Emmanuel Byamukama – Curriculum Vitae

Acting Division Director/National Program Leader, USDA-NIFA
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Education

Ph.D. Major: Plant Pathology	2008	Iowa State University, Ames, Iowa.
Minor in Statistics	2008	Iowa State University, Ames, Iowa.
GIS Certificate	2008	Iowa State University, Ames Iowa
M. S. Major: Crop Science	2001	Makerere University, Kampala, Uganda
B. S. Major: Agriculture	1999	Makerere University, Kampala, Uganda

Work Experience

- **March 2025 to present: Acting Division Director**, Division of Plant Systems-Protection, Institute of Food Production and Sustainability, USDA-NIFA. I oversee the operation of the Division, which has 22 competitive and non-competitive programs. I coordinate the development of Request for Applications through the awarding process and manage general activities within the Division.

  Accomplishments
  - Worked with program leaders to ensure the timely awarding of grants following new administration priorities
  - Coordinated and integrated programs within the Division and agency
  - Supervised the Division's financial account and prioritized impactful funding
  - Provided annual reports and justification for programs in the Division
  - Conducted Division staff annual reviews and staff performance awards
  - Responded to data calls from the USDA Secretary's office
  - Represented the Division at the Agency meetings and provided progress reports
  - Facilitated collaborations with NIFA partners and stakeholders within the Division
  - Handled all personnel matters including labor shortage solutions, conflict resolution, and role assignments.

- **Jan 2022- to present: National Program Leader,** Division of Plant Systems-Protection, USDA-NIFA. I currently manage or co-manage six programs: Emergence Citrus Disease Research and Extension Program (ECDRE), Agricultural Microbiomes in Plant Systems and Natural Resources (A1402), Pest and Beneficial Species in Agricultural Production Systems (A1112), Extension Implementation Program (EIP), Applied Research and Development Program (ARDP), and Small Business Innovation Research Program (8.13). I represent NIFA on 15 Working Groups.

Accomplishments:

- Presented the status of operation to Congressional Staff on the Emergence Citrus Disease Research and Extension Program
- Developed and recommended improvements resulting in improved stakeholder engagement
- Organized stakeholder listening sessions and implemented input provided by stakeholders in Request for Applications (RFAs)
- Organized and held project directors' meetings to review grant progress and solicit feedback for future improvements
- Reviewed and approved state Experiment Station and Extension annual work plans and accomplishments reports
- Reviewed and tracked progress of over 65 plant health projects per year
- Recruit and train panel managers
- Recruit and train panel reviewers
- Recognized for individual and Team excellence in the delivery of programs

- **August 2019 – Dec 2021: Associate Professor/Extension Plant Pathologist,** Agronomy, Horticulture, and Plant Science Department, Brookings, South Dakota State University. My major research goal was to develop effective and sustainable plant disease management practices for major row crops in South Dakota. My major Extension goal was to disseminate timely research-based plant disease management practices to enable producers, agronomists, and crop scientists manage plant diseases effectively and sustainably. My teaching goal was to impart knowledge of natural resource management with regard to plant diseases to senior agronomy undergraduate students.

  Accomplishments:

  - Developed and disseminated current and relevant research-based information to help crop producers manage plant diseases effectively, profitably, and sustainably (Estimated **impact of $2.5m**).
  - Developed and obtained grant funding to support research and extension (**$1.2m**)
  - Conducted research that identified natural products that are effective against soybean cyst nematode and wheat diseases.
  - Conducted varietal and germplasm screening for disease resistance working with breeders
  - Conducted surveys among producers and agronomists to assess outreach efforts' impact and grower needs
  - Directed and supervised the operation of the South Dakota State University Plant Diagnostic Clinic
  - Collaborated with other scientists at the university, regional, and national levels
  - Co-taught senior-level undergraduate course “Natural Resource Management/Plant Disease Management.”

- **March 2013 – July 2019: Assistant Professor/Extension Plant Pathologist,** Agronomy, Horticulture, and Plant Science Department, South Dakota State University. The major research goal was to develop effective and sustainable plant management practices for major row crops in South Dakota. The major Extension goal was to disseminate timely research-based plant disease management practices to assist producers, agronomists, and crop scientists manage plant diseases effectively and sustainably. The teaching goal was to help students master the importance of plant diseases and effective natural resource management practices.

  Accomplishments

  - Conducted surveys to determine crop growers' plant disease management needs
  - Developed and disseminated current and relevant research-based information to help crop producers manage plant diseases effectively, profitably, and sustainably **(impact estimated at over $12 million).**
  - Conducted research (fungal, bacterial, nematodes) to generate unbiased science-based plant disease management recommendations
  - Conducted varietal and germplasm screening for disease resistance, working with wheat breeders
  - Obtained **over $2 million** in grant funding in direct spending authority for my research and extension activities
  - Directed and supervised the operation of the South Dakota State University Plant Diagnostic Clinic
  - Co-taught Natural Resource Management senior undergraduate class
  - Collaborated with other scientists at the university, regional, and national levels
  - Supervised and mentored six graduate students and four professional staff.
  - Chaired the North Central Wheat Diseases Working Group 2017-2018
  - Lead Coordinator, Northern Plains IPM Group 2016-2018

- **September 2010 – February 2013, Postdoctoral Research Associate,** Department of Plant Pathology, University of Nebraska, Lincoln. Major goal: Conduct epidemiological research to develop management practices for wheat diseases.

  Accomplishments

  - Developed epidemiology and yield loss quantification studies on wheat diseases.
  - Conducted fungicide efficacy trials on fungal foliar diseases of wheat
  - Published four papers directly from my postdoctoral research
  - Wrote extension fact sheets for grower outreach
  - Team-taught graduate level "Ecological management of plant diseases course"
  - Assisted in the detection of plant diseases in the diagnostic clinic

- **January 2009 – August 2010, Postdoctoral Research Associate**, Department of Plant Pathology and Microbiology, Iowa State University. Major goal: Develop effective soybean and corn plant disease management practices.

Accomplishments

- Quantified effect of strobilurin fungicides on dry matter accumulation in corn
- Determined the effect of row spacing on the spread of soybean diseases
- Gave outreach talks on fungicide efficacy in corn
- Co-taught Plant Disease Epidemiology class for graduate students
- Successfully wrote one research grant
- Supervised hourly and graduate student workers.

- **August 2005 – December 2008: Graduate Research Assistant**, Department of Plant Pathology and Microbiology, Iowa State University. Major goal: Conduct research on the epidemiology of soybean virus diseases.

  Accomplishments

  - Developed soybean Bean pod mottle virus epidemiological model that describes the risk factors for this virus
  - Quantified and mapped soybean disease distribution in Iowa
  - Wrote and published refereed journal papers,
  - Gave conference and extension presentations

- **January 2002 –April 2005: Research Associate**, International Institute of Agriculture, Uganda.
  - Oversaw project implementation for the provision and preservation of improved planting material in Uganda and Tanzania
  - Mobilized and formed participating farmer groups for the implementation of IPM techniques for increased sweetpotato production.
  - Coordinated the project appraisal using the participatory approach in identifying constraints to sweetpotato production.
  - Conducted the participatory on-farm sweetpotato disease and pest management trials with farmer groups.
  - Conducted crop diseases survey in Rwanda and Tanzania
  - Conducted and analyzed data from farmer-participatory on-farm trials and farmer-participatory variety evaluations (FPVE).
  - Wrote annual reports, technical reports, and gave conference presentations.

- **September 1999 – December 2001: Agricultural Officer**, Ministry of Agriculture and Animal Husbandry, Mbarara District, Uganda.
  - Performed extension activities at the sub-county aimed at improving crop production
  - Formed farmer groups as implementers of improved crop production practices
  - Coordinated acquisition and delivery of improved planting materials
  - Liaised with the political leaders at the sub-county level to obtain funding for agricultural activities
  - Performed surveillance for exotic pathogens and crop disease outbreaks

- Collaborated with non-governmental organizations in the area to improve market channels for agricultural produce.

