

AD-421 Progress Report Checklist
All Projects
10/14/2020

| Accession Number | Project Number | Title | Department | Project Director | Funding Source | Project Start Date | Project End Date | Last Progress Report FY | Reporting Period of Performance | Project Status |
|------------------|----------------|---|------------------------|---------------------|-------------------|--------------------|------------------|-------------------------|---------------------------------|----------------|
| 1011683 | KY004051 | Food Safety Standards and Certification: Implications for Producers and Certifiers | Agriculture Economics | Zheng, Yuqing | HATCH | 12/21/2016 | 09/30/2021 | 2019 | 2019-10-01 - 2020-09-30 | Active |
| 1012994 | KY004052 | Price analysis and Dynamics of Price Adjustment along the Food Supply Chain in an Environment of Food Safety Incidents and Highly Integrated Monopolistically Competitive Agriculture and Food Industries | Agriculture Economics | Saghian, S | HATCH | 06/09/2017 | 09/30/2021 | 2019 | 2019-10-01 - 2020-09-30 | Active |
| 1014277 | KY004053 | Equine Markets and Economic Decision Making in the Equine Industry | Agriculture Economics | Stowe, C | HATCH | 10/19/2017 | 09/30/2022 | 2019 | 2019-10-01 - 2020-09-30 | Active |
| 1017987 | KY004055 | Economic Analysis of Local Food Issues | Agriculture Economics | Kusunose, Yoko | HATCH | 10/12/2018 | 09/30/2023 | 2019 | 2019-10-01 - 2020-09-30 | Active |
| 1022231 | KY004057 | Management and Policy Challenges in a Water-Scarce World | Agriculture Economics | Buck, Steven | HATCH/MULTI-STATE | 03/02/2020 | 09/30/2024 | | 2020-03-02 - 2020-09-30 | Active |
| 1017448 | KYKY004045 | U.S. Agricultural Trade and Policy in a Dynamic Global Market Environment | Agriculture Economics | Reed, M | HATCH/MULTI-STATE | 10/01/2018 | 09/30/2023 | | 2018-10-01 - 2019-09-30 | Active |
| 1010352 | KY007095 | Effects of selenium in free-choice mineral-vitamin mixes on genes, proteins and metabolites of beef cattle consuming endophyte-infected tall fescue | Animal & Food Sciences | Matthews, James | HATCH | 10/01/2016 | 09/30/2021 | 2019 | 2019-10-01 - 2020-09-30 | Active |
| 1011211 | KY007096 | National Animal Nutrition Program | Animal & Food Sciences | Lindemann, M | HATCH/MULTI-STATE | 10/11/2016 | 09/30/2020 | 2018 | 2018-10-01 - 2019-09-30 | Active |
| 1014747 | KY007097 | Enhancing the Competitiveness and Value of U.S. Beef | Animal & Food Sciences | Suman, Surendranath | HATCH/MULTI-STATE | 11/22/2017 | 09/30/2022 | 2019 | 2019-10-01 - 2020-09-30 | Active |
| 1015132 | KY007098 | Influence of ovary, uterus, and embryo on pregnancy success in ruminants | Animal & Food Sciences | Bridges, Phillip | HATCH/MULTI-STATE | 01/10/2018 | 09/30/2022 | 2019 | 2019-10-01 - 2020-09-30 | Active |
| 1016084 | KY007100 | Applied Animal Behavior and Welfare | Animal & Food Sciences | Costa, Joao | HATCH/MULTI-STATE | 04/30/2018 | 09/30/2021 | 2019 | 2019-10-01 - 2020-09-30 | Active |
| 1018136 | KY007101 | Metabolic Relationships in Supply of Nutrients for Lactating Cows | Animal & Food Sciences | McLeod, Kyle | HATCH/MULTI-STATE | 10/30/2018 | 09/30/2023 | 2019 | 2019-10-01 - 2020-09-30 | Active |
| 1018404 | KY007102 | Factors affecting mineral concentrations in pasture herbage consumed by grazing animals | Animal & Food Sciences | Lawrence, L | HATCH | 11/27/2018 | 09/30/2023 | 2019 | 2019-10-01 - 2020-09-30 | Active |
| 1018385 | KY007103 | Nutritional Systems for Swine to Increase Reproductive Efficiency | Animal & Food Sciences | Lindemann, M | HATCH/MULTI-STATE | 02/05/2019 | 09/30/2023 | 2019 | 2019-10-01 - 2020-09-30 | Active |
