc. 58:89.
- Bhowmik, P. and R.S. Chandran. 2004. Current status and significance of giant hogweed. Proc. Northeast. Weed Sci. Soc. 58:90.
- Mandal, M. and R.S. Chandran. 2004. Effect of composted poultry litter on germination of different weed species. Proc. Northeast. Weed Sci. Soc. 58:112.
- Chandran, R.S. 2004. Weed control in organic Vegetable Production. Fourth International Weed Sci. Congress Proceedings. 4:106.
- McDonald, L.M., M.Mandal, and R.S.Chandran. 2004. Compost rate on snap bean yield and weed populations. Northeastern Branch Abstracts: Amer. Soc. Agron., Soil Sci. Soc. of America. 2004:4.
- Chandran, R.S. 2003. Evaluation of vinegar and corn gluten for weed control in field-grown sweet pepper. Proc. Northeast. Weed Sci. Soc. 57:65.
- Chandran, R.S., and M. Singh. 2003. Survey and control of Brazil pusley (*Richardia brasiliensis*) in Florida citrus. 2003 Florida State Hort. Soc. Annual Meeting Abstracts. (Citrus section p 3).

- Chandran, R. S., P.L. Hipkins, and D. Richmond. 2002. Effect of metsulfuron-methyl application timing on multiflora rose (*Rosa multiflora*) control. Proc. South. Weed Sci. Soc. 55:106.
- Chandran, R.S. 2002. Effect of plastic mulches on apple weed control and drop fruit quality. Proc. Northeast. Weed Sci. Soc. 56:81.
- Chandran R. S, and H. W. Hogmire. 2001. Effect of preemergence herbicide application timing for weed control in apple. Proc. Northeast. Weed Sci. Soc. 55:75.
- Chandran R. S and M. Singh. 2001. Survey and control of Brazil pusley (*Richardia braziliensis*) in Florida Citrus. Weed Sci. Soc. Amer. Abstracts. 41:11.
- Richmond, R., E. Smolder, M. B. Bennett, D. Davis, C. Hickman, J. Hileman, E. Rayburn, and R. Chandran. 2000. Multiflora rose (*Rosa multiflora*) control using fertilizer impregnated metsulfuron-methyl. Proc. Northeast. Weed Sci. Soc. 54:138.
- Chandran R. S and M. Singh. 1999. Effect of adjuvants on norflurazon reduction in a sandy soil. Proc. South. Weed Sci. Soc. 52:193.
- Chandran R. S, and J. F. Derr. 1998. Quantification of isoxaben breakdown in a field soil as affected by application timings. Weed Sci. Soc. Amer. Abstracts. 38:18.
- Chandran R. S, and J. F. Derr. 1998. Effect of application timing on isoxaben dissipation. Proc. South Weed Sci. Soc. 51:69.
- Chandran R. S, and J. F. Derr. 1997. Effect of isoxaben applied postemergence for broadleaf weed control. Proc. Northeast. Weed Sci. Soc. 51:41.
- Chandran, R. S., J. F. Derr and S. W. Bingham. 1996. Dissipation of isoxaben in soil using bioassays. Weed Sci. Soc. Amer. Abstracts. 36:22.
- Chandran, R. S., J. F. Derr and S. W. Bingham. 1996. Effect of timing and application rate of isoxaben for broadleaf weed control. Proc. Northeast. Weed Sci. Soc. 50:60.
- Chandran, R. S., J. F. Derr and S. W. Bingham. 1995. Residual weed control with isoxaben. Proc. Northeast. Weed Sci. Soc. 49:79.
- Chandran, R. S. and A. E. Dudeck. 1993. Response of St. Augustinegrass [Stenotaphrum secundatum (Walt.) Kuntze.] to composted solid waste and irrigation frequency. Amer. Soc. Agron. Abstracts. 85:156.

## **Research Reports**

- Derr, J. F, R. S. Chandran and S. Salihu. 1996. Weed Control Investigations in Horticultural Crops. Department of Plant Pathology, Physiology, and Weed Science. Virginia Polytechnic Institute and State University. Information Note 175.
- Chandran, R. S., J. F. Derr, and S. W. Bingham. 1995. Long term broadleaf weed control with Gallery. Res. Report 1995. Virginia Tech Turfgrass and Landscape field days. p 69.
- Chandran, R. S., J. F. Derr, and S. W. Bingham. 1995. Long term control of broadleaf weeds in turf with Gallery. Res. Report 1994. Virginia Tech Turfgrass and Landscape field days. p 108.

### **Extension Publications**

- Derr, J.F. and R.S. Chandran. 2019. Orchard Weed Control. *In* Pfeiffer, D. G. (Ed.), 2019 Spray Bulletin for Commercial Tree Fruit Growers. Va. Coop. Ext. Serv. Publ. VT/0118/ENTO-257P. Pages 126-143. https://pubs.ext.vt.edu/content/dam/pubs\_ext\_vt\_edu/456/456-419/456-419.pdf
- Curran, W.S., D. Lingenfelter, Q. Johnson, M. VanGessel, B. Schulz, T. Besancon, C. Cahoon, M.L. Flessner, and R. S. Chandran. 2019. 2019 Mid-Atlantic Field Crop Weed Management Guide. The Pennsylvania State University AGRS-136.
- E. Ernest, M. Infante-Casella, H.B. Doughty, G.C. Johnson, W. Kline, T.P. Kuhar, T.J. Orton, J.M. Wilson, M.J. VanGessel, R.W. VanVranken, K. Vollmer, R.A. Arancibia, T. Besançon, D.B. Langston, D. Owens, K. Holmstrom, J. Ingerson-Mahar, C.A. Wyenandt,, G.C. Hamilton, P.D. Hastings, G.E. Brust, K. Demchak L.W. Jett, F. Di Gioia, K.L. Everts, T.E. Elkner, R.S. Chandran, M.J. Hu, E. Sánchez, M.M. Rahman, D. Lingenfelter, J.M. Wallace, S.J. Fleischer, B.J. Lingbeek, B.K. Gugino. 2019. In C.A. Wyenandt and M.M.I. van Vuuren (Coordinators), T. P. Kuhar, G. C. Hamilton, M. J. VanGessel, R. A. Arancibia, and C.A. Wyenandt, (Discipline Editors). 2019 Mid-Atlantic Commercial Vegetable Production Recommendations. (413p)
- Chandran, R.S., M. Danilovich, D. Frank, S. Owen, M.M. Rahman, B. Liedl. IPM Chronicle Summer 2018. 7(3)1-8. West Virginia University Extension Service Publication: AG 19-222.
- Chandran, R.S., M. Danilovich, D. Frank, S. Owen, M.M. Rahman, B. Liedl. IPM Chronicle Spring 2019. 7(2)1-6. West Virginia University Extension Service Publication. AG 19-191.
- Chandran, R.S., M. Danilovich, D. Frank, S. Owen, M.M. Rahman, B. Liedl. IPM Chronicle Winter 2018. 7(1)1-8. West Virginia University Extension Service Publication: AG 19-23.
- Chandran, R.S. 2019. 'Weed of the Week 'Mugwort'. WVU Extension Service Webpage Fact Sheet. <a href="https://extension.wvu.edu/lawn-gardening-pests/weeds/mugwort">https://extension.wvu.edu/lawn-gardening-pests/weeds/mugwort</a>
- Chandran, R.S. 2019. 'Weed of the Week 'Mile-A-Minute'. WVU Extension Service Webpage Fact Sheet. <a href="https://extension.wvu.edu/lawn-gardening-pests/weeds/mile-a-minute">https://extension.wvu.edu/lawn-gardening-pests/weeds/mile-a-minute</a>
- Chandran, R.S. 2019. 'Weed of the Week 'Yellow Nutsedge'. WVU Extension Service Webpage Fact Sheet. <a href="https://extension.wvu.edu/lawn-gardening-pests/weeds/yellow-nutsedge">https://extension.wvu.edu/lawn-gardening-pests/weeds/yellow-nutsedge</a>
- Chandran, R.S. 2019. 'Weed of the Week 'Nimblewell'. WVU Extension Service Webpage Fact Sheet. <a href="https://extension.wvu.edu/lawn-gardening-pests/weeds/nimblewill">https://extension.wvu.edu/lawn-gardening-pests/weeds/nimblewill</a>
- Chandran, R.S. 2019. 'Weed of the Week 'Crabgrass'. WVU Extension Service Webpage Fact Sheet. https://extension.wvu.edu/lawn-gardening-pests/weeds/crabgrass
- Chandran, R.S. 2019. 'Weed of the Week 'Corn Speedwell'. WVU Extension Service Webpage Fact Sheet. <a href="https://extension.wvu.edu/lawn-gardening-pests/weeds/corn-speedwell">https://extension.wvu.edu/lawn-gardening-pests/weeds/corn-speedwell</a>