Honors and Awards

- USDA-NIFA Excellence Award – Individual award for excellence. August 2024
- USDA-NIFA Team Excellence Award – Emergence Citrus Research and Extension Program, September 2023.
- USDA-NIFA Team Excellence Award – Crop Protection and Pest Management Program, September 2023.
- F. O. Butler Award – University-wide Faculty Excellence in Extension and Outreach award, 2020.
- Outstanding Extension Award - Gamma Delta Sigma Agricultural Honoring Society, 2016
- Communication Award - National Association of County Agricultural Agents, 2014
- Travel award - GIS-User Conference, ESRI, San Diego, CA. 2008.
- Graduate Student Research Recognition Award. 8th I.E. Melhus Graduate Student Symposium, American Phytopathological Society, Minneapolis, MN. 2008
- Best poster award, North Central Division Meeting of the American Phytopathological Society, Lafayette, IN. 2007
- Travel Scholarship award, North Central Division Meeting of the American Phytopathological Society, Lafayette, IN. 2007
- Travel Scholarship award, North Central Division Meeting of the American Phytopathological Society, Fargo, ND. 2007
- Best poster award, Sixth Annual Norman Borlaug Lectureship Poster Competition for Graduate Students, Iowa State University, Ames, IA. 2006

Relevant Skills:

Research Experience: Strong research skills in plant disease management – plant disease risk assessment, plant disease diagnosis, plant disease modeling, yield and quality loss analysis, plant disease mapping, cultivar screening for disease resistance, product efficacy evaluation, natural products research, remote sensing for plant diseases, and statistical analysis.

Teaching Experience: My teaching experience started at Iowa State as a teaching assistant for the plant disease epidemiology class. I co-taught one course for two years while at the University of Nebraska. I co-taught one course at South Dakota State University. My classes have always been exciting to students because of the blend of hands-on experiences, varied material delivery methods, and the ability to provide students with a chance to think on their own.

Extension/Outreach Experience:
Extension is the 3rd leg of the three-legged stool missions of a land-grant university. I have vast experience performing extension activities (taking the university to the people), including developing effective outreach programs, needs assessment skills, and effective communication

skills to a wide audience – visual aids, computer-aided presentations, impact assessment, team building, and team networking. I have experience packaging information for effective delivery to various audiences, from social media to printed handouts to impactful video production and demonstration setup.

Leadership/Administration Roles

- Activating Division Director
    - Set priorities for the Division
    - Coordinate granting activities
    - Prepare work plans for the Division
    - Review and approve the hire of grant panel managers and panel members
    - Work with the agency administrators to implement priorities
- National Program Leader
    - Oversee the operations and set priorities for five programs
    - Recruit and train panel members and panel managers
    - Organize project directors' meetings
    - Review and improve Request for Application documents
    - Engage stakeholders for program delivery

- Coordinator, Northern Great Plains Integrated Pest Management Working Group 2015-2018
    - Organized stakeholder meeting to set priorities (25 Extension Faculty from 6 mid-west Land Grant Universities)
    - Wrote the grant to obtain funding for the group
    - Spearheaded the web content development and peer review process.
    - Updated content on the web and also the mobile app.

- Chair, Wheat Diseases Working Group 2018/2019
    - Organized the annual meeting for the group (30 faculty and industry group members from various universities and ag companies)
    - Invited and coordinated presenters for the Group meeting
    - Led the discussion of research and extension priorities for the group
    - Wrote annual reports for the group to USDA-NIFA

- Director, South Dakota State University Diagnostic Clinic 2013-2021
    - Recruit a diagnostician and an assistant diagnostician for the clinic
    - Write grants to support the clinic
    - Coordinate with faculty to support the clinic with diagnoses
    - Represent SDSU at the National Plant Diagnostic Network.

Information Technology Apps, digital tools and platforms

I have worked extensively with Zoom, MS Teams, Adobe Connect, and Webex. I have also used teaching platforms such as Dare2Learn to deliver online classes. I am familiar with many

computer applications, including MS Excel, MS Word, MS PowerPoint, SAS, and R. I have basic knowledge of HTML, Python, and SQL.

Professional activities

Mentoring: I have advised 8 MS students (Krishna Acharya, Pawan Basnet, Collins Bugingo, Marilen Nampijja, Bishnu Dhital, Abraham Hangaimisho, Ashley Frederickson, and Abrielle Tembrell, and three PhD students (Rawnaq Chowdhury, Confiance Mfuka, and Esneider Mahecha). I have mentored two postdocs: Dr. Oscar Perez and Dr. Dalitso Yabwalo. I have mentored 18 undergraduate students and hosted two visiting scientists.

Reviewing: I am a reviewer for high-impact journals: Plant Disease, Phytopathology, Crop Protection, Canadian Journal of Plant Pathology, and Plant Health Progress. I am a reviewer for grants under the USDA-United States Wheat and Barley Scab Initiative.

Professional Memberships: Member and serving on two committees – American Phytopathological Society; Member of the Sigma XI, The Scientific Research Society; Member of Gamma Sigma Delta Society; Member, American Association for the Advancement of Science.

University service: University Senator – College of Agriculture, Food and Environmental Sciences. Served on the College Leadership Advisory Committee, Served on the Agronomy, Horticulture, and Plant Science Department Leadership Committee, member lead, Departmental Review for the Extension Program, served as search chair for three faculty positions in the Department and as a committee member for 8 searches.

Other Services: Volunteer – Boy Scouts of America; Samaritan Pulse, Katy, TX; Farmer-to-Farmer Organization; Habitat for Humanity; Paetow High School Marching Band, Katy, TX. Golden Experiences, Houston; Eastern SD Science and Engineering Fair Judge; Brookings Animal Shelter, SD; Move-in-Day, South Dakota State University.

Peer-reviewed refereed publications

1. Dangal, N. K., Oros, M., Lo, J., Baumann, I., Smith, D. L., Allen, T. W., Betts, A. K., Bish, M., Bissonnette, K., **Byamukama, E**. and Byrne, A., 2026. Determining the Optimal Timing and Economic Return of Corn Fungicide Applications Using a Network Meta-Analysis. *PhytoFrontiers™*, 6*:* 266-285.
2. Telenko, D.E., Allen, T.W., Sisson, A.J., Bergstrom, G.C., Betts, A.K., Bish, M.D., Bissonnette, K.M., Bond, J.P., Bonkowski, J., Bradley, C.A., **Byamukama, E**..& Zheng, Y. 2026. Estimated Soybean Yield and Economic Losses Caused by Diseases in the United States and Ontario, Canada, from 2020 to 2024. Plant Health Progress, 27:269-282.
3. Dangal, N.K., Ernat, E.M., Adee, E.A., Betts, A.K., Bish, M., Bissonnette, K.M., Bradley, C., **Byamukama, E**., Byrne, A.M., …and Muller, D. S 2026. Soybean seed

treatment evaluation under various levels of Sudden Death Syndrome and populations of soybean cyst nematode. Plant Disease 10:6, 2297-2304