| 1020779 | KY007104 | Environmental Pollutants, Nutrition, and Multi-Organ Cardiovascular Risk | Animal & Food Sciences | Hennig, B | HATCH | 12/04/2019 | 09/30/2024 | | 2019-12-04 - 2020-09-30 | Active |
| 1020733 | KY007105 | Mucosal carbohydrases are limiting to small intestinal starch assimilation | Animal & Food Sciences | Harmon, D | HATCH | 10/01/2019 | 09/30/2024 | | 2019-10-01 - 2020-09-30 | Active |
| 1020731 | KY007106 | Development of New Luminescence Methods to Measure Hydroperoxides in Foods | Animal & Food Sciences | Boatright, William | HATCH | 01/18/2020 | 09/30/2024 | | 2020-01-18 - 2020-09-30 | Active |
| 1020736 | KY007107 | Functional Properties of Food Proteins Modified by Phytophenolic Compounds | Animal & Food Sciences | Xiong, Youling | HATCH | 01/18/2020 | 09/30/2024 | | 2020-01-18 - 2020-09-30 | Active |

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| 1021826 | KY007108 | Potential of red clover phenolic compounds to increase nitrogen utilization and weight gain by growing lambs | Animal & Food Sciences | Ely, D | HATCH | 12/09/2019 | 09/30/2024 | | 2019-12-09 - 2020-09-30 | Active |
| 1021234 | KY007109 | Regulating the mTOR signaling pathway in equine skeletal muscle | Animal & Food Sciences | Urschel, Kristine | HATCH | 10/01/2019 | 09/30/2024 | | 2019-10-01 - 2020-09-30 | Active |
| 1021461 | KY007110 | Relationships among dietary factors, measures of temperament, and physiological responses of economic importance in growing and finishing beef cattle. | Animal & Food Sciences | Vanzant, Eric | HATCH | 02/12/2020 | 09/30/2024 | | 2020-02-12 - 2020-09-30 | Active |
| 1021462 | KY007111 | Enhancing Poultry Production Systems through Emerging Technologies and Husbandry Practices | Animal & Food Sciences | Adedokun, Sunday | HATCH/MULTI-STATE | 11/22/2019 | 09/30/2024 | | 2019-11-22 - 2020-09-30 | Active |
| 1021937 | KY007112 | Development and Application of Nuclear Magnetic Resonance-Based Structural Profiling Methods for Arabinoxylans in Foods and Feeds | Animal & Food Sciences | Schendel, Rachel | HATCH | 01/23/2020 | 09/30/2024 | | 2020-01-23 - 2020-09-30 | Active |
| 1017985 | KYS1077 | Enhancing Microbial Food Safety by Risk Analysis | Animal & Food Sciences | Newman, M | HATCH/MULTI-STATE | 10/05/2018 | 09/30/2023 | | 2018-10-05 - 2019-09-30 | Active |
| 1007893 | KY005042 | Engineering for food safety and quality | Biosystems & Agricultural Engineering | Adedeji, Akinbode | HATCH/MULTI-STATE | 10/01/2015 | 09/30/2020 | 2019 | 2019-10-01 - 2020-09-30 | Active |
| 1018137 | KY005043 | Marketing and Delivery of Quality Grains and BioProcess Coproducts | Biosystems & Agricultural Engineering | Montross, M | HATCH/MULTI-STATE | 10/22/2018 | 09/30/2023 | 2019 | 2019-10-01 - 2020-09-30 | Active |
| 1015710 | KY005046 | Research and Extension for Unmanned Aircraft Systems (UAS) Applications in U.S. Agriculture and Natural Resources | Biosystems & Agricultural Engineering | Sama, Michael | HATCH/MULTI-STATE | 12/08/2018 | 09/30/2021 | 2019 | 2019-10-01 - 2020-09-30 | Active |
| 1019706 | KY005047 | Integrated Systems Research and Development in Automation and Sensors for Sustainability of Specialty Crops | Biosystems & Agricultural Engineering | Dvorak, Joseph | HATCH/MULTI-STATE | 07/26/2019 | 09/30/2023 | 2019 | 2019-10-01 - 2020-09-30 | Active |
| 1017109 | KYHS1224832 | Impacts of Stress Factors on Performance, Health, and Well-Being of Farm Animals (from W2173) | Biosystems & Agricultural Engineering | Hayes, Morgan | HATCH/MULTI-STATE | 08/02/2018 | 09/30/2021 | 2019 | 2019-10-01 - 2020-09-30 | Active |