- Chandran, R.S. 2019. 'Weed of the Week 'Japanese knotweed'. WVU Extension Service Webpage Fact Sheet. <a href="https://extension.wvu.edu/lawn-gardening-pests/weeds/japanese-knotweed">https://extension.wvu.edu/lawn-gardening-pests/weeds/japanese-knotweed</a>
- Chandran, R.S. 2018. 'Weed of the Week American Burnweed'. WVU Extension Service Webpage Fact Sheet. <a href="https://extension.wvu.edu/lawn-gardening-pests/weeds/american-burnweed">https://extension.wvu.edu/lawn-gardening-pests/weeds/american-burnweed</a> (accessed 11/11/18)
- Chandran, R.S. 2018. 'Weed of the Week Canada thistle'. WVU Extension Service Webpage Fact Sheet. <a href="https://extension.wvu.edu/lawn-gardening-pests/weeds/canada-thistle">https://extension.wvu.edu/lawn-gardening-pests/weeds/canada-thistle</a> (accessed 11/11/18)
- Chandran, R.S. 2018. 'Weed of the Week Bulbous Buttercup. WVU Extension Service Webpage Fact Sheet. <a href="https://extension.wvu.edu/lawn-gardening-pests/weeds/buttercup">https://extension.wvu.edu/lawn-gardening-pests/weeds/buttercup</a> (accessed 11/11/18)
- Chandran, R.S. 2018. 'Weed of the Week Dandelions'. WVU Extension Service Webpage Fact Sheet. <a href="https://extension.wvu.edu/lawn-gardening-pests/weeds/dandelions">https://extension.wvu.edu/lawn-gardening-pests/weeds/dandelions</a> (accessed 11/11/18)
- Chandran, R.S. 2018. 'Weed of the Week Giant Hogweed'. WVU Extension Service Webpage Fact Sheet. <a href="https://extension.wvu.edu/lawn-gardening-pests/weeds/giant-hogweed">https://extension.wvu.edu/lawn-gardening-pests/weeds/giant-hogweed</a> (accessed 11/11/18)
- Chandran, R.S. 2018. 'Weed of the Week Ground Ivy'. WVU Extension Service Webpage Fact Sheet. <a href="https://extension.wvu.edu/lawn-gardening-pests/weeds/ground-ivy">https://extension.wvu.edu/lawn-gardening-pests/weeds/ground-ivy</a> (accessed 11/11/18)
- Chandran, R.S. 2018. 'Weed of the Week Jimsonweed'. WVU Extension Service Webpage Fact Sheet. <a href="https://extension.wvu.edu/lawn-gardening-pests/weeds/jimsonweed">https://extension.wvu.edu/lawn-gardening-pests/weeds/jimsonweed</a> (accessed 11/11/18)
- Chandran, R.S. 2018. 'Weed of the Week Hairy bittercress'. WVU Extension Service Webpage Fact Sheet. <a href="https://extension.wvu.edu/lawn-gardening-pests/weeds/hairy-bittercress">https://extension.wvu.edu/lawn-gardening-pests/weeds/hairy-bittercress</a> (accessed 11/11/18)
- Chandran, R.S. 2018. 'Weed of the Week Perilla Mint'. WVU Extension Service Webpage Fact Sheet. <a href="https://extension.wvu.edu/lawn-gardening-pests/weeds/perilla-mint">https://extension.wvu.edu/lawn-gardening-pests/weeds/perilla-mint</a> (accessed 11/11/18)
- Chandran, R.S. 2018. 'Weed of the Week Star-of-Bethlehem'. WVU Extension Service Webpage Fact Sheet. <a href="https://extension.wvu.edu/lawn-gardening-pests/weeds/star-of-bethlehem">https://extension.wvu.edu/lawn-gardening-pests/weeds/star-of-bethlehem</a> (accessed 11/11/18)
- Chandran, R. S. 2018. Integrated Weed Management: A Refresher. In Booth H., and R.S. Chandran (*Ed*) Extension Service/ANR Research Notes September 7, 2018.
- Chandran, R. S. 2018. Nutritive Value of Forage Weeds. In Lacko, Z., and R.S. Chandran (*Ed*) Extension Service/ANR Research Notes February 9, 2018.
- Chandran, R.S., M. Danilovich, D. Frank, S. Owen, M.M. Rahman, B. Liedl. IPM Chronicle Fall 2018. 6(4)1-8. West Virginia University Extension Service Publication: AG 18-292.
- Chandran, R.S., M. Danilovich, D. Frank, S. Owen, M.M. Rahman, B. Liedl. IPM Chronicle Summer 2018. 6(3)1-7. West Virginia University Extension Service Publication: AG 18-234.