4. Bugingo, C., Ali, S., Yabwalo, D., and **Byamukama, E**. 2025. Optimizing fungicide seed treatments for early foliar diseases management in wheat under Northern Great Plains conditions. Agronomy 15: 291-299
5. Bissonnette, K, M., Barizon, J., Adee, E., Ames, K. A., Becker, T., Biggs, M., Bradley, A. C., Brown, M., **Byamukama, E**., Chilvers M, I., … and Tenuta, A. U. 2024. Management of soybean cyst nematode and sudden death syndrome with nematode-protectant seed treatments across multiple environments in soybean. Plant Disease 108:1729-1739.
6. Hangamaisho, A., Bleakley, B. H., Ali, S., Yabwalo, D., and **Byamukama**, E. 2024. Aggressiveness of *Xanthomonas translucens pv. undulosa* isolates and differential reaction among spring wheat varieties under a controlled environment. Plant Health Progress 25: 33-36.
7. Broders, K., Iriarte, G., Bergstrom, G., **Byamukama, E**., Chilvers, M., Cruz, C., ... Duray, Z. 2024. Tar spot of maize in the Americas is caused by a complex of closely related Phyllachora species which vary in their host and geographic range. Authorea Preprints.
8. Basnet, P., Clay, S.A. and **Byamukama, E**., 2022. Reproduction of soybean cyst nematode populations on field pennycress, henbit, and purple deadnettle weed hosts. Agronomy 12:2027
9. Broders, K., Iriarte-Broders, G., Bergstrom, G. C., **Byamukama, E**., Chilvers, M., Cruz, C., ... & Kleczewski, N. M. 2022. Phyllachora species infecting maize and other grass species in the Americas represents a complex of closely related species. *Ecology and Evolution*, *12* (4), e8832.
10. Chowdhury, R. N., Okello, P. N., and **Byamukama**, E. 2022. Examining the interaction between *Phytophthora sojae* and soybean cyst nematode on soybean (Glycine max). Plants, 11: 560-575.
11. Chowdhury, R. N., Tande, C., and **Byamukama, E.** 2021. Common *Phytophthora sojae* pathotypes occurring in South Dakota. Plant Health Prog. 22: 374-379.
12. Kandel, Y. R., Hunt, C., Ames, K., Arneson, N., Bradley, C. A., **Byamukama, E**., Byrne, A., Chilvers, M. I., Giesler, L. J., Halvorson, J. and Hooker, D.C., and Mueller, D. S. 2021. Meta-analysis of soybean yield response to foliar fungicides evaluated from 2005 to 2018 in the United States and Canada. Plant Disease, PDIS-07.
13. Mfuka, C., **Byamukama, E**., and Zhang, X. 2020. Spatiotemporal characteristics of white mold and impacts on yield in soybean fields in South Dakota. Geo-spatial Information Science 23:182-193.
14. Adhikari, A., Lockhart, B. E., Ganiger, M., **Byamukama, E.,** Tande, C., Smith, M. J., and Dill-Macky, R. 2020. Barley yellow dwarf virus-PAV is the dominant species causing Barley yellow dwarf disease in South Dakota and Minnesota. Crop Protection, 134, 105171.
15. Shabbir, Z., Sehgal, S., Glover, K.D., **Byamukama, E**., Liu, Z. and Ali, S., 2020. BS ToxA producing *Bipolaris sorokiniana* population on wheat in South Dakota. Plant Health 2020 Online.
16. Mueller, D.S., Wise, K.A., Sisson, A.J., Allen, T.W., Bergstrom, G.C., Bissonnette, K.M., Bradley, C.A., **Byamukama, E**., Chilvers, M.I., Collins, A.A. and Esker, P.D.,

2020. Corn yield loss estimates due to diseases in the United States and Ontario, Canada, from 2016 to 2019. Plant Health Progress, 24:238-247.

17. Merrick, L.F., Glover, K.D., Yabwalo, D. and **Byamukama, E**., 2020. Use of genotype by yield* trait (GYT) analysis to select hard red spring wheat with elevated performance for agronomic and disease resistance traits. Crop Breeding, Genetics and Genomics, 2(2).
18. Basnet, P., Clay, A., and **Byamukama, E.** 2020. Determination of weed hosts of soybean cyst nematode in South Dakota. Weed Technology, 1-6. doi:10.1017/wet.2019.122.
19. **Byamukama, E**., Tande, C., Nampijja, M., Mathew, F., and Bleakley. 2020. First report of *Xanthomonas vasicola* pv. *vasculorum*, the causal agent of bacterial leaf streak of corn in South Dakota. Plant Disease 104:1851.
20. Tande, C., Dorrance, A. E., Schwarzrock, D., Mahecha, E., and **Byamukama, E.** 2020. First report of *Phytophthora sansomeana* causing root rot of soybean in South Dakota. Plant Disease 104:1877.
21. Mfuka, C., Zhang X., and **Byamukama, E.** 2019. Mapping and quantifying white mold in soybean across South Dakota using landsat images. Journal of Geographic Information System 11: 331-346.
22. Mathew, F. M., **Byamukama, E**., Neves, D. L., and Bradley, C. 2019. Resistance to quinone outside inhibitor fungicides conferred by the G143A mutation in *Cercospora sojina* (causal agent of frogeye leaf spot) isolates from South Dakota soybean fields. Plant Health Prog. 20: 104-105.
23. Dhungana, B., Ali, S., **Byamukama, E**., Krishnan, P., Wu, J., and Caffe-Treml, M. 2019. Effects of temperature, water activity, and fungal isolate on ochratoxin A accumulation in oat grain inoculated with *Penicillium verrucosum* and development of a methodology to screen oat cultivars for ochratoxin A accumulation. Cereal Chemistry 96: 950-957.
24. Paul, P. A., Salgado, J. D., Bergstrom, G., Bradley, C. A., **Byamukama, E**., Byrne, A. M., Chapara, V., Cummings, J. A., Chilvers, M. I., Dill-Macky, R., Friskop, A., Kleczewski, N., Madden, L. V. Nagelkirk, M., Stevens, J., Smith, M., Wegulo, S. N., Wise, K., and D. Yabwalo. 2018. Integrated effects of genetic resistance and prothioconazole + tebuconazole application timing on fusarium head blight in wheat. Plant Disease 103: 223-237.
25. Wise, K. A., Smith, D., Freije, A., Mueller, D.S., Kandel, Y., Allen T., Bradley, C. A., **Byamukama, E**., Chilvers, M., Faske, T., Friskop, A., Hollier, C., Jackson-Ziems, T. A., Kelly, H., Kemerait, B., Prince, P., Robertson, A., and Tenuta, A. 2019. Meta-analysis of yield response of foliar fungicide-treated hybrid corn in the United States and Ontario, Canada. PLoS ONE 14(6): e0217510.
26. **Byamukama, E**., Ali, S., Kleinjan, J., Yabwalo, D., Graham, C., Caffe, M., Mueller, N., Rickertsen, J., and Berzonsky, B. 2018. Winter wheat grain yield response to fungicide application is influenced by cultivar and rainfall. Plant Pathol. J. 35:63-70.
27. Andersen, E.J., Ali, A., **Byamukama, E**., Yen, Y., Nepal, M. P. 2018. Disease resistance mechanisms in plants. Genes 9 (339) 1-30.
28. Dhungana, B., Ali, S., **Byamukama, E**., Krishnan, P., and Caffe-Treml, M. 2018. Incidence of *Penicillium verrucosum* in grain samples from oat varieties commonly grown in South Dakota. J. Food Prot. 81:898-902
29. Acharya, K., Tande, C. and **Byamukama, E**. 2017. Assessment of commercial soybean cultivars for resistance against prevalent *Heterodera glyines* populations in South Dakota.

Plant Health Progress 18: 156-161.

30. Allen, T. W., Bradley, C. A., Sisson, A. J., **Byamukama, E**., Chilvers, M. I., Coker, C. … and Wrather, J. A. 2017. Soybean yield loss estimates due to diseases in the United States and Ontario, Canada, from 2010 to 2014. Plant Health Progress 18:19-27
31. **Byamukama, E**., Szczepaniec, A., Strunk, C., Fanning, R., Backmann, A., Deneke, D., Johnson, P. 2016. Assessing integrated pest management implementation and knowledge gaps in South Dakota. Journal of Extension 54:1-9.
32. Acharya, K., Tande, C. and **Byamukama**, **E.** 2016. Determination of *Heterodera glycines* virulence phenotypes occurring in South Dakota. Plant Disease 100:2281-2286.
33. **Byamukama, E**., Tatineni, S., Hein, G. L., McMechan, J. A., and Wegulo, S. N. 2016. Incidence of Wheat streak mosaic virus, Triticum mosaic virus, and Wheat mosaic virus in wheat curl mites recovered from maturing winter wheat spikes. Plant Dis. 100: 318-323.
34. Mueller, D. S., Wise, K. A., Sisson, A. J., Allen, T. W., Bergstrom, G. C., Bosley, D. B., Bradley, C. A., Broders, K. D., **Byamukama, E**., Chilvers, M. I., Collins, A., … and Warner, F. 2016. Corn yield loss estimates due to diseases in the United States and Ontario, Canada from 2012 to 2015. Plant Health Progress 18: 34-40 doi:10.1094/PHP-RS-16-0030.
35. Acharya, K., Tande, C., and **Byamukama, E**. 2016. Determination of *Heterodera glycines* virulence phenotypes occurring in South Dakota. Plant Dis. 2281-2286.
36. Abdullah, S., Ali, S., **Byamukama, E**., and Langham, M. A. C. 2016. First report of *Pyrenophora tritici-repentis* Race 5 from South Dakota. Plant Dis. 100: 2322.
37. Yabwalo, D., Geppert, R., and **Byamukama, E**. 2016. Fusarium head blight management with fungicides in barley in South Dakota 2015. Plant Management Reports 10:CF051.
38. **Byamukama, E**., Robertson, A. E., and Nutter, F. W., Jr. 2015. Bean pod mottle virus time of infection influences soybean yield, yield components, and quality. Plant Dis. 99: 1026-1032.
39. Tande, C., Gebreil, A., Mathew, F., Grady, K., and **Byamukama, E**. 2015. First report of charcoal rot caused by Macrophomina phaseolina on Brassica carinata in South Dakota. Plant Health Progress doi: 10.1094/PHP-BR-15-0021.
40. Mathew, F., Tande, C., Gebreil, A., **Byamukama, E**., Osborne, L., and Draper, M. 2015. First report of Brown stem rot of soybean (Glycine max L.) caused by *Phialophora gregata* in South Dakota. Plant Disease 99: 8.
41. Ruden, K., Redenius, G. S., and **Byamukama, E.** 2015. Management of Fusarium head blight with fungicides in spring wheat in South Dakota 2014. PDMR: 9 CF31.
42. **Byamukama, E**., Tatineni, S., Hein, G. L., Graybosch, R., Baenziger, P. S., French, R. and Wegulo, S. N. 2014. Quantification of the grain yield loss associated with single and double infections of winter wheat by Triticum mosaic virus and Wheat streak mosaic virus. Plant Dis. 98: 127-133.
43. **Byamukama, E**., Eggenberger, S. K., Coelho-Netto, R. A., Robertson, A. E., and Nutter, F. W., Jr. 2014. Geospatial and temporal analyses of Bean pod mottle virus epidemics in soybean at three spatial scales. Phytopathology 104:365-378.
44. Tande, C., Hadi, B., Chowdhury, R., Subramanian, S., and **Byamukama, E**. 2014. First report of sudden death syndrome of soybean caused by *Fusarium virguliforme* in South Dakota. Plant Dis. 98: 1012
45. Seifers, D. L., Wegulo, S. N., Hein, G. L., **Byamukama, E.,** De Wolf, E., and Langham,