| 1018315 | KYKY005045 | The Science and Engineering for a Biobased Industry and Economy | Biosystems & Agricultural Engineering | Shi, Jian | HATCH/MULTI-STATE | 11/16/2018 | 09/30/2023 | 2019 | 2019-10-01 - 2020-09-30 | Active |
| 1012499 | KY013012 | Understanding rural economic dynamics in Appalachian Kentucky: rural livelihood strategies and access to productive resources | Community & Leadership Development | Rignall, Karen | HATCH | 05/09/2017 | 02/07/2022 | 2018 | 2018-10-01 - 2019-09-30 | Active |
| 1015615 | KY013013 | Renewing an Agriculture of the Middle: Value Chain Design, Policy Approaches, Environmental and Social Impacts | Community & Leadership Development | Tanaka, K | HATCH/MULTI-STATE | 03/15/2018 | 09/22/2022 | 2019 | 2019-10-01 - 2020-09-30 | Active |
| 1021614 | KY013016 | Individual, family, and community factors associated with resilience in diverse, rural, low-income families | Community & Leadership Development | Dyk, P | HATCH/MULTI-STATE | 11/01/2019 | 09/30/2024 | | 2019-11-01 - 2020-09-30 | Active |
| 228133 | KY013038 | Agriculture, Food, and Natural Resource Applied Behavioral Sciences (formerly Ag Ed Research) | Community & Leadership Development | Hains, B | HATCH/MULTI-STATE | 01/03/2012 | 09/30/2020 | 2018 | 2018-10-01 - 2019-09-30 | Active |

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| 1020729 | KY 008086 | Mechanisms of RNA interference in insect pests | Entomology | Palli, Subba | HATCH | 11/20/2019 | 09/30/2024 | | 2019-11-20 - 2020-09-30 | Active |
| 1006700 | KY008072 | Management of Pests and Conservation of Beneficial Insects in Urban Landscapes | Entomology | Potter, D | HATCH | 10/01/2015 | 09/30/2020 | 2019 | 2019-10-01 - 2020-09-30 | Active |
| 1008480 | KY008074 | Comparative ecological and phenological studies of predatory lady beetles (Coleoptera:Coccinellidae) | Entomology | Obrycki, John | HATCH | 11/18/2015 | 09/30/2020 | 2019 | 2019-10-01 - 2020-09-30 | Active |
| 1010996 | KY008075 | Integrative research on the overwintering biology of insects | Entomology | Teets, Nicholas | HATCH | 10/29/2016 | 09/30/2021 | 2019 | 2019-10-01 - 2020-09-30 | Active |
| 1012993 | KY008077 | Mechanisms of aggression and health resilience in the honey bee <i>Apis mellifera</i> | Entomology | Rittschof, Clare | HATCH | 06/02/2017 | 09/30/2021 | 2019 | 2019-10-01 - 2020-09-30 | Active |
| 1014521 | KY008078 | Integrative Management Actions Against Current and Potential Invasive Arthropod Pests of Field Crops in Kentucky | Entomology | Villanueva, Raul | HATCH | 11/28/2017 | 09/30/2022 | | 2017-11-28 - 2018-09-30 | Active |
| 1018138 | KY008079 | The impact of local and landscape farmland diversification on the services and dis-services of biodiversity | Entomology | Gonthier, David | HATCH | 10/31/2018 | 09/30/2023 | 2019 | 2019-10-01 - 2020-09-30 | Active |
| 1018145 | KY008080 | Developing gene silencing technologies for suppression of exotic wood-boring Buprestidae | Entomology | Rieske-Kinney, L | MCINTIRE-STENNIS | 11/28/2018 | 09/30/2023 | 2019 | 2019-10-01 - 2020-09-30 | Active |
| 1017835 | KY008081 | Influences of dispersal and environmental stress on life history and behavior of a stored products pest | Entomology | Fox, C | HATCH | 11/01/2018 | 09/30/2023 | 2019 | 2019-10-01 - 2020-09-30 | Active |
| 1018530 | KY008082 | Biological Improvement of Chestnut through Technologies that Address Management of the Species and its Pathogens and Pests | Entomology | Rieske-Kinney, L | HATCH/MULTI-STATE | 02/12/2019 | 09/30/2023 | 2019 | 2019-10-01 - 2020-09-30 | Active |