- Chandran, R.S., M. Danilovich, D. Frank, S. Owen, M.M. Rahman, B. Liedl. IPM Chronicle
   Spring 2018. 6(1)1-7. West Virginia University Extension Service Publication.
- Chandran, R.S., M. Danilovich, D. Frank, S. Owen, M.M. Rahman, B. Liedl. IPM Chronicle

   Winter 2018. 6(1)1-7. West Virginia University Extension Service Publication:

  AG 18-23.
- Derr, J.F. and R.S. Chandran. 2018. Orchard Weed Control. *In* Pfeiffer, D. G. (Ed.), 2017 Spray Bulletin for Commercial Tree Fruit Growers. Va. Coop. Ext. Serv. Publ. VT/0118/ENTO-257P. Pages 126-143. https://pubs.ext.vt.edu/content/dam/pubs\_ext\_vt\_edu/456/456-419/456-419.pdf
- Curran, W.S., D. Lingenfelter, Q. Johnson, M. VanGessel, B. Schulz, T. Besancon, C. Cahoon, M.L. Flessner, and R. S. Chandran. 2018. 2018 Mid-Atlantic Field Crop Weed Management Guide. The Pennsylvania State University AGRS-136.
- Chandran, R.S., M. Danilovich, D. Frank, S. Owen, M.M. Rahman, B. Liedl. IPM Chronicle Summer/Fall 2017. 5(3/4)1-7. West Virginia University Extension Service Publication.
- Chandran, R.S., M. Danilovich, D. Frank, S. Owen, M.M. Rahman, B. Liedl. IPM Chronicle Spring 2017. 5(2)1-7. West Virginia University Extension Service Publication.
- Chandran, R.S., M. Danilovich, D. Frank, S. Owen, M.M. Rahman, B. Liedl. IPM Chronicle Winter 2017. 5(1)1-7. West Virginia University Extension Service Publication: AG 16-40.
- Derr, J.F. and R.S. Chandran. 2017. Orchard Weed Control. *In* Pfeiffer, D. G. (Ed.), 2017 Spray Bulletin for Commercial Tree Fruit Growers. Va. Coop. Ext. Serv. Publ. VT/02-17/ENTO-223P. Pages 126-142. <a href="http://pubs.ext.vt.edu/content/dam/pubs">http://pubs.ext.vt.edu/content/dam/pubs</a> ext vt edu/456/456-419/456-419-PDF.pdf
- Curran, W.S., Q. Johnson, M. VanGessel, B. Schulz, C. Cahoon, M.L. Flessner, and R. S. Chandran. 2017. 2017 Mid-Atlantic Field Crops Weed Management Guide. The Pennsylvania State University AGRS-136.
- Chandran, R.S., M. Danilovich, D. Frank, S. Owen, M.M. Rahman, B. Liedl. IPM Chronicle Fall 2016. 4(4)1-7. West Virginia University Extension Service Publication: AG 16-383. <a href="http://anr.ext.wvu.edu/pests/publications">http://anr.ext.wvu.edu/pests/publications</a>
- Chandran, R.S., M. Danilovich, D. Frank, S. Owen, M.M. Rahman, B. Liedl. IPM Chronicle Summer 2016. 4(3)1-8. West Virginia University Extension Service Publication: AG 16-281. http://anr.ext.wvu.edu/r/download/230390
- Chandran, R.S., M. Danilovich, D. Frank, S. Owen, M.M. Rahman, B. Liedl. IPM Chronicle Spring 2016. 4(2)1-7. West Virginia University Extension Service Publication: AG 16-161. <a href="http://anr.ext.wvu.edu/r/download/227964">http://anr.ext.wvu.edu/r/download/227964</a>
- Chandran, R.S., M. Danilovich, D. Frank, S. Owen, M.M. Rahman, B. Liedl. IPM Chronicle Winter 2016. 4(1)1-7. West Virginia University Extension Service Publication: AG 16-40. http://anr.ext.wvu.edu/r/download/224993
- Derr, J.F. and R.S. Chandran. 2016. Orchard Weed Control. *In Pfeiffer*, D. G. (Ed.), 2016 Spray Bulletin for Commercial Tree Fruit Growers. Va. Coop. Ext. Serv. Publ. VT/01-16/ANR-172P. Pages 126-142.

- Curran, W.S., Q. Johnson, M. VanGessel, B. Schulz, C. Cahoon, M.L. Flessner, and R. S. Chandran. 2016. 2016 Mid-Atlantic Field Crops Weed Management Guide. The Pennsylvania State University AGRS-136.
- Chandran, R.S. 2015. Identification and management of invasive knotweeds. West Virginia University Extension Service Publication. ANR-IPM-15-013.
- Chandran, R.S., B.M. Loyd. 2015. Autumn Olive. West Virginia University Extension Service Publication ANR-IPM-15-012.
- Chandran, R.S., M. Danilovich, D. Frank, S. Owen, M.M. Rahman, B. Liedl. IPM Chronicle Fall 2015. 3(4)1-8. West Virginia University Extension Service Publication: AG 15-262.
- Chandran, R.S., M. Danilovich, D. Frank, S. Owen, M.M. Rahman, B. Liedl. IPM Chronicle Summer 2015. 3(3)1-9. West Virginia University Extension Service Publication: AG 115-262.
- Chandran, R.S., M. Danilovich, D. Frank, S. Owen, M.M. Rahman, B. Liedl. IPM Chronicle Spring 2015. 3(2)1-9. West Virginia University Extension Service Publication: AG 15-120.
- Chandran, R.S., M. Danilovich, D. Frank, S. Owen, M.M. Rahman, B. Liedl. IPM Chronicle Winter 2015. 3(1)1-6. West Virginia University Extension Service Publication: AG 15-17.
- Chandran, R.S. 2015. How to establish a lawn. West Virginia University Extension Service Publication ANR-IPM-15-11. <a href="http://anr.ext.wvu.edu/r/download/213447">http://anr.ext.wvu.edu/r/download/213447</a>
- Collier, C.W. and R.S. Chandran. 2015 Maintaining turfgrass in shady areas. West Virginia University Extension Service Publication ANR-IPM-15-009. http://anr.ext.wvu.edu/r/download/213406
- Chandran, R.S. 2015. Lawn care. West Virginia University Extension Service Publication ANR-IPM-15-007. <a href="http://anr.ext.wvu.edu/r/download/213177">http://anr.ext.wvu.edu/r/download/213177</a>.
- Chandran, R.S. 2015. Weed management in lawns. West Virginia University Extension Service Publication ANR-IPM-15-010. http://anr.ext.wvu.edu/r/download/213568.
- Collier, C.W. and R.S. Chandran. 2015. Lawn liming. West Virginia University Extension Service Publication ANR-IPM-15-008. http://anr.ext.wvu.edu/r/download/213363.
- Derr, J.F. and R.S. Chandran. 2015. Orchard Weed Control. *In Pfeiffer*, D. G. (Ed.), 2015. Spray Bulletin for Commercial Tree Fruit Growers. Va. Coop. Ext. Serv. Publ. 456-419. Pages 127-143.
- Hagood, E.S., M.L. Flessner, R.L. Ritter, B.A. Majek, W.S. Curran, R. S. Chandran and M. VanGessel. 2015. *In* Guinn, L. (Ed.) Pest Management Guide for Field Crops 2015. Publication 456-016. Virginia Cooperative Extension Service. Pages 5-1 to 5-186.
- Derr, J.F. and R.S. Chandran. 2014. Orchard Weed Control. *In Pfeiffer*, D. G. (Ed.), 2014 Spray Bulletin for Commercial Tree Fruit Growers. Va. Coop. Ext. Serv. Publ. 456-419. Pages 126-142.
- Hagood, E.S., H.P Wilson, R.L. Ritter, B.A. Majek, W.S. Curran, R. S. Chandran and M. VanGessel. 2014. *In* Guinn, L. (Ed.) Pest Management Guide for Field Crops –