M. A. C. 2014. Biological properties of isolates of *Triticum mosaic virus* from the Great Plains states of the United States. Canadian J. Plant Path. 36:389-395.

46. Ruden, K., Redenius, G., and **Byamukama, E**. 2014. Management of foliar leaf diseases with fungicides at V5 in corn in South Dakota 2013. Plant Disease Management Reports 8:FC191.
47. **Byamukama, E**., Seifers, D. L., Hein, G. L., De Wolf, E., Tisserat, N. A., Langham, M. A. C., Osborne L. E., Timmerman, A., and Wegulo, S. N. 2013. Occurrence and distribution of Triticum mosaic virus in the central Great Plains. Plant disease, 97(1), 21-29.
48. **Byamukama, E.,** Abendroth, L. J., Elmore, R. W., and Robertson, A. E. 2013. Quantifying the effect of Pyraclostrobin on grain-fill period and kernel dry matter accumulation in maize. Online. Plant Health Progress doi:10.1094/PHP-2013-1024-02-RS.
49. **Byamukama, E.,** Tatineni, S., Hein, G. L., Graybosch, R. A., Baenziger, P. S., French, R., and Wegulo, S. N. 2012. Effects of single and double infections of winter wheat by Triticum mosaic virus and Wheat streak mosaic virus on yield determinants. Plant Disease, 96: 859-864.
50. **Byamukama, E.,** Robertson, A. E., and Nutter, F.W., Jr. 2011. Quantifying the temporal and spatial dynamics of Bean pod mottle virus in Iowa. Plant Disease: 95: 126:136.
51. Lu, X., Robertson, A. E., **Byamukama, E**., and F. W. Nutter, Jr. 2010. Evaluating the importance of stem canker of soybean in Iowa. Plant Disease 94: 167-173
52. Lu, X., Robertson, A. E., **Byamukama, E**., and F. W. Nutter, Jr. 2010. Incidence, prevalence and spatial dependence of Soybean mosaic virus in Iowa. Phytopathology 100: 931-940.
53. **Byamukama, E**., Robertson, A. E., and Nutter, F. W., Jr. 2010. Quantification of temporal and spatial dynamics of Bean pod mottle virus at different spatial scales. Online. Plant Health Progress doi:10.1094/PHP-2010-0526-03-SY.
54. Gibson, R. W., **Byamukama, E**., Mpembe, I., Kayongo, S., and Mwanga, R. O. M. 2008. Working with farmer groups in Uganda to develop new sweet potato cultivars: decentralization and building on traditional approaches. Euphytica 159: 217-228.
55. **Byamukama, E**., Adipala, E., Gibson, R. W., and Aritua, V. 2004. Within-crop spread of sweet potato virus disease and the population dynamics of its whitefly and aphid vectors. Crop Protection 23: 109-116.
56. Gibson, R. W, Aritua, V., **Byamukama, E**., Mpembe, I., and Kayongo, J. 2002. Control strategies for sweet potato virus disease in Africa. Virus Research. 100:115-122.

Abstracts

1. Frederickson, A., Bleakley, B.H., **Byamukama**, E., Yabwalo, D., Ali, S. and Tembreull, A. 2022. Bacterial antagonists for biological control of *Xanthomonas translucens pv. undulosa* (Xtu) that causes bacterial leaf streak of wheat. Phytopathology 112: 48.

2. Tembreull, A., **Byamukama, E.**, Frederickson, A. and Shires, M. 2023. The presence of inoculum and disease severity in South Dakota winter wheat fields. Phytopathology 113
3. Mahecha, E., Tande, C., Yabwalo, D., Ali, S., and **Byamukama, E**. 2022. Evaluation of essential oils for leaf spotting disease management in wheat. Phytopathology 112:94.

4. Tembreull, A., Bleakley, B.H., Frederickson, A., **Byamukama,** E., Ali, S. and Yabwalo, D. 2022. The effects of residue level and variety susceptibility on fungal disease severity in winter wheat in South Dakota. Phytopathology 112:31
5. Shabbir, Z., Ali, S., Sehgal, S., **Byamukama, E**. and Glover, K.D. 2021. Seedling reaction to leaf rust in spelt wheat (Triticum spelta L.) collection. Phytopathology 111:152.
6. Mahecha, E., Yabwalo, D., Tande, C., Ali, S. and **Byamukama**, E., 2020. Efficacy of alternative oil-based fungicides on the management of Fusarium head blight in spring wheat. National Fusarium Head Blight Forum p.49.
7. Nampijja, M., Bleakley, B., Hamilton, T., and **Byamukama, E**. 2019. Determining epiphytic bacterial diversity of wheat seed as influenced by cultivar and the environment. APS Annual Conference, Cleveland OH. July 29-August 2, 2019.
8. Yabwalo, D. N., Ali, S., Glover, K., Ruden, K., **Byamukama, E**. 2018. Multi-environment assessment of host genetics, artificial inoculation and Prithioconazole +Tebuconazole in *Fusarium graminearum* management studies. USWBSI Conference St Louis MO Dec 2-4, 2018.
9. Mfuka, C., Zhang, X., and **Byamukama, E**. 2018. Characterizing spatiotemporal pattern of white mold in soybeans across South Dakota using remote sensing. North Central American Phytopathological Society Meeting, Fargo, ND. March 12-14.
10. Yabwalo, D. N., Ali, S., Glover, K., Ruden, K., **Byamukama, E**. 2018. Independent impact of metconazole versus tebuconazole+prothioconazole on Fusarium head blight and deoxynivalenol under moderate disease pressure. USWBSI Conference St Louis MO Dec 2-4, 2018.
11. Salgado, J. D., Bergstrom, G., C. Bradley, K. Bowen, **Byamukama, E**., Byrne, A. Collins, C. Cowger, J. Cummings, V. Chapara, M.I. Chilvers, E. De Wolf, R. Dill-Macky, H.M. Darby, P.D. Esker, A. Friskop, J. Halvorson, N. Kleczewski, L.V. Madden, J. Marshall, H. Mehl, M. Nagelkirk, J. Starr, J. Stevens, D. Smith, M. Smith, S. Wegulo, K. Wise, D. Yabwalo, H.M. Young-Kelly and P.A. Paul. 2018. Efficacy of two-treatment fungicide programs for FHB management: a multi-state coordinated project. . USWBSI Conference St Louis MO Dec 2-4, 2018.
12. Mahecha, E., Yabwalo, D., Geppert, R., Tande, C., and **Byamukama, E**. 2018. Evaluation of foliar fungicides for seed-borne pathogen control in soybean seeds. North Central American Phytopathological Society Meeting, Fargo, ND. March 12-14.
13. Yakha, J. K., Kafle, A., **Byamukama, E**., Mathew, F., and Bucking, H. 2018. Plant microbe interactions - A new strategy to reduce soybean cyst nematode infestations. North Central American Phytopathological Society Meeting, Fargo, ND. March 12-14.
14. Basnet, P., and **Byamukama, E**. 2018. Reproduction of *Heterodera glycines* types on weed hosts: field pennycress, henbit and purple deadnettle in South Dakota. North Central American Phytopathological Society Meeting, Fargo, ND. March 12-14.
15. Bugingo, C., Yabwalo, D., Ali, S., and **Byamukama, E**. 2018. Efficacy of biopesticides in the management of tan spot in wheat. North Central American Phytopathological Society Meeting, Fargo, ND. March 12-14.
16. Andersen, J. E., Ali, S., **Byamukama, E**., Yen, Y., and Nepal, M. P. 2018. Multigene-for-gene: Components of pathogen resistance mechanisms in plants. North Central American Phytopathological Society Meeting, Fargo, ND. March 12-14.
17. Nampijja, M., Yabwalo, D., Geppert, R., and Byamukama, E. 2018. Efficacy of