| 1020916 | KY008083 | EXPLOITING THE SENSE OF SMELL FOR THE DEVELOPMENT OF ATTRACTANTS AND REPELLENTS AGAINST ARTHROPOD VECTORS OF DISEASE | Entomology | Syed, Zainulabeuddin | HATCH | 11/21/2019 | 09/30/2024 | | 2019-11-21 - 2020-09-30 | Active |
| 1021145 | KY008084 | Improving Soybean Arthropod Pest Management in the U.S. | Entomology | Villanueva, Raul | HATCH/MULTI-STATE | 11/20/2019 | 09/30/2023 | | 2019-11-20 - 2020-09-30 | Active |
| 1020740 | KY008087 | Endosymbiont interactions and emergent phenotypes in arthropods | Entomology | White, Jennifer | HATCH | 11/12/2019 | 09/30/2024 | | 2019-11-12 - 2020-09-30 | Active |
| 1020738 | KY008088 | Pheromone-mediated behavior in bed bugs | Entomology | Haynes, K | HATCH | 11/21/2019 | 09/30/2024 | | 2019-11-21 - 2020-09-30 | Active |
| 1021146 | KY008089 | Biology, Ecology & Management of Emerging Disease Vectors | Entomology | Palli, Subba | HATCH/MULTI-STATE | 10/01/2019 | 09/30/2024 | | 2019-10-01 - 2020-09-30 | Active |
| 1011623 | KY009032 | The oak-fire hypothesis: using fire to manage oak forest ecosystems in the central and southern Appalachians | Forestry | Arthur, M | MCINTIRE-STENNIS | 12/20/2016 | 09/30/2021 | 2019 | 2019-10-01 - 2020-09-30 | Active |
| 1014537 | KY009033 | Landscape-scale evaluation of forest health and resilience to multi-agent disturbances in eastern Kentucky's Appalachian forest with an integration of remote sensing and ecological models | Forestry | Yang, Jian | MCINTIRE-STENNIS | 01/11/2018 | 09/30/2022 | 2019 | 2019-10-01 - 2020-09-30 | Active |

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| 1014910 | KY009034 | Advancing population parameter estimation to inform conservation of snakes under threat from an emerging fungal disease | Forestry | Price, Steven | MCINTIRE-STENNIS | 01/11/2018 | 11/19/2022 | 2019 | 2019-10-01 - 2020-09-30 | Active |
| 1017834 | KY009035 | Recent and long-term shifts in the statewide distribution and abundance of forest bats in Kentucky: current status and implications from climate change, white-nose syndrome and wind power development | Forestry | Lacki, M | MCINTIRE-STENNIS | 10/17/2018 | 09/30/2022 | 2019 | 2019-10-01 - 2020-09-30 | Active |
| 1018771 | KY009036 | Valuation of Forest Ecosystem Services and their Integration in Economic Accounts for Policy Analysis in Central Hardwood Region: A Case Study of Kentucky | Forestry | Ochudho, Thomas | MCINTIRE-STENNIS | 02/07/2019 | 09/30/2023 | 2019 | 2019-10-01 - 2020-09-30 | Active |
| 1018324 | KY009037 | INFORMING WHITE OAK SILVICULTURAL PRACTICE THROUGH STUDY OF GROWTH DYNAMICS IN EARLY-, MID-, AND LATE-ROTATION STANDS | Forestry | Lhotka, J | MCINTIRE-STENNIS | 11/28/2018 | 09/30/2022 | 2019 | 2019-10-01 - 2020-09-30 | Active |
| 1021105 | KY009038 | Use of Long-Term Data to Determine Climate and Land-Use Influences on Water Quality and Quantity in the Central Appalachian Region of the U.S. | Forestry | Barton, C | MCINTIRE-STENNIS | 10/01/2019 | 09/30/2024 | | 2019-10-01 - 2020-09-30 | Active |
| 1021936 | KY009039 | Autecology and population dynamics of elk in fragmented forests of Appalachia | Forestry | Cox, John | MCINTIRE-STENNIS | 12/18/2019 | 09/30/2024 | | 2019-12-18 - 2020-09-30 | Active |
| 1011520 | KY0STRINGER2 | Improving environmental and economic benefits from forest and wildlife resources in Kentucky. | Forestry | Stringer, J | RENEWABLE RESOURCES EXTENSION | 11/03/2016 | 09/29/2021 | 2019 | 2019-10-01 - 2020-09-30 | Active |