- 2014. Publication 456-016. Virginia Cooperative Extension Service. Pages 5-1 to 5-161.
- Chandran, R.S., M. Danilovich, D. Frank, S. Owen, and M.M. Rahman. IPM Chronicle Fall 2014. 2(4)1-6. West Virginia University Extension Service Publication: AG 14-396.
- Chandran, R.S., M. Danilovich, D. Frank, S. Owen, and M.M. Rahman. IPM Chronicle Summer 2014. 2(3)1-6. West Virginia University Extension Service Publication: AG 14-276.
- Chandran, R.S., M. Danilovich, D. Frank, S. Owen, and M.M. Rahman. IPM Chronicle Spring 2014. 2(2)1-7: West Virginia University Extension Service Publication: AG 14-116.
- Chandran, R.S., M. Danilovich, D. Frank, and M.M. Rahman. IPM Chronicle Winter 2014. 2(1)1-5. West Virginia University Extension Service Publication: AG 14-101.
- Derr, J.F. and R.S. Chandran. 2013. Orchard Weed Control. *In Pfeiffer*, D. G. (Ed.), 2013 Spray Bulletin for Commercial Tree Fruit Growers. Va. Coop. Ext. Serv. Publ. 456-419. Pages 124-139.
- Hagood, E.S., H.P Wilson, R.L. Ritter, B.A. Majek, W.S. Curran, R. S. Chandran and M. VanGessel. 2013. *In* Guinn, L. (Ed.) Pest Management Guide for Field Crops 2011. Publication 456-016. Virginia Cooperative Extension Service. Pages 5-1 to 5-52.
- Chandran, R.S., D. Frank, M.M. Rahman. IPM Chronicle Fall 2013. 1(4)1-4: Fall West Virginia University Extension Service Publication: AG 13-342.
- Chandran, R.S., D. Frank, M.M. Rahman. IPM Chronicle Summer 2013. 1(3)1-6. West Virginia University Extension Service Publication: AG 13-219.
- Chandran, R.S., D. Frank, M.M. Rahman. IPM Chronicle Spring 2013. 1(2)1-5: West Virginia University Extension Service Publication: AG 13-95.
- Chandran, R.S., D. Frank, M.M. Rahman. IPM Chronicle Winter 2013. 1(1)1-4. West Virginia University Extension Service Publication: AG 13-31.
- Chandran, R.S. 2013. Weed Control. *In J. Bower and M. Baughman (Ed.), Garden Calendar 2013. WVU Extension Service.*
- Derr, J.F. and R.S. Chandran. 2012. Orchard Weed Control. *In Pfeiffer*, D. G. (Ed.), 2012 Spray Bulletin for Commercial Tree Fruit Growers. Va. Coop. Ext. Serv. Publ. 456-419. Pages 118-133.
- Hagood, E.S., H.P Wilson, R.L. Ritter, B.A. Majek, W.S. Curran, R. S. Chandran and M. VanGessel. 2012. *In* Guinn, L. (Ed.) Pest Management Guide for Field Crops 2011. Publication 456-016. Virginia Cooperative Extension Service. Pages 5-1 to 5-96.
- Chandran, R.S., D. Frank, M.M. Rahman. IPM Update: Fall 2012. West Virginia University Extension Service Publication: AG 12-254.
- Chandran, R.S., D. Frank, M.M. Rahman. IPM Update: Summer 2012. West Virginia University Extension Service Publication: AG 12-127.

- Derr, J.F. and R.S. Chandran. 2011. Orchard Weed Control. *In Pfeiffer*, D. G. (Ed.), 2011 Spray Bulletin for Commercial Tree Fruit Growers. Va. Coop. Ext. Serv. Publ. 456-419. Pages 118-133.
- Hagood, E.S., H.P Wilson, R.L. Ritter, B.A. Majek, W.S. Curran, R. S. Chandran and M. VanGessel. 2011. *In* Guinn, L. (Ed.) Pest Management Guide for Field Crops 2011. Publication 456-016. Virginia Cooperative Extension Service. Pages 5-1 to 5-96.
- Chandran, R.S., M. Rahman, T.B. Basden, and J. Murray. Identifying and Preventing Injury to Landscape Plants and Vegetables. WVU Extension Service, Fact Sheet. <a href="http://anr.ext.wvu.edu/r/download/106177">http://anr.ext.wvu.edu/r/download/106177</a>.
- Derr, J.F. and R.S. Chandran. 2010. Orchard Weed Control. *In Pfeiffer, D. G. (Ed.), 2010*Spray Bulletin for Commercial Tree Fruit Growers. Va. Coop. Ext. Serv. Publ. 456-419. Pages 119-134.
- Hagood, E.S., H.P Wilson, R.L. Ritter, B.A. Majek, W.S. Curran, R. S. Chandran and M. VanGessel. 2010. *In* Guinn, L. (Ed.) Pest Management Guide for Field Crops 2010. Publication 456-016. Virginia Cooperative Extension Service. Pages 5-1 to 5-207.
- Chandran, R.S. and C.W. Coburn. 2010. Sustainable Corn WVU Researchers Study Ways to Plant with Weeds. The Dominion Post. 2010 June-24. 1-D.
- Chandran, R.S. and B.M. Loyd. 2010. Use Integrated Approaches to Control Autumn Olive in Pastures. West Virginia Farm Bureau News. 18(5)12.
- Chandran, R.S. 2010. Management of Perennial Weeds in Orchards. WVU Extension Service, Fact Sheet.
- Chandran, R.S., R. Wallbrown, E. Smolder, C. Yohn. 2010. Use of Rotary Weed Wiper in Pasture Weed Management. WVU Extension Service, Fact Sheet.
- Derr, J.F. and R.S. Chandran. 2009. Orchard Weed Control. *In Pfeiffer, D. G. (Ed.), 2009* Spray Bulletin for Commercial Tree Fruit Growers. Va. Coop. Ext. Serv. Publ. 456-419. Pages 115-130.
- Hagood, E.S., H.P Wilson, R.L. Ritter, B.A. Majek, W.S. Curran, R. S. Chandran and M. VanGessel. 2009. *In* Guinn, L. (Ed.) Pest Management Guide for Field Crops 2009. Publication 456-016. Virginia Cooperative Extension Service. Pages 5-1 to 5-147.
- Chandran, R.S. and L. Jett. 2009. Weed Management in Vegetables. WVU Extension Service, Fact Sheet.
- Baniecki, J.F, D.P. McCann, and R.S. Chandran. 2009. Look What's Out There in Integrated Pest Management. West Virginia University Extension Service. Issue 18 August, 2009. http://www.wvu.edu/%7Eagexten/lookwhat/LWOT\_AUGUST\_2009.pdf
- Baniecki, J.F, D.P. McCann, and R.S. Chandran. 2009. Look What's Out There in
- Integrated Pest Management. West Virginia University Extension Service. Issue 17 June/July, 2009.
  - http://www.wvu.edu/%7Eagexten/lookwhat/LWOT JUNE and JULY 2009.pdf
- Baniecki, J.F, D.P. McCann, and R.S. Chandran. 2009. Look What's Out There in Integrated Pest Management. West Virginia University Extension Service. Issue