bacteriostats on bacterial leaf streak in spring wheat. North Central American Phytopathological Society Meeting, Fargo, ND. March 12-14.

18. Acharya, K., Tande, C., and **Byamukama, E**. 2017. Reproduction of three *Heterodera glycines* types on commercial varieties with PI88788 as the source of resistance genes under greenhouse conditions. Phytopathology 107: 3-3.
19. Chowdhury, R., Mathew, F., Tande, C., and **Byamukama, E**. 2017. Pathotypes of *Phytophthora sojae* from South Dakota soybean fields. Phytopathology 107: S5.116.
20. Basnet, P., and **Byamukama, E**. 2017. Nematicidal effects of absinth wormwood (*Artemisia absinthium*) against soybean cyst nematode in in-vitro and in-vivo conditions. Phytopathology 107: S5.37.
21. Basnet, P., Clay, S., and **Byamukama, E**. 2017. Evaluation of weed species as alternative hosts of soybean cyst nematode in South Dakota. Phytopathology 107: S5.167.
22. Dhungana, B., Ali, S., **Byamukama, E.,** Krishna, P., and Caffe-Treml, M. 2017. Methodology for screening oat genotypes for Ochratoxin A accumulation in grain inoculated with *Penicilium verrucosum*. National Association of Plant Breeders meeting, UC, Davis, CA. August 7-10.
23. Bugingo, C., Ali, S., Tande, C., and **Byamukama, E**. 2017. Effect of fungicide seed treatments in the protection against tan spot in wheat. Phytopathology 107: S5.168.
24. Salgado, J. D., Paul, P. A., Ames, K. A., Bergstrom, G. C., Bradley, C. A., Byamukama, E., Cummings, J. A., Chapara, V., Chilvers, M., Dill-Macky, R., Friskop, A. J., Gautam, P., Kleczewski, N., Madden, L. V., Milus, E. A., Nagelkirk, M., Ransom, J., Ruden, K., Stevens J., Wegulo, S., Wise, K., and Yabalwo, D. 2017. A multi-state coordinated project to evaluate integrated management strategies for Fusarium head blight and deoxynivalenol in wheat. Phytopathology 107: 6-6.
18. **Byamukama, E.,** Tande, C., and Acharya, K. 2016. Partnering with the state soybean commodity board to promote diagnosis and management of SCN in South Dakota. National Plant Diagnostic Network 4th National Meeting, Washington DC. March 8-12.
19. **Byamukama, E.,** Kleinjan, J., Graham, C., Mueller, N., Kalsbeck, S., Rickertsen, J., Kirby, K., Swan, B., and Berzonsky, B. 2016. Winter wheat grain yield gain from fungicide application is influenced by amount rainfall. Phytopathology 106: S1-S3.
20. Tande, C., Mathew, F., Ali, S., Johnson, P., Ball, J., Tilmon, K., Chirumamila, A., Bachmann, A., Johnson, O. P., Fuller, B., Burrows, R., Varenhorst, A., Patrick, B., and **Byamukama, E**. 2016. Plant disease and pest diagnostics: It is more than you think. National Plant Diagnostic Network 4th National Meeting, Washington DC. March 8-11.
21. **Byamukama, E**., Wegulo, S., Yabwalo, D., and Langham, M. A. C. 2016. Impact of Wheat streak mosaic virus on wheat production in the northern Great Plains region of the United States: A review. 13th International Plant Virus Epidemiology Symposium, Avignon, France. June 12-15.
22. Yabwalo, D., Thomas, J., Glover, K., and **Byamukama, E.** 2016. Screening hard red spring wheat breeding lines for bacterial leaf streak resistance. APS National Meeting, Tampa, FL. August 1-3.
23. Dhungana, B., Caffe-Treml, M., Ali, S., **Byamukama, E**., Krishnan, P., and Kleinjan, J. 2016. Evaluation of Ochratoxin A levels in oat varieties commonly grown in South Dakota. American Society of Plant Biologists Meeting, Brookings, SD. April 12-13.

24. Chowdhury, R., Adhikari, S., **Byamukama, E**., and Subramanian, S. 2016. Developing a host-based quantitative PCR assay to detect *Phytophthora sojae* causing root rot of soybean. NC-APS meeting, St. Paul, MN. June 12-14.
25. Okello, P., Adhikari, A., Varenhorst, A., Osborne, S., **Byamukama, E**., and Mathew, F. 2016. Interaction between Fusarium and soybean cyst nematode on soybean. Phytopathology 106:S4.4.
26. Hernandez-Perez, O., and **Byamukama, E**. 2015. Tillage effect on population densities of *Heterodera glycines* in the United States: A review. CSSA/SSA/ASA Annual Meeting, Minneapolis, MN. November 15-19.
27. Acharya, K., **Byamukama, E**., and Tylka, G. 2015. Determination of *Heterodera glycines* types for improved soybean cyst nematode management in South Dakota. Phytopathology 106: S1.1.
28. Dhungana, B., Caffe-Treml, M., Ali, S., **Byamukama, E.**, Tande, C., Krishnan, P., and Kleinjan, J. 2015. Evaluation of ochratoxin A level in oat varieties commonly grown in South Dakota. CSSA/SSA/ASA Annual Meeting, Minneapolis MN. November 15-19.
29. Yabwalo D., Ruden, K., Ali, S., Geppert, R., Glover, K., Bleakley, B. and **Byamukama, E.** 2015. Spring wheat cultivar performance against Fusarium head blight in natural infestation. USWBSI Forum, St. Louis, MO. December 6-8.
30. Smith, M. J., Friskop, A., Arends, A., Chapara, V., Meyer, S., Schatz, B., Bergstrom, G. C., Cummings, J.A., **Byamukama, E.**, Yabwalo, D., Bleakley, B., Murthy, N., Ruden, K., Bradley, C.A., Ames, K., Pike, J., and Belm, R. 2015. Uniform fungicide trial results for management of FHB and DON, 2015. USWBSI Forum, St. Louis, MO. December 6-8.
31. Murthy, N. K. S., Bleakley, B. H., Yabwalo, D., and **Byamukama, E**. 2015. 2014 and 2015 filed plot trials for biological control of Fusarium head blight in South Dakota using *Bacillus anyloliquefaciens* strains. USWBSI Forum, St. Louis, MO. December 6-8.
32. Chowdhury, R. N., **Byamukama, E.**, and Mathew, F. 2015. *Phytophthora sojae* pathotypes occurring in South Dakota. Ag Outlook Conference, Sioux Falls, SD. December 10.
33. Acharya K., **Byamukama, E.**, and Tylka, G. 2015. Greenhouse assessment of commercial soybean cultivar for resistance against popular *H. glycines* populations of South Dakota. Ag Outlook Conference, Sioux Falls, SD. December 10.
34. Tande, C., Hadi, B., Chowdhury, R., Subramanian, S., and **Byamukama, E**. 2014. Occurrence of sudden death syndrome of soybean caused by *Fusarium virguliforme* in South Dakota. Phytopathology 104: S14.
35. **Byamukama**, **E**., Acharya, K., and Tande, C. 2014. The status of soybean cyst nematode, *Heterodera glycines*, in South Dakota. Phytopathology 104:S15.
36. Murthy, K. S., Bleakley, B. H., **Byamukama, E**., Redenius, G. and Ruden, K. 2014. 2013 and 2014 Field plot trials for biological control of Fusarium head blight in South Dakota using *Bacillus amyloliquefaciens* strains. USWBSI Forum, Manhattan, KS. December 7-9.
37. Ruden, K. R., Redenius, G., Ali S., and **Byamukama, E**. 2014. Evaluation of HRWW and HRSW cultivars for FHB management in South Dakota. USWBSI Forum, Manhattan, KS. December 7-9.
38. Salgado, J. D., Ames, K., Bergstrom, G., Bradley, C., **Byamukama, E.**, Cummings, J., Chilvers, M., Dill-Macky, R., Friskop, A., Gautam, P., Kleczewski, N., Madden, L.V.,

Milus, E., Nagelkirk, M., Ransom, J., Ruden, K., Wegulo, S., Wise, K., and Paul, P.A. 2014. Best FHB management practices: A 2014 multi-state project update. USWBSI Forum, Manhattan, KS. December 7-9.