| 1007198 | KY011043 | Sustainable Practices, Economic Contributions, Consumer Behavior, and Labor Management in the U.S. Environmental Horticulture Industry | Horticulture | Ingram, D | HATCH/MULTI-STATE | 10/01/2015 | 09/30/2020 | 2019 | 2019-10-01 - 2020-09-30 | Active |
| 1012719 | KY011044 | Introgression of zingiberene and type IV trichome density from wild, insect-resistant Solanum habrochaites accession LA2329 into cultivated tomato, S. lycopersicum | Horticulture | Snyder, John | HATCH | 04/14/2017 | 09/30/2021 | 2019 | 2019-10-01 - 2020-09-30 | Active |
| 1013410 | KY011045 | Evaluating conservation practices for ecological intensification of organic high tunnel production systems | Horticulture | Jacobsen, Krista | HATCH | 10/01/2017 | 09/30/2022 | 2018 | 2018-10-01 - 2019-09-30 | Active |
| 1017450 | KY011046 | Improving Economic and Environmental Sustainability in Tree-Fruit Production Through Changes in Rootstock Use | Horticulture | Archbold, D | HATCH/MULTI-STATE | 09/04/2018 | 09/30/2022 | 2019 | 2019-10-01 - 2020-09-30 | Active |
| 1019088 | KY011047 | IDENTIFICATION AND ANALYSIS OF PROTEINS INTERACTING WITH LATE EMBRYOGENESIS ABUNDANT PROTEINS | Horticulture | Downie, Allan | HATCH | 03/22/2019 | 09/30/2023 | 2019 | 2019-10-01 - 2020-09-30 | Active |

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| 1020295 | KY011048 | SORBITOL AND RIBITOL BIOSYNTHESIS AND METABOLISM DURING ABIOTIC STRESS IN TOMATO (<i>Solanum lycopersicum</i> L.) | Horticulture | Archbold, D | HATCH | 07/30/2019 | 09/30/2023 | 2019 | 2019-10-01 - 2020-09-30 | Active |
| 1021069 | KY011049 | Alternative management methods to enhance sustainability of Kentucky vegetable production systems | Horticulture | Rudolph, Rachel | HATCH | 11/21/2019 | 09/30/2024 | | 2019-11-21 - 2020-09-30 | Active |
| 1020852 | KY011050 | Harnessing epigenetic memory stress for the development of locally adapted cultivars in perennial crops | Horticulture | Rodriguez Lopez, Carlos | HATCH | 10/10/2019 | 09/30/2024 | | 2019-10-10 - 2020-09-30 | Active |
| 1022286 | KY011051 | Advancing plant biotechnology for the Kentucky bioeconomy | Horticulture | Debolt, S | HATCH | 02/24/2020 | 09/30/2024 | | 2020-02-24 - 2020-09-30 | Active |
| 1021610 | KY011052 | Environmental and Genetic Determinants of Seed Quality and Performance | Horticulture | Geneve, R | HATCH/MULTI-STATE | 12/12/2019 | 09/30/2024 | | 2019-12-12 - 2020-09-30 | Active |
| 1012286 | KY010014 | Examining the impact of in-store marketing and product placement to reduce unhealthy purchases among low-income caregivers | Human Environmental Sciences | Gustafson, Alison | HATCH | 03/31/2017 | 09/30/2021 | 2019 | 2019-10-01 - 2020-09-30 | Active |
| 1009015 | KY006094 | Onsite Wastewater Treatment Systems: Assessing the Impact of Climate Variability and Climate Change | Plant and Soil Sciences | Lee, Brad | HATCH/MULTI-STATE | 12/15/2015 | 09/30/2020 | 2019 | 2019-10-01 - 2020-09-30 | Active |
| 1009329 | KY006095 | The cytokinin signaling mechanism and plant growth | Plant and Soil Sciences | Smalle, Jan | HATCH | 07/01/2016 | 09/30/2020 | 2019 | 2019-10-01 - 2020-09-30 | Active |
| 1010357 | KY006096 | Effects of fungal endophyte symbiosis on tall fescue pasture nutrient dynamics and resilience to climate change | Plant and Soil Sciences | McCulley, Rebecca | HATCH | 10/01/2016 | 09/20/2021 | 2019 | 2019-10-01 - 2020-09-30 | Active |
| 1010358 | KY006097 | Effect of coatings on the behavior of manufactured zinc oxide nanoparticles in soil and zinc bioavailability to plants | Plant and Soil Sciences | Unrine, Jason | HATCH | 10/01/2016 | 09/30/2021 | 2019 | 2019-10-01 - 2020-09-30 | Active |