- 16 May, 2009.
- http://www.wvu.edu/%7Eagexten/lookwhat/LWOT MAY 2009.pdf
- Baniecki, J.F, D.P. McCann, and R.S. Chandran. 2009. Look What's Out There in Integrated Pest Management. West Virginia University Extension Service. Issue 15 April, 2009.
  - http://www.wvu.edu/%7Eagexten/lookwhat/LWOT APRIL 2009.pdf
- Baniecki, J.F, D.P. McCann, and R.S. Chandran. 2009. Look What's Out There in Integrated Pest Management. West Virginia University Extension Service. Issue 14 March, 2009.
  - http://www.wvu.edu/%7Eagexten/lookwhat/LWOT MARCH 2009.pdf
- Baniecki, J.F, D.P. McCann, and R.S. Chandran. 2009. Look What's Out There in Integrated Pest Management. West Virginia University Extension Service. Issue 13 February, 2009.
  - http://www.wvu.edu/%7Eagexten/lookwhat/LWOT\_FEBRUARY\_2009.pdf
- Baniecki, J.F, D.P. McCann, and R.S. Chandran. 2009. Look What's Out There in Integrated Pest Management. West Virginia University Extension Service. Issue 12 January, 2009.
  - http://www.wvu.edu/%7Eagexten/lookwhat/LWOT JANUARY 2009.pdf
- Derr, J. F. and R. S. Chandran. 2008. Orchard Weed Control. *In* Pfeiffer, D. G. (Ed.), 2008 Spray Bulletin for Commercial Tree Fruit Growers. Va. Coop. Ext. Serv. Publ. 456-419. Pages 111-126.
- Hagood, E.S., H.P Wilson, R.L. Ritter, B.A. Majek, W.S. Curran, R. S. Chandran and M. VanGessel. 2008. *In* Guinn, L. (Ed.) Pest Management Guide for Field Crops 2008. Publication 456-016. Virginia Cooperative Extension Service. Pages 5-1 to 5-140.
- Baniecki, J.F, D.P. McCann, and R.S. Chandran. 2008. Look What's Out There in Integrated Pest Management. West Virginia University Extension Service. Issue 11 Nov. 2008. http://www.wvu.edu/~agexten/lookwhat/lwot1108.pdf
- Baniecki, J.F, D.P. McCann, and R.S. Chandran. 2008. Look What's Out There in Integrated Pest Management. West Virginia University Extension Service. Issue 10 Oct. 2008. http://www.wvu.edu/~agexten/lookwhat/lwot1008.pdf
- Baniecki, J.F, D.P. McCann, and R.S. Chandran. 2008. Look What's Out There in Integrated Pest Management. West Virginia University Extension Service. Issue 9 Sept. 2008. http://www.wvu.edu/~agexten/lookwhat/lwot908.pdf
- Baniecki, J.F, D.P. McCann, and R.S. Chandran. 2008. Look What's Out There in Integrated Pest Management. West Virginia University Extension Service. Issue 8 Aug. 2008. http://www.wvu.edu/~agexten/lookwhat/lwot808.pdf
- Chandran, R.S. 2008. 'Perennial Weed Management'. *In* H. Hogmire, A. Biggs (Ed). Orchard Monitor, Jul. 28, 2008.
- Baniecki, J.F, D.P. McCann, and R.S. Chandran. 2008. Look What's Out There in Integrated Pest Management. West Virginia University Extension Service. Issue 7 Jun., Jul. 2008. <a href="http://www.wvu.edu/~agexten/lookwhat/lwot708.pdf">http://www.wvu.edu/~agexten/lookwhat/lwot708.pdf</a>

- Baniecki, J.F, J. Eggers, and R.S. Chandran. 2008. Look What's Out There in Integrated Pest Management. West Virginia University Extension Service. Issue 5 May 2008. http://www.wvu.edu/~agexten/lookwhat/lwot508.pdf
- Baniecki, J.F, J. Eggers, and R.S. Chandran. 2008. Look What's Out There in Integrated Pest Management. West Virginia University Extension Service. Issue 4 Apr. 2008. <a href="http://www.wvu.edu/~agexten/lookwhat/lwot408.pdf">http://www.wvu.edu/~agexten/lookwhat/lwot408.pdf</a>
- Baniecki, J.F, J. Eggers, and R.S. Chandran. 2008. Look What's Out There in Integrated Pest Management. West Virginia University Extension Service. Issue 3 Mar. 2008. <a href="http://www.wvu.edu/~agexten/lookwhat/lwot308.pdf">http://www.wvu.edu/~agexten/lookwhat/lwot308.pdf</a>
- Baniecki, J.F, J. Eggers, and R.S. Chandran. 2008. Look What's Out There in Integrated Pest Management. West Virginia University Extension Service. Issue 2 Feb. 2008. <a href="http://www.wvu.edu/~agexten/lookwhat/lwot208.pdf">http://www.wvu.edu/~agexten/lookwhat/lwot208.pdf</a>
- Baniecki, J.F, J. Eggers, and R.S. Chandran. 2008. Look What's Out There in Integrated Pest Management. West Virginia University Extension Service. Issue 1 Jan. 2008. http://www.wvu.edu/~agexten/lookwhat/lwot108.pdf
- Chandran, R. S. and T. Basden. 2007. Can goats and sheep help control invasive plants? WVU Update in West Virginia Farm Bureau News. Vol. 15 (2).
- Derr, J. F. and R. S. Chandran. 2007. Orchard Weed Control. *In* Pfeiffer, D. G. (Ed.), 2007 Spray Bulletin for Commercial Tree Fruit Growers. Va. Coop. Ext. Serv. Publ. 456-419. Pages 111-126.
- Hagood, E.S., H.P Wilson, R.L. Ritter, B.A. Majek, W.S. Curran, R. S. Chandran and M. VanGessel. 2007. *In* Guinn, L. (Ed.) Pest Management Guide for Field Crops 2007. Publication 456-016. Virginia Cooperative Extension Service. Pages 5-1 to 5-140.
- Baniecki, J.F., J. Eggers, and R.S. Chandran. 2007. Look What's Out There in Integrated Pest Management. West Virginia University Extension Service. Issue 12 Dec. 2007. <a href="http://www.wvu.edu/~agexten/lookwhat/lwot1207.pdf">http://www.wvu.edu/~agexten/lookwhat/lwot1207.pdf</a>
- Baniecki, J.F., J. Eggers, and R.S. Chandran. 2007. Look What's Out There in Integrated Pest Management. West Virginia University Extension Service. Issue 11 Nov. 2007. http://www.wvu.edu/~agexten/lookwhat/lwot1107.pdf
- Baniecki, J.F., J. Eggers, and R.S. Chandran. 2007. Look What's Out There in Integrated Pest Management. West Virginia University Extension Service. Issue 10 Oct. 2007. http://www.wvu.edu/~agexten/lookwhat/lwot1007.pdf
- Baniecki, J.F., J. Eggers, and R.S. Chandran. 2007. Look What's Out There in Integrated Pest Management. West Virginia University Extension Service. Issue 9 Sept. 2007. <a href="http://www.wvu.edu/~agexten/lookwhat/lwot907.pdf">http://www.wvu.edu/~agexten/lookwhat/lwot907.pdf</a>
- Eggers, J., J.F. Baniecki, and R.S. Chandran. 2007. Look What's Out There in Integrated Pest Management. West Virginia University Extension Service. Issue 8 Aug. 2007. http://www.wvu.edu/~agexten/lookwhat/lwot807.pdf
- Eggers, J., J.F. Baniecki, and R.S. Chandran. 2007. Look What's Out There in Integrated Pest Management. West Virginia University Extension Service. Issue 7 Jul. 2007. http://www.wvu.edu/~agexten/lookwhat/lwot707.pdf