39. Smith, M. J., Wiersma, J., Friskop, A., Blaine, S., Gautam, P., Bergstrom, G. C., Cummings, J. A., **Byamukama, E**., Ruden, K., Bleakley, B. H., Bradley, C. A., Ames, K., Pike, J., Belm, R., and Milus, G. 2014. Uniform fungicide trial results for management of FHB and DON, 2014. USWBSI Forum, Manhattan, KS. December 7-9.
40. **Byamukama, E.,** Ruden, K., Hall, L., Kirby, K., and Caffe, M. 2014. Evaluation of oat cultivars for crown rust resistance. 1st McFadden Symposium. Brookings, SD. September 23-24.
41. **Byamukama, E**., Tatineni, S., Hein, G., McMechan, J., and Wegulo, S. N. 2013. Incidence of Wheat streak mosaic virus, Triticum mosaic virus, and High Plains virus in wheat curl mites in maturing wheat heads. Phytopathology 103: S143.
42. **Byamukama, E**., Robertson, A. E, and Nutter, F. W., Jr. 2009. Abiotic and biotic risk factors associated with *Bean pod mottle virus* in Iowa. Phytopathology 99:S18.
43. **Byamukama, E**., Robertson, A., and Nutter, F. W., Jr. 2008. Integrating GPS, GIS, and geostatistics for risk assessment of *Bean pod mottle virus* in Iowa. Phytopathology 98:S28.
44. **Byamukama, E.,** Robertson, A. E., Nordman, D., and Nutter, F. W., Jr. 2008. Quantification of the temporal and spatial dynamics of *Bean pod mottle virus* at different spatial scales. Phytopathology 98:S189.
45. **Byamukama, E**., Robertson, A. E., Nordman, D., and Nutter, F.W., Jr. 2008. Within-field spatial and temporal analysis of *Bean pod mottle virus* in Iowa. Phytopathology 98:S29.
46. **Byamukama, E**., Robertson, A. E., and Nutter, F. W., Jr. 2008. Spatial and temporal spread of *Bean pod mottle virus* (BPMV) and relationship between time of BPMV infection and soybean yield. Phytopathology: 98: S202.
47. **Byamukama, E**., Xin, L., Robertson, A. E., and Nutter, F. W., Jr. 2008. *Bean pod mottle virus* spatial pattern and its relationship with bean leaf beetle winter mortality. Phytopathology 98:S202.
48. Nutter, F.W., Jr. and **Byamukama, E**. 2008. Modeling yield loss based on time of virus detection: A geostatistical quadrat-based approach. Phyopathology: 98:S198.
49. Lu X., Robertson A.M., **Byamukama, E**., and Nutter, F.W., Jr. 2008. Comparison of the prevalence and incidence of *Soybean mosaic virus* in Iowa soybean fields during 2005-2007. Phytopathology 98:S94.
50. **Byamukama, E**., Lu X., Robertson, A. E., and Nutter, F. W., Jr. 2007. Temporal and spatial patterns of *Bean pod mottle virus* a the county and field scales in Iowa. Phytopathology: 97:S160.
51. Steadman, J., Robertson, A. E, **Byamukama, E**., and Nutter, F. W., Jr. 2007. Relationship between percent mortality predictions for Bean leaf beetles overwintering populations and incidence of *Bean pod mottle virus*. Phytopathology 97: S110.
52. Lu X., Robertson, A., **Byamukama, E**., and Nutter, F.W., Jr. 2007. The prevalence, incidence and spatial dependence of *Soybean mosaic virus* in Iowa. Phytopathology 97: S68.

53. **Byamukama, E**., Robertson, A. E., and Nutter, F. W., Jr. 2007. Risk of *Bean pod mottle virus* in Iowa in 2005 and 2006 based on spatial distribution. 2nd Annual Symposium on Food Safety and Public Health: Production, Distribution, and Policy. Ames, Iowa. Pg. 30
54. **Byamukama, E**., Robertson, A. E., and Nutter, F. W., Jr. 2007. Use of temporal and spatial data to quantify impact of Bean pod mottle virus on soybean yield. 2nd Annual Symposium on Food Safety and Public Health: Production, Distribution, and Policy. Ames, Iowa. Pg. 31

Selected Conference Proceedings:

1. Marian-Luis J., Ng S. J., Bergstrom, G., Bisosonate, K., Bowen, K., Bradley, C., **Byamukama, E**., Culvers, M., Collins, A., …and Paul, P. E. 2020. Fusarium head blight management coordinated project: Integrated management trials 2019-2020. National Fusarium Head Blight Forum Proceedings, Online, December 2020.
2. Paul, P. E., Ng S. J., Bergstrom, G., Bisosonate, K., Bowen, K., Bradley, C., Byamukama, E., Culvers, M., Collins, A., …and Young-Kelly, H. 2019. Fusarium head blight management coordinated project: Uniform trials 2018-2019. National Fusarium Head Blight Forum Proceedings. Milwaukee, WI December 2019.
3. Taheri, M., Dheeman, S., Hatfield, G., **Byamukama, E**., and Shin, S. Y. 2017. Applied statistical model and remote sensing for management decision support system for soybean. Proceedings of the International Conference on Research and Adaptive and Convergent Systems. Pg. 11-14. Krakow, Poland. September 20-23.
4. Dheeman, S., Kim, D., Jhang, J., **Byamukama, E**., Hatfield, G., and Shin, S. Y. 2017. Identification of the white mold affected soybean fields by using multispectral imageries, spatial autocorrelation and support vector machine. International Conference on Research and Adaptive and Convergent Systems. Pg. 11-14. Krakow, Poland. September 20-23.
5. Bleakley, B. H., Murthy, N. K. S., Kulkarni, P., Yabwalo, D., and **Byamukama, E**. 2016. Field plot trials for biological control of Fusarium head blight on winter wheat in South Dakota using *Bacillus amyloliquefaciens* strains. Proceedings of the 2016 National Fusarium Head Blight Forum. St Louis, MO. December 4-6.
6. Yabwalo, D., Geppert, R., Ali, S., Sehgal, S. and **Byamukama, E**. 2016. Development of Fusarium head blight in hard red winter wheat during the 2016 season in South Dakota. Proceedings of the 2016 National Fusarium Head Blight Forum. St Louis, MO. Dec 4-6.
7. Salgado, J. D., Ames, K., Bergstrom, G., Bradley, C., **Byamukama, E.**, Cummings, J., Chapara, V., Chilvers, M., Dill-Macky, R., Friskop, A., Gautam, P., Kleczewski, N., Madden, L.V., Milus, E., Nagelkirk, M., Ransom, J., Ruden, K., Stevens, J., Wegulo, S., Wise, K., Yabwalo, D. and Paul, P.A. 2015. Robust management programs to minimize losses due to FHB and DON: A multi-state coordinated project. USWBSI Forum, St. Louis, MO. December 2-4.
8. Ali, S., Abdullah, S., Gautam, P., **Byamukama**, **E.,** Rohila, J. S., Eldakak, M., Glover, K., and Gonzalez, J. 2013. Determination of *Fusarium graminearum* chemotypes prevalent on oat, rye heads, and wheat roots in South Dakota. In: S. Canty, A Clark, Y. Salat and D. Van Sanford (Eds.), *Proceedings of the 2013 National Fusarium Head*

Blight Forum (pp 97-98). East Lansing, MI/Lexington, KY: U.S. Wheat & Barley Scab Initiative.

