



SCIENCE MATTERS

Bayer Facts of Science Education XIX (2018) Science Matters: U.S. Teachers and Parents Weigh in on Ag Science Literacy and Careers

What is agri-science? A new study commissioned by Bayer and National 4-H Council suggests students across the country may be asking the same question. Agri-science is the application of scientific principles and advanced technology to produce food for a growing population while preserving and protecting natural resources. As 2050 approaches and we grow closer to nearly 10 billion people on Earth, science becomes increasingly important.

Through the Science Matters initiative and in recognition of National Ag Day 2018, the Bayer Facts of Science Education survey sought perspectives from high school science teachers and parents to evaluate the importance placed on agri-science education in today's classrooms.

Teachers and parents agree agri-science is important, but lesson plans don't reflect that.

- More than 80 percent of high school science teachers say it's important to expose students to agri-science as part of their overall science education. Parents of high school students agree with nearly nine-in-10 saying the same.
- However, only one-fifth of teachers say at least some agri-science content is included in their lesson plans. Teachers in rural schools are more likely than those in urban schools to say they include agri-science content in their lesson plans (30% vs. 16%).
- On the other hand, only one-third of parents believe their child is receiving at least some exposure to agri-science education in school.

Parents want kids to feel good about agri-science, but curricula need to dedicate more time to the subject.

- More than three-quarters of parents say it's important that their children see agri-science as an exciting, creative and interesting subject.
- Half of parents believe their children's curriculum needs to dedicate more time to agri-science. Teachers agree with nearly half saying they would dedicate more time to agri-science instruction if they had the option.
- More than half of teachers feel their school should place more emphasis on science education overall. This number jumps to 60 percent among teachers in urban schools.

Teachers feel unqualified to teach agri-science, but parents are confident they can help with the homework.

- Though teachers would like to incorporate more agri-science content, only about half say they feel qualified to teach this subject. At 52 percent, teachers in rural schools are more likely to feel qualified compared to 42 percent of urban teachers.
- However, parents feel confident in their agri-science know-how; 63 percent say they feel qualified to help their children with homework on the subject.

- When teachers do incorporate agri-science into their curricula, they are most likely to include environmental sustainability (72%), plant breeding and genetics (55%) and food/crop production (38%).

Students are unfamiliar with career options in agri-science and unlikely to pursue careers in the field.

- Nearly half of teachers believe there is less emphasis placed on teaching agri-science today as compared to 15 years ago. However, parents are less likely to agree, with only 35 percent saying the same. Parents who live in rural areas are more likely to perceive a change in emphasis than parents living in urban areas (36% vs. 26%).
- Most parents agree it's important for the country's future success to encourage more children to pursue careers in agriculture. More than two-thirds also believe the industry provides exciting career opportunities.
- Unfortunately, teachers and parents suggest there's a lack of awareness and interest when it comes to students pursuing agri-science careers. Only 6 percent of urban teachers and 37 percent of rural teachers say their students are familiar with the various agricultural career fields that exist beyond working on a farm. One-third of parents say their children are familiar with the options for agricultural careers.
- And, nearly seven-in-10 parents believe it is unlikely their children will pursue an agricultural career. Teachers in urban areas are even more skeptical with nine-in-10 saying it's unlikely their students would pursue a career in the agricultural industry. Among teachers in rural schools, about half say the same.

About Science Matters

Science Matters is an initiative spearheaded by Bayer and National 4-H Council to spark an interest in STEM careers and agri-science in students. Launched in 2017, Science Matters is a multi-faceted program designed to help instill a love for scientific discovery and help provide students the tools they need to pursue STEM-related fields. To learn more about how Bayer and 4-H are supporting the next generation through Science Matters, visit 4-H.org/bayer.

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