| 1010736 | KY006098 | Enhancing Wheat Breeding Through Selection for Resilience to Climate Change | Plant and Soil Sciences | Van Sanford, David | HATCH | 10/01/2016 | 09/30/2021 | 2019 | 2019-10-01 - 2020-09-30 | Active |
| 1011341 | KY006099 | Evaluation of soybean varieties for use in Kentucky | Plant and Soil Sciences | Pfeiffer, T | HATCH | 10/28/2016 | 09/30/2021 | 2019 | 2019-10-01 - 2020-09-30 | Active |
| 1011624 | KY006100 | Performance of Small Grain Varieties in Kentucky | Plant and Soil Sciences | Van Sanford, David | HATCH | 12/22/2016 | 09/30/2021 | 2019 | 2019-10-01 - 2020-09-30 | Active |
| 1011681 | KY006101 | Genetics and biochemistry of phosphate solubilization by rhizosphere-dwelling microbes | Plant and Soil Sciences | Moe, Luke | HATCH | 12/12/2016 | 09/30/2021 | 2018 | 2018-10-01 - 2019-09-30 | Active |
| 1011780 | KY006103 | Ecophysiology of soybean yield and water use efficiency-experimental and modeling approaches | Plant and Soil Sciences | Salmeron Cortasa, Montserrat | HATCH | 01/03/2017 | 09/30/2021 | 2018 | 2018-10-01 - 2019-09-30 | Active |
| 1013409 | KY006104 | Mechanisms of gene regulation during plant embryogenesis | Plant and Soil Sciences | Perry, S | HATCH | 10/01/2017 | 09/30/2022 | 2019 | 2019-10-01 - 2020-09-30 | Active |
| 1013862 | KY006105 | Impact of global warming on timing of seedling emergence in summer annuals | Plant and Soil Sciences | Baskin, C | HATCH | 10/01/2017 | 09/30/2022 | 2019 | 2019-10-01 - 2020-09-30 | Active |
| 1014280 | KY006106 | A key to unlocking the seed size and number dilemma: a new approach to make bigger seeds for better yield | Plant and Soil Sciences | Kawashima, Tomokazu | HATCH | 10/01/2017 | 09/30/2022 | 2019 | 2019-10-01 - 2020-09-30 | Active |

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| 1017837 | KY006107 | Genetic and molecular basis of symbiotic specificity in Medicago | Plant and Soil Sciences | Zhu, Hongyan | HATCH | 10/01/2018 | 09/30/2022 | 2019 | 2019-10-01 - 2020-09-30 | Active |
| 1016185 | KY006108 | Improving Forage and Bioenergy Crops for Better Adaptation, Resilience, and Flexibility | Plant and Soil Sciences | Phillips, T | HATCH/MULTI-STATE | 05/18/2018 | 01/10/2022 | 2019 | 2019-10-01 - 2020-09-30 | Active |
| 1017838 | KY006109 | An integrated modeling framework to understand and predict agroecosystem response to climate-smart agriculture management in the Conterminous U.S. | Plant and Soil Sciences | Ren, Wei | HATCH | 10/23/2018 | 09/30/2022 | 2019 | 2019-10-01 - 2020-09-30 | Active |
| 1017873 | KY006110 | Integrated marestail management for corn and soybean production in Kentucky | Plant and Soil Sciences | Haramoto, Erin | HATCH | 10/05/2018 | 09/30/2023 | 2019 | 2019-10-01 - 2020-09-30 | Active |
| 1018313 | KY006112 | Industrial Hemp Production, Processing, and Marketing in the U.S. | Plant and Soil Sciences | Pearce, B | HATCH/MULTI-STATE | 11/08/2018 | 09/30/2023 | 2019 | 2019-10-01 - 2020-09-30 | Active |
| 1018559 | KY006113 | Plant Genetic Resources Conservation and Utilization | Plant and Soil Sciences | Phillips, T | HATCH/MULTI-STATE | 12/21/2018 | 09/30/2023 | 2019 | 2019-10-01 - 2020-09-30 | Active |
| 1018774 | KY006114 | Genetic improvement of soybeans, chia and hemp seed for Kentucky agriculture | Plant and Soil Sciences | Hildebrand, D | HATCH | 02/21/2019 | 09/30/2023 | | 2019-02-21 - 2019-09-30 | Active |