9. Ruden, K.R., Redenius, G. S., Glover, K. D., Kleinjan, J. L., Bleakley B. H., and **Byamukama, E.** 2013. Uniform fungicide performance trials for the suppression of Fusarium head blight in South Dakota in hard red spring wheat 2013. In: S. Canty, A Clark, Y. Salat and D. Van Sanford (Eds.), Proceedings of the 2013 National Fusarium Head Blight Forum (p113-114). East Lansing, MI/Lexington, KY: U.S. Wheat & Barley Scab Initiative.
10. Murthy, N.K.S., Bleakley, B.H., **Byamukama**, **E.,** Redenius, G., and Ruden, K. 2013. Field plot trial for biological control of Fusarium head blight in South Dakota using *Bacillus amyloliquefaciens* strains. In: S. Canty, A. Clark, Y. Salat and D. Van Sanford (Eds.), Proceedings of the 2013 National Fusarium Head Blight Forum (p108). East Lansing, MI/Lexington, KY: U.S. Wheat & Barley Scab Initiative.
11. Bleakley, B.H., Murthy, N. K. S., **Byamukama, E**., Redenius, G., Ruden, K. Bergstrom, G. C., Cummings, J., Yuen, G. Y., and Jochum, C. 2013. Uniform tests of biological control agents for management of FHB and DON. In: S. Canty, A Clark, Y. Salat and D. Van Sanford (Eds.), Proceedings of the 2013 National Fusarium Head Blight Forum (p108). East Lansing, MI/Lexington, KY: U.S. Wheat & Barley Scab Initiative.
12. Robertson, A.E., Nutter, F.W., Jr., **Byamukama, E**., Lu, X. and Stedman, J. 2007. Soybean mosaic virus and Bean pod mottle virus in Iowa: Occurrence, interactions, impact and identification of pre-plant risk factors. Proceedings of the 19th Annual Integrated Crop Management Conference. November 28-29, 2007, Ames IA. Pg 115-122.
13. **Byamukama, E**., Gibson, R. W., Mpembe, I., Kayongo, J., and .Mwanga, R. O. M. 2007. Effect of shade and intercropping in management of sweet potato virus disease in Uganda. In R. Kapinga., R. Kingamkono, M. Msabaha, J. Ndunguru, B. Lemaga, and G. Tusiime (Eds).Proceedings of the 13th International Society for Tropical Root Crops (ISTRC). Tropical root and tuber crops: opportunities for poverty alleviation and sustainable livelihoods in the developing world. November 10-14, 2003, Arusha, Tanzania. Pp 233-239.
14. **Byamukama, E**., Gibson, R.W., Mpembe, I., Kayongo, J. and Mwanga, R. O. M. 2007. Evaluation of orange-fleshed sweetpotato varieties for resistance to sweetpotato virus disease. In R. Kapinga., R. Kingamkono, M. Msabaha, J. Ndunguru, B. Lemaga, and G. Tusiime (Eds). Proceedings of the 13th International Society for Tropical Root Crops (ISTRC). Tropical root and tuber crops: opportunities for poverty alleviation and sustainable livelihoods in the developing world. November 10-14, 2003, Arusha, Tanzania. Pp 355-358.

Book and Production Manual Chapters

1. Smith, D., Wise, K., Freije, A., Sisson, A., Tenuta, A., Friskop, A., **Byamukama, E**., Marshall, J. M., Burrows, M., and Mueller, D. 2021. A Farmer's Guide to Wheat Diseases. American Phytopathological Society Press. ISBN:978-0-89054-652-9
2. **Byamukama, E.**, Hernandez-Perez, O., and Yabwalo, D. 2021. Plant disease threats to food security in the Northern Plains of North America. A Review. J. Agronomy 113: 4473-4483

3. Rakotondrafara, A. M., **Byamukama, E**. and Plumb, R. T. 2017. Virus Diseases of Cereals. Pgs. 1-12. In: eLS. John Wiley & Sons, Ltd: Chichester. DOI: 10.1002/9780470015902.a0000762.pub3
4. Clay, D. E., Kitchen, N. R., **Byamukama,** E. and Bruggeman, S. 2017. Calculations Supporting Management Zones. Pgs. 122-135. In: Clay, D, E., Clay, S. and Bruggeman S (eds.). ASA-CSSA-SSSA.
5. **Byamukama, E.** and Strunk, C. 2016. Managing Corn Diseases with Seed Treatments. *In* Clay, D.E., C.G. Carlson, S.A. Clay, and E. Byamukama (eds). iGrow Corn: Best Management Practices. South Dakota State University.
6. **Byamukama, E.** and Strunk, C. 2016. Foliar Fungicides Use in Corn. *In* Clay, D.E., C.G. Carlson, S.A. Clay, and E. Byamukama (eds). iGrow Corn: Best Management Practices. South Dakota State University.
7. Strunk, C. and **Byamukama, E.** 2016. Corn Diseases in South Dakota and their Management. *In* Clay, D.E., C.G. Carlson, S.A. Clay, and E. Byamukama (eds). iGrow Corn: Best Management Practices. South Dakota State University.
8. **Byamukama, E.**, and Strunk, C. 2016. Scouting Corn for Diseases. *In* Clay, D. E Carlson, C. G., Clay, S. A., and Byamukama, E. (eds). iGrow Corn: Best Management Practices. South Dakota State University.

Invited Presentations

1. Small Grains Disease Management for Maximum Return on Investment. Practical Farmers of Iowa. Ames, IA. January 18, 2019.
2. In-season Management Decisions for Small Grains. Webinar hosted by Practical Farmers of Iowa. April 5, 2019.
3. Small Grains Diseases Update. Ag Horizon Conference, Pierre, SD. November 28, 2018
4. Major sunflower diseases and their management in the United States: A review. International Sunflower Development Forum, Inner Mongolia, China. 8/8/2018-8/10/2018.
5. Disease management and precision: Improving fungicide efficacy and yield. Webinar, United Soybean Board Seminar Series. 3/19/2018.
6. Plants get sick too: An intro to plant disease epidemiology. Augustana University, Sioux Falls, SD. 4/11/2018.
7. Pathogen characterization for improved management of soybean cyst nematode and Phytophthora root and stem rot. Department of Botany and Plant Pathology Purdue University, IN. 3/21/2018.
8. Efficacy of fungicide application on crown rust management and quality improvement. Oat Rust Initiative Symposium, Cornell University, NY. 11/15/2017.
9. White mold management, Soy100 Brookings, SD. 3/17/2017.
10. Wheat streak mosaic disease of wheat in the Great Plains: A review. Great Plains Plant Diagnostic Network, Manhattan, KS. 3/2/2016.
11. Timely deployment of strategies and tactics for effective wheat disease management. Ag Horizons, Pierre, SD. 12/2/2015.
12. Soybean and diseases update with emphasis on soybean cyst nematode. Legend Seeds Field Day. Lake Preston, SD. 9/15/2015.
13. Achieving high yield by managing plant diseases effectively. Town hall meeting, Farmers of North America Focus Group. Brookings, SD. 6/15/2015.

14. Disease patterns and implications for precision agriculture. Precision Agriculture Conference, Sioux Falls, SD. 3/18/2015.
15. Old and new plant diseases in South Dakota: An update. South Dakota Agribusiness Association Conference. Sioux Falls Convention Center, SD. 12/17/2014.
16. Weather patterns: Implications for wheat disease management. Ag Horizons, Pierre, SD. 12/2/2014.
17. Integrating GPS, GIS, and geostatistics in plant disease management. Geospatial Sciences Center of Excellence Seminar Series, South Dakota State University, Brookings, SD. 11/17/2014.
18. Plant disease patterns: Implication for management decisions. Department of Plant Pathology and Microbiology, Iowa State University. Ames, IA. 11/6/2014.
19. Achieving 100 bu. soybean yield: Role of Plant Disease Resistance. Soy100 Conference, South Dakota State University, Brookings, SD. 3/12/2014.