- Eggers, J., J.F. Baniecki, and R.S. Chandran. 2007. Look What's Out There in Integrated Pest Management. West Virginia University Extension Service. Issue 6 Jun. 2007. <a href="http://www.wvu.edu/~agexten/lookwhat/lwot607.pdf">http://www.wvu.edu/~agexten/lookwhat/lwot607.pdf</a>
- Eggers, J., J.F. Baniecki, and R.S. Chandran. 2007. Look What's Out There in Integrated Pest Management. West Virginia University Extension Service. Issue 5 May. 2007. <a href="http://www.wvu.edu/~agexten/lookwhat/lwot507.pdf">http://www.wvu.edu/~agexten/lookwhat/lwot507.pdf</a>
- Eggers, J., J.F. Baniecki, and R.S. Chandran. 2007. Look What's Out There in Integrated Pest Management. West Virginia University Extension Service. Issue 4 Apr. 2007. http://www.wvu.edu/~agexten/lookwhat/lwot407.pdf
- Eggers, J., J.F. Baniecki, and R.S. Chandran. 2007. Look What's Out There in Integrated Pest Management. West Virginia University Extension Service. Issue 3 Mar. 2007. <a href="http://www.wvu.edu/~agexten/lookwhat/lwot307.pdf">http://www.wvu.edu/~agexten/lookwhat/lwot307.pdf</a>
- Baniecki, J.F., R.S. Chandran and J. Eggers. 2007. Look What's Out There in Integrated Pest Management. West Virginia University Extension Service. Issue 2 Feb. 2007. http://www.wvu.edu/~agexten/lookwhat/lwot207.pdf
- Baniecki, J.F and R.S. Chandran. 2007. Look What's Out There in Integrated Pest Management. West Virginia University Extension Service. Issue 1 Jan. 2007. http://www.wvu.edu/~agexten/lookwhat/lwot107.pdf
- Chandran, R. S. 2006. Trials of herbicide wick applicators show mixed results. WVU Update in West Virginia Farm Bureau News. Vol. 14 (5).
- Chandran, R. S. 2006. EPA registers new herbicides to control weeds in pastures. WVU Update in West Virginia Farm Bureau News. Vol. 14 (2).
- Derr, J. F. and R. S. Chandran. 2006. Orchard Weed Control. *In* Pfeiffer, D. G. (Ed.), 2006 Spray Bulletin for Commercial Tree Fruit Growers. Va. Coop. Ext. Serv. Publ. 456-419. Pages 105-120.
- Hagood, E.S., H.P Wilson, R.L. Ritter, B.A. Majek, W.S. Curran, R. S. Chandran and M.
   VanGessel. 2006. *In* Guinn, L. (Ed.) Pest Management Guide for Field Crops –
   2006. Publication 456-016. Virginia Cooperative Extension Service. Pages 235-406.
- Chandran R.S. 2006. Long-term control of Japanese knotweed (*Polygonum cuspidatum*). The Mid-Atlantic Aquatic Weed Management Newsletter. Vol. 2 (2).
- Baniecki, J.F., E. Dabaan, and R.S. Chandran. 2006. Look What's Out There in Integrated Pest Management. West Virginia University Extension Service. Issue 9 Oct. 2006. http://www.wvu.edu/~agexten/lookwhat/lwot102006.pdf
- Baniecki, J.F., E. Dabaan, and R.S. Chandran. 2006. Look What's Out There in Integrated Pest Management. West Virginia University Extension Service. Issue 8 Sept. 2006. http://www.wvu.edu/~agexten/lookwhat/lwot906.pdf
- Baniecki, J.F., E. Dabaan, and R.S. Chandran. 2006. Look What's Out There in Integrated Pest Management. West Virginia University Extension Service. Issue 7 Jul/Aug. 2006. http://www.wvu.edu/~agexten/lookwhat/lwot706.pdf
- Baniecki, J.F., E. Dabaan, and R.S. Chandran. 2006. Look What's Out There in Integrated Pest Management. West Virginia University Extension Service. Issue 6 Jun. 2006. <a href="http://www.wvu.edu/~agexten/lookwhat/lwot606.pdf">http://www.wvu.edu/~agexten/lookwhat/lwot606.pdf</a>