| 1019079 | KY006115 | Enhancing nitrogen utilization in corn based cropping systems to increase yield, improve profitability and minimize environmental impacts | Plant and Soil Sciences | Poffenbarger, Hanna | HATCH/MULTI-STATE | 03/22/2019 | 09/30/2021 | 2019 | 2019-10-01 - 2020-09-30 | Active |
| 1020734 | KY006117 | Plant root trait-based phenotyping in support of sustainable agronomic crop production | Plant and Soil Sciences | McNear, David | HATCH | 10/01/2019 | 09/30/2024 | | 2019-10-01 - 2020-09-30 | Active |
| 1020849 | KY006118 | Messenger RNA 3' end formation in plants | Plant and Soil Sciences | Hunt, A | HATCH | 10/10/2019 | 09/30/2024 | | 2019-10-10 - 2020-09-30 | Active |
| 1021290 | KY006119 | Quantifying the pathways of pedogenesis in the context of past climate cycling in Kentucky | Plant and Soil Sciences | Shepard, Christopher | HATCH | 12/05/2019 | 09/30/2024 | | 2019-12-05 - 2020-09-30 | Active |
| 1021563 | KY006120 | Soil, Water, and Environmental Physics to Sustain Agriculture and Natural Resources | Plant and Soil Sciences | Wendroth, Ole | HATCH/MULTI-STATE | 11/25/2019 | 09/30/2024 | | 2019-11-25 - 2020-09-30 | Active |
| 1021567 | KY006121 | Beneficial Use of Residuals to Improve Soil Health and Protect Public, and Ecosystem Health | Plant and Soil Sciences | Dangelo, Elisa | HATCH/MULTI-STATE | 12/05/2019 | 09/30/2024 | | 2019-12-05 - 2020-09-30 | Active |
| 1021845 | KY006122 | Evaluation of corn hybrids for use in Kentucky | Plant and Soil Sciences | Kenimar, Richard | HATCH | 12/12/2019 | 09/30/2024 | | 2019-12-12 - 2020-09-30 | Active |
| 1023622 | KY007091 | Management and Environmental Factors Affecting Nitrogen Cycling and Use Efficiency in Forage-Based Livestock Production Systems | Plant and Soil Sciences | McCulley, Rebecca | HATCH/MULTI-STATE | 07/09/2020 | 09/30/2024 | | 2020-07-09 - 2020-09-30 | Active |
| 1014909 | KY0BAILEYWA2 | Reduction of Tobacco-specific N-nitrosamines (TSNA) and Benzo [a] pyrene (BaP) in Dark Tobaccos | Plant and Soil Sciences | Bailey, W | STATE | 12/01/2017 | 09/30/2022 | 2019 | 2019-10-01 - 2020-09-30 | Active |
| 1009920 | KY0MILLER2 | Tobacco Breeding and Genetics | Plant and Soil Sciences | Miller, R | STATE | 07/01/2016 | 06/30/2021 | 2018 | 2018-10-01 - 2019-09-30 | Active |
| 1018389 | KYKY006111 | Dynamics of Nitrogen Fertilizer Transformations in a No-Tillage Agroecosystem | Plant and Soil Sciences | Matocha, Christopher | HATCH | 01/01/2019 | 12/31/2021 | 2019 | 2019-10-01 - 2020-09-30 | Active |
| 1019259 | KYKY006116 | Nanotechnology and Biosensors | Plant and Soil Sciences | Tsyusko, Olga | HATCH/MULTI-STATE | 03/28/2019 | 09/30/2021 | 2019 | 2019-10-01 - 2020-09-30 | Active |

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| 1008664 | KY012040 | Mycotoxins: Biosecurity, Food Safety and Biofuels Byproducts (NC129, NC1025) | Plant Pathology | Vaillancourt, Lisa | HATCH/MULTI-STATE | 10/28/2015 | 09/30/2020 | 2019 | 2019-10-01 - 2020-09-30 | Active |
| 1008881 | KY012041 | Locoweed and its Fungal Endophyte: Impact, Ecology, and Management | Plant Pathology | Schardl, Christopher | HATCH/MULTI-STATE | 01/01/2016 | 09/30/2020 | 2019 | 2019-10-01 - 2020-09-30 | Active |
| 1009338 | KY012042 | Inhibition of Tombusvirus replication by exploiting novel host factors | Plant Pathology | Nagy, P | HATCH | 02/23/2016 | 09/30/2020 | 2018 | 2018-10-01 - 2019-09-30 | Active |
| 1014371 | KY012043 | Genetic and Genomic Tools to Study Associations of Colletotrichum Fungi with Plants | Plant Pathology | Vaillancourt, Lisa | HATCH | 10/12/2017 | 09/30/2022 | 2019 | 2019-10-01 - 2020-09-30 | Active |