Selected Peer Reviewed Extension Publications (out of 47)

1. **Byamukama, E**., Strunk, C., and Tande, C. 2019. Bacterial leaf streak of corn. A new corn disease in South Dakota. South Dakota State University Extension Publication #P-00045.
2. **Byamukama, E**., Strunk, C., and Tande, C. and Mathew, F. 2019. Frogeye leaf spot of soybean. South Dakota State University Extension Publication #P-00121.
3. **Byamukama, E**., Ali, S., Strunk, C., Hopkins, R., Braun N., and Mathew, F. 2019. Fungicide resistance: Risks and management. South Dakota State University Extension Publication #P-00048.
4. **Byamukama, E**., Yabwalo, D. and Strunk C. 2019. Fungicides in corn. 2019 South Dakota Pest Guide-Corn. South Dakota State University Extension Publication #P-00009.
5. Yabwalo, D., Geppert, R., Tande, C., and **Byamukama, E**. 2018. Soybean fungal and nematode management trials summaries 2017. iGrow Publication # 03-7001-2018
6. **Byamukama, E**., Yabwalo, D. and Strunk C. 2018. Fungicides in wheat. 2018 South Dakota Pest Guide-Wheat. iGrow Publication # 03-3044-2017
7. **Byamukama, E**., Strunk, C., and Ali, S. 2018. Wheat diseases identification pocket guide. iGrow Publication # 03-2000-2018.
8. **Byamukama, E.,** Yabwalo, D., and Strunk, C. 2018. Alfalfa and oilseeds fungicide guide. 2018 South Dakota Pest Management Guide. iGrow Publication #03-3043-2017.
9. Bugingo, C. **Byamukama, E**. and Ali, S. 2018. Tan spot of wheat. iGrow Publication # 03-2008-2018
10. **Byamukama, E**., Strunk, C., and Ali, S. 2018. Wheat diseases identification pocket guide. iGrow Publication # 03-2000-2018.
11. Yabwalo, D., Geppert, R., Tande, C., and **Byamukama, E**. 2018. Soybean fungal and nematode management trials summaries 2017. iGrow Publication # 03-7001-2018.
12. **Byamukama, E**., Ali, S., Caffe-Treml, M., and Strunk, C. 2017. Crown rust of oats. Fact sheet. iGrow Publication # 03-5002-2017
13. **Byamukama, E.,** Tande, C. and Mathew, F. 2017. White mold (Sclerotinia stem rot) of soybean. Fact sheet. iGrow Publication #03-2007-2016
14. **Byamukama, E**., Strunk, C., and Tande, C. 2016. Goss's bacterial wilt and leaf blight of corn. Fact sheet. iGrow Publication # 03-2003-2016

Selected Non-peer Reviewed Extension Publications (out of 205 extension publications)

1. **Byamukama, E**., Ali, S., Strunk, C., and Yabwalo, D. 2019. Diagnosing early diseases in winter wheat. SDSU Extension Crops Newsletter and online.
2. **Byamukama, E**., Caffe, M., Ali, S., Kleinjan, J. 2019. Oats crown rust inoculum abundant this year. SDSU Extension Crops Newsletter and online.
3. **Byamukama, E**., Ali, S., and Edwards, L. 2019. Use the scab and leaf disease forecasting tools to decide on fungicide application in wheat. SDSU Extension Crops Newsletter and online.
4. **Byamukama, E**., Sehgal, S. and Ali, S. 2019. Stripe rust and leaf rust developing in winter wheat. SDSU Extension Crops Newsletter and online.
5. **Byamukama, E**., Strunk, C., and Ali, S. 2019. Winter wheat disease update: Leaf diseases and FHB on the increase. SDSU Extension Crops Newsletter and online.
6. **Byamukama, E**., Ali, S., and Caffe, M. 2019. Bacterial blight developing in oats. SDSU Extension Crops Newsletter and online.
7. **Byamukama, E**., Ali, S., and Strunk, C. 2019. Diseases in winter wheat imply high inoculum for spring wheat. SDSU Extension Crops Newsletter and online.
8. **Byamukama, E**., and Varenhorst, A. 2019. Alfalfa mosaic developing in alfalfa fields. SDSU Extension Crops Newsletter and online.
9. **Byamukama, E**. and Struck C. 2019. Fungicide seed treatment considerations for 2019. SDSU Extension Crops Newsletter and online.
10. **Byamukama, E.,** and Tande, C. 2018. Has your soil been tested for SCN? What is your latest number? iGrow online and Crops Newsletter article published May 2018.
11. **Byamukama, E**., and Strunk, C. 2018. Stalk rots developing in corn. SDSU Extension Crops Newsletter and online.
12. **Byamukama, E**., Strunk, C., and Mathew, F. 2018. Early senescence or stem canker killing soybean plants? SDSU Extension Crops Newsletter and online.
13. **Byamukama, E**., and Strunk C. 2018. Storage mold: Precautions to avoid grain spoilage during storage. SDSU Extension Crops Newsletter and online.
14. **Byamukama, E**., Langham, M., Strunk, C., and Tande, C. 2017. Brome mosaic found in corn. iGrow online and Crops Newsletter article published September 2017.
15. **Byamukama, E**., and Strunk, C. 2017. White mold starting to develop. iGrow online and Crops Newsletter article published September 2017.
16. **Byamukama, E**., Strunk, C., and Tande, C. 2017. Southern rust confirmed in several counties. iGrow online and Crops Newsletter article published September 2017.
17. **Byamukama, E**., Strunk, C., and Tande, C. 2017. Brown stem rot and frogeye leaf spot developing in soybeans. iGrow online and Crops Newsletter article published September 2017.
18. **Byamukama, E**., Strunk, C., Tande, C. and Mathew, F. 2017. Sudden death syndrome of soybean confirmed in South Dakota. iGrow online and Crops Newsletter article published September 2017.
19. **Byamukama, E**., and Tande, C. 2017. Bacterial leaf streak detected in South Dakota corn. iGrow online and Crops Newsletter article published September 2017.

20. **Byamukama, E**., Strunk, C., Tande, C., Langham, M. A. C., and Varenhorst, A. 2017. Alfalfa mosaic virus detected in soybeans. iGrow online and Crops Newsletter article published September 2017.
21. **Byamukama, E**., Strunk, C., and Tande, C. 2017. Soybeans dropping leaves too early in patches? Could be charcoal rot. iGrow online and Crops Newsletter article published September 2017.

Selected Grants to Support Research for Extension and Outreach (out of $ 2,269,054 Spending Authority in the 6 years).

1. **Byamukama, E.,** Paul, P. E., Burrows, M., DeWolf, E. 2020. Developing a wheat disease prediction tool. **$100,000**. Funded by USDA-ARS under the National Plant Disease Prediction Tool Initiative. 2021-2022.
2. **Byamukama, E.,** Bleakly, B., Ali., S. and Friskop, A. 2020. Integrated management of bacterial leaf streak in spring wheat. **$299,982**. 2021-2023. Funded by USDA-NIFA.
3. **Byamukama, E.,** and Ali, S. 2019. Efficacy of biofungicides in controlling crown rust of oats **$136,788**. Funded by Terramera. 2019-2022
4. Zhang, X. and **Byamukama, E**. 2019. Development of a web-enabled geospatial tool for real-rime monitoring of crop progress and condition. $**300,000**. Funded by USDA-NIFA (spending authority: $40,000).
5. **Byamukama, E**., and Marzano, S. 2018. Investigating alternative nematicides and continued grower education for improved soybean cyst nematode management in South Dakota. **$77,951.** Funded by the South Dakota Soybean Research and Promotion Council.
6. Ali, S. and **Byamukama, E**. 2018. Sustainable disease management for profitable wheat production **$50,000** (Spending authority $20,000). Funded by the South Dakota Wheat Commission.
7. **Byamukama, E.,** and Tande, C. 2018. Monitoring and surveillance of plant diseases in South Dakota. **$25,000**. Funded by USDA-NIFA/NPDN.
8. **Byamukama, E**., and Ali, S. 2018. Fungicide efficacy in Fusarium head blight and DON management for hard red winter and spring wheat in South Dakota. **$61,049**. Funded by USDA-NIFA through the United States Wheat and Barley Scab Initiative. 2020-2022
9. **Byamukama, E**., Tande, C., Johnson, P., and Mathew F. 2018. Continued monitoring, grower education and alternative hosts determination for effective management of the soybean cyst nematode, *Heterodera glycines*. **$90,951.** Funded by the South Dakota Soybean Research and Promotion Council. 2018-2021
10. Varenhorst A., Bachmann, A., Johnson, P., and **Byamukama, E**. 2017. Extension implementation program at SDSU. **$358,000** (Spending authority: $55,000). Funded by USDA-NIFA. 2017-2021