- Baniecki, J.F., E. Dabaan, and R.S. Chandran. 2006. Look What's Out There in Integrated Pest Management. West Virginia University Extension Service. Issue 5 May 2006. <a href="http://www.wvu.edu/~agexten/lookwhat/lwot506.pdf">http://www.wvu.edu/~agexten/lookwhat/lwot506.pdf</a>
- Baniecki, J.F., E. Dabaan, and R.S. Chandran. 2006. Look What's Out There in Integrated Pest Management. West Virginia University Extension Service. Issue 4 Apr. 2006. <a href="http://www.wvu.edu/~agexten/lookwhat/lwot406.pdf">http://www.wvu.edu/~agexten/lookwhat/lwot406.pdf</a>
- Baniecki, J.F., E. Dabaan, and R.S. Chandran. 2006. Look What's Out There in Integrated Pest Management. West Virginia University Extension Service. Issue 3 Mar. 2006. <a href="http://www.wvu.edu/~agexten/lookwhat/lwot306.pdf">http://www.wvu.edu/~agexten/lookwhat/lwot306.pdf</a>
- Baniecki, J.F., E. Dabaan, and R.S. Chandran. 2006. Look What's Out There in Integrated Pest Management. West Virginia University Extension Service. Issue 2 Feb. 2006 <a href="http://www.wvu.edu/~agexten/lookwhat/lwot206.pdf">http://www.wvu.edu/~agexten/lookwhat/lwot206.pdf</a>
- Baniecki, J.F., E. Dabaan, and R.S. Chandran. 2006. Look What's Out There in Integrated Pest Management. West Virginia University Extension Service. Issue 1 Jan. 2006. <a href="http://www.wvu.edu/~agexten/lookwhat/lwot106.pdf">http://www.wvu.edu/~agexten/lookwhat/lwot106.pdf</a>
- Derr, J. F. and R. S. Chandran. 2005. Orchard Weed Control. *In* Pfeiffer, D. G. (Ed.), 2005 Spray Bulletin for Commercial Tree Fruit Growers. Va. Coop. Ext. Serv. Publ. 456-419. Pages 103-118.
- Ritter, R, E., E.S. Hagood, H.P Wilson, W. S. Curran, B. A. Majek, M. VanGessel, and R. S. Chandran. 2005. Weed Control in Field Crops. Pest Management Recommendations for Field Crops 2005. Bulletin 237 Maryland Cooperative Extension Service. Pages 2-1 to 2-194.
- Chandran, R.S. 2005. Control weeds with integrated approach. *In J. Bower and J. Cowell (Ed.)*, Garden Calendar 2005. WVU Extension Service.
- Baniecki, J.F., E. Dabaan, and R.S. Chandran. 2005. Look What's Out There. West Virginia University Extension Service. Issue 12 Dec. 2005. http://www.wvu.edu/~agexten/lookwhat/lwot1205.pdf
- Baniecki, J.F., E. Dabaan, and R.S. Chandran. 2005. Look What's Out There. West Virginia University Extension Service. Issue 11 Nov. 2005. http://www.wvu.edu/~agexten/lookwhat/lwot1105.pdf
- Baniecki, J.F., E. Dabaan, and R.S. Chandran. 2005. Look What's Out There. West Virginia University Extension Service. Issue 10 Oct. 2005. http://www.wvu.edu/~agexten/lookwhat/lwot1005.pdf
- Baniecki, J.F., E. Dabaan, and R.S. Chandran. 2005. Look What's Out There. West Virginia University Extension Service. Issue 9 Sept 2005. http://www.wvu.edu/~agexten/lookwhat/lwot905.pdf
- Baniecki, J.F., E. Dabaan, and R.S. Chandran. 2005. Look What's Out There. West Virginia University Extension Service. Issue 8 Aug. 2005. http://www.wvu.edu/~agexten/lookwhat/lwot805.pdf
- Baniecki, J.F., E. Dabaan, and R.S. Chandran. 2005. Look What's Out There. West Virginia University Extension Service. Issue 7 Jul. 2005. http://www.wvu.edu/~agexten/lookwhat/lwot705.pdf

- Baniecki, J.F., E. Dabaan, and R.S. Chandran. 2005. Look What's Out There. West Virginia University Extension Service. Issue 6 Jun. 2005. http://www.wvu.edu/~agexten/lookwhat/lwot605.pdf
- Baniecki, J.F., E. Dabaan, and R.S. Chandran. 2005. Look What's Out There. West Virginia University Extension Service. Issue 5 May 2005. http://www.wvu.edu/~agexten/lookwhat/lwot505.pdf
- Baniecki, J.F., E. Dabaan, and R.S. Chandran. 2005. Look What's Out There. West Virginia University Extension Service. Issue 4 Apr. 2005. http://www.wvu.edu/~agexten/lookwhat/lwot405.pdf
- Baniecki, J.F., E. Dabaan, and R.S. Chandran. 2005. Look What's Out There. West Virginia University Extension Service. Issue 3 Mar. 2005. http://www.wvu.edu/~agexten/lookwhat/lwot305.pdf
- Baniecki, J.F., E. Dabaan, and R.S. Chandran. 2005. Look What's Out There. West Virginia University Extension Service. Issue 2 Feb. 2005. http://www.wvu.edu/~agexten/lookwhat/lwot205.pdf
- Baniecki, J.F., E. Dabaan, and R.S. Chandran. 2005. Look What's Out There. West Virginia University Extension Service. Issue 1 Jan. 2005. http://www.wvu.edu/~agexten/lookwhat/lwot105.pdf
- Chandran, R.S., R. Wallbrown and D. Workman. 2004. Managing Herbicide-Resistant Weeds. WVU Extension Service Fact Sheet. http://www.wvu.edu/~agexten/ipm/weeds/weedresist.pdf
- Chandran, R.S. and R.W. Wallbrown. Weed Control Program Necessary to Improve Corn Yield. <a href="http://www.wvu.edu/%7Eagexten/ipm/weeds/masonwdcntrl.pdf">http://www.wvu.edu/%7Eagexten/ipm/weeds/masonwdcntrl.pdf</a>
- Chandran, R.S., and D. Workman. Update on ALS-Resistant Johnsongrass in Hardy County, West Virginia. http://www.wvu.edu/%7Eagexten/ipm/weeds/hardyco.pdf
- Ritter, R, E., E.S. Hagood, H.P Wilson, W. S. Curran, B. A. Majek., M.VanGessel, and R. S. Chandran. 2004. Weed Control in Field Crops. Pest Management Recommendations for Field Crops. 2004. Bulletin 237 Maryland Cooperative Extension Service. Pages 2-1 to 2-180.
- Chandran, R.S., A. R. Nandeshwar, V.M. Zachariahs, and M. Mandal. 2004.

  BLOW©:Biology and Life cycle Of Weeds Prototype of an educational tool on weed growth and life cycles. WVU Extension Service Interactive Fact Sheet <a href="http://www.wvu.edu/~agexten/ipm/weeds/Biology%20of%20Weeds/NEW%20CD/main.html">http://www.wvu.edu/~agexten/ipm/weeds/Biology%20of%20Weeds/NEW%20CD/main.html</a>
- Loyd, B.M. and R.S. Chandran. 2004. Various Brush Control Herbicides Require Different Application Methods. WVU Extension Service Fact Sheet. West Virginia Farm Bureau News May, 2004 12(5)
  http://www.wvu.edu/~agexten/ipm/weeds/weedcontrol.pdf
- Derr, J. F. and R. S. Chandran. 2004. Orchard Weed Control. *In* Pfeiffer, D. G. (Ed.), 2004 Spray Bulletin for Commercial Tree Fruit Growers. Va. Coop. Ext. Serv. Publ. 456-419. Pages 93-108.