| 1014428 | KY012044 | Molecular Genetic Improvement of the Common Endophyte of Tall Fescue | Plant Pathology | Schardl, Christopher | HATCH | 10/01/2017 | 09/30/2022 | 2019 | 2019-10-01 - 2020-09-30 | Active |
| 1014539 | KY012045 | Dissecting defense signaling pathways in Soybean (Glycine max) and Arabidopsis thaliana | Plant Pathology | Kachroo, A | HATCH | 10/13/2017 | 09/30/2022 | 2019 | 2019-10-01 - 2020-09-30 | Active |
| 1018560 | KY012046 | Explorations in the Turfgrass Phytobiome: Understanding Microbial Associations and Developing Tools for Management | Plant Pathology | Farman, Mark | HATCH/MULTI-STATE | 02/12/2019 | 09/30/2021 | 2019 | 2019-10-01 - 2020-09-30 | Active |
| 1020737 | KY012047 | The role of nuclear proteins in replication and movement of plant viruses | Plant Pathology | Goodin, M | HATCH | 10/10/2019 | 09/30/2024 | | 2019-10-10 - 2020-09-30 | Active |
| 1021705 | KY012048 | TELOMERE ROLES IN ADAPTIVE EVOLUTION OF THE RICE/WHEAT BLAST PATHOGEN, MAGNAPORTHE ORYZAE | Plant Pathology | Farman, Mark | HATCH | 12/02/2019 | 09/30/2024 | | 2019-12-02 - 2020-09-30 | Active |
| 1010609 | KY014051 | Reference Standards, Internal Standards and Critical Reagents/Regulatory Analytes for Analytical/Toxicological Approaches to Needs in Equine Medicine and Racing Regulation | Veterinary Science | Tobin, Thomas | HATCH | 10/01/2016 | 09/30/2021 | 2019 | 2019-10-01 - 2020-09-30 | Active |
| 1010993 | KY014052 | Minimizing the impact of feral horses on agricultural lands: Tubo-ovarian ligation via colpotomy as a method for sterilization in mares | Veterinary Science | Ball, Barry | HATCH | 10/24/2016 | 09/30/2021 | 2019 | 2019-10-01 - 2020-09-30 | Active |
| 1011380 | KY014053 | Equine herpesvirus-1 and equine interferon types 1 and 3 | Veterinary Science | Chambers, Thomas | ANIMAL HEALTH | 10/24/2016 | 09/30/2021 | 2019 | 2019-10-01 - 2020-09-30 | Active |
| 1012262 | KY014054 | Sarcocystis neurona: investigation of host cell interactions that contribute to parasite survival | Veterinary Science | Howe, Daniel | HATCH | 02/15/2017 | 09/30/2021 | 2019 | 2019-10-01 - 2020-09-30 | Active |
| 1012983 | KY014056 | Equine parasite diagnostics â€” new platforms for increased reliability | Veterinary Science | Nielsen, Martin | HATCH | 10/01/2017 | 09/30/2022 | 2019 | 2019-10-01 - 2020-09-30 | Active |
| 1013226 | KY014057 | The molecular basis for Rhodococcus equi susceptibility of foals | Veterinary Science | Horohov, David | HATCH | 08/10/2017 | 09/30/2021 | 2019 | 2019-10-01 - 2020-09-30 | Active |
| 1015612 | KY014058 | Delineating mechanisms of Rhodococcus equi pathogenicity and host colonization | Veterinary Science | Shaffer, Carrie | HATCH | 02/21/2018 | 09/30/2022 | 2019 | 2019-10-01 - 2020-09-30 | Active |
| 1018339 | KY014059 | Understanding seasonal influences on inflammation and insulin dysregulation using an oral sugar test in horses with endocrine disorders | Veterinary Science | Adams, Amanda | HATCH | 11/09/2018 | 09/30/2021 | 2019 | 2019-10-01 - 2020-09-30 | Active |

AD-421 Progress Report Checklist
 All Projects
 10/14/2020

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| 1018323 | KY014060 | Impact of Tall Fescue on Uterine Endometrial Gene Expression and Peripheral Vasoconstriction In Horses | Veterinary Science | Mcdowell, K | HATCH | 11/13/2018 | 09/30/2023 | 2019 | 2019-10-01 - 2020-09-30 | Active |
| 1018618 | KY014061 | National Animal Genome Research Program | Veterinary Science | Bailey, E | HATCH/MULTI-STATE | 02/01/2019 | 09/30/2023 | 2019 | 2019-10-01 - 2020-09-30 | Active |