- Chandran, R.S. and E. Smolder. 2004. Integrated pest management practices good for lawns. *In* J. Bower and J. Cowell (Ed.), Garden Calendar 2004. WVU Extension Service.
- Chandran, R.S. 2004. Weed Management Section in Mid Atlantic Apple Pest Management Strategic Plan 2003. Northeast Pest Management Center. <a href="http://www.nepmc.org/rese-profiles.cfm">http://www.nepmc.org/rese-profiles.cfm</a>
- Ritter, R, E., E.S. Hagood, C. W. Swann, H.P Wilson W. S. Curran, B. A. Majek., M.VanGessel, and R. S. Chandran. 2003. Weed Control in Field Crops. 2003. Pest Management Recommendations for Field Crops. Bulletin 237 Maryland Cooperative Extension Service. Pages 2-1 to165.
- Derr, J. F. and R. S. Chandran. 2003. Orchard Weed Control. *In* Pfeiffer, D. G. (Ed.), 2003 Spray Bulletin for Commercial Tree Fruit Growers. Va. Coop. Ext. Serv. Publ. 456419. Pages 93-108.
- Ritter, R, E., E.S. Hagood, C. W. Swann, H.P Wilson W. S. Curran, B. A. Majek., M.VanGessel, and R. S. Chandran. 2002. Weed Control in Field Crops. 2002. Pest Management Recommendations for Field Crops. Bulletin 237 Maryland Cooperative Extension Service. Pages 2-1 to165.
- Derr, J. F. and R. S. Chandran. 2002. Orchard Weed Control. *In* Pfeiffer, D. G. (Ed.), 2002 Spray Bulletin for Commercial Tree Fruit Growers. Va. Coop. Ext. Serv. Publ. 456-419. Pages 93-108.
- Chandran, R.S. 2002. Horsenettle management in West Virginia Pastures and Hayfields.

  WVU Extension Service Fact Sheet.

  http://www.wvu.edu/~agexten/ipm/weeds/horsenettle.pdf
- King, S., R.S. Chandran, E.S. Hagood, K.W. Bradley, K. Love, and R. Heidel. 2002. Control of common pasture and hayfield weeds in Virginia and West Virginia. Virginia Tech Cooperative Extension Fact Sheet.

  http://www.ppws.vt.edu/scott/weed\_id/pasturepub.pdf
- Semmens, K. and R.S. Chandran. 2002. Herbicide and grass carp can control pondweed. WVU Update in West Virginia Farm Bulletin News. Aug, 2002.
- Chandran, R. S. and D. Workman. 2002. Deciding on a weed control program for your lawn. Moorefield Examiner Special Suppl. April 10, 2002.
- Chandran, R. S. and K. Semmens. 2002. Choosing the correct herbicide for weed control in ponds. WVU Update in West Virginia Farm Bulletin News. Feb, 2002.
- Shah, S. and R. S. Chandran. 2002. Non-chemical measures can reduce asian lady beetles indoors. WVU Update in West Virginia Farm Bulletin News. Feb, 2002.
- Ritter, R, E., E.S. Hagood, C. W. Swann, H.P Wilson, W. S. Curran, B. A. Majek., M.VanGessel, and R. S. Chandran. 2001. Weed Control in Field Crops. 2001 Pest Management Recommendations for Field Crops. Bulletin 237 Maryland Cooperative Extension Service. Pages 2-1 to 2-157.
- Derr, J. F. and R. S. Chandran. 2001. Orchard Weed Control. *In Pfeiffer, D. G. (Ed.),* 2001 Spray Bulletin for Commercial Tree Fruit Growers. Va. Coop. Ext. Serv. Publ. 456-419.
- Chandran, R. S. 2001. Genetic engineering. Part 3. Pros and Cons of genetically engineered crops. WVU Update in West Virginia Farm Bureau News. Vol 9 (6).

- Chandran, R. S. 2001. Genetic engineering. Part 2. Pros and Cons of genetically engineered crops. WVU Update in West Virginia Farm Bureau News. Vol 9 (5).
- Semmens, K. and R. S. Chandran. 2001. Start now to control next year's aquatic weeds. Farm Bureau News, August, 2001. WVU Update in West Virginia Farm Bureau News. August 2001.
- Hagood, E. S., C. W. Swann, H. P. Wilson, R. L. Ritter, B. A. Majek. W. S. Curran, and R. S. Chandran. 2000. Weeds: Grain Crops, Soybeans, and Forages. *In* B. J. Brinlee. (Ed.) 2000 Field Crops Pest Management Guide. Va. Coop. Ext. Serv. Publ. 456-016.
- Derr, J. F. and R. S. Chandran. 2000. Orchard Weed Control. *In* Pfeiffer, D. G. (Ed.), 2000 Spray Bulletin for Commercial Tree Fruit Growers. Va. Coop. Ext. Serv. Publ. 456-419.
- Chandran, R. S. 2000. Genetic engineering. West Virginia Farm Bureau News. 8(11):WVU Update p4.
- Chandran R. S. 1999. Drought and Chemical Weed Control. WVU Web-site. http://www.wvu.edu/~agexten/ipm/weeds/weeddrot.htm
- Chandran R. S. 1999. Drought and Herbicide Residues, Fall Herbicide Application. WVU Web-site. http://www.wvu.edu/~agexten/ipm/weeds/herbresi.htm
- Chandran R. S. and D. Workman. 1999. Jimsonweed Poisoning in Humans and Animals. WVU Web-site. http://www.wvu.edu/~agexten/ipm/weeds/jimsonwd.htm

# **AWARDS AND HONORS**

- Recipient of 'Research Excellence Award' WVU Extension Service, 2019.
- National Winner 'Weed Science Society of America Photo Contest Weed in a Landscape', WSSA Annual Meeting, 2019.
- Recipient of 'Distinguished Senior Alumni Award'. Department of Plant Pathology, Physiology, and Weed Science, Virginia Tech. 2018.
- Recipient of 'Gamma Sigma Delta Extension Faculty Award of Merit'. West Virginia University Chapter of Gamma Sigma Delta. 2018.
- Co-recipient (along with ANR faculty members) of WVU Extension's 'Key Communicator Award'. WVU Extension Service, 2018.
- Co-recipient of 'National Winner Team Newsletter' (along with D. Frank, M.M. Rahman, M. Danilovich, S. Owen, B. Liedl). National Association of Agricultural County Agents (NACAA), July 2017.
- Recipient of 'Distinguished Service Award' from the National Association of Agricultural County Agents (NACAA), July 2016.
- Co-recipient of WVU Extension's 'Team Program Excellence Award' (along with D. Frank and M. Rahman) 2013.
- Co-recipient of WVU Extension's 'Team Program Excellence Award' (along with other Grassland Team members) 2007.
- Inducted into *Epsilon Sigma Phi*, the National Honor Fraternity for Extension Service Professionals, West Virginia Chapter, 2005.

- Inducted into *Gamma Sigma Delta*, the National Honor Society of Agriculture and Forestry, West Virginia University Chapter, 2004.
- Third Place 'Photo Contest' Northeastern Weed Science Society 58th Annual Meeting, January, 2004.
- Co-recipient of the Arthur J. Webber Award for 'Outstanding Graduate Student of the Year', (along with S. Salihu). Department of Plant Pathology Physiology and Weed Science, VPI&SU, 1996.
- First Place, Graduate Team (along with M. Czarnota and S. Salihu) *Collegiate Weed Contest*, Northeastern Weed Science Society 1995.

### PROFESSIONAL ASSOCIATION MEMBERSHIPS

Northeast Region Technical Committee on IPM (NEERA-1604) Weed Science Society of America Northeastern Weed Science Society National Agricultural County Agents Association International Weed Science Society