Discovery of on/off genes in maize genome may speed plant breeding

The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion and analysis.

For astronomers, “dark matter” is the largely hypothetical substance that accounts for approximately 85 percent of the matter in the universe. Now, plant scientists have discovered a different kind of “dark matter” in the maize genome: a tiny percentage of regulatory DNA that accounts for roughly half of the variation in observable traits found in corn.

In a landmark finding, Cornell University and Florida State University researchers report they have identified one to two percent of the maize genome that turns genes on and off, so they may now focus their attention on these areas for more efficient plant breeding.

“It allows us to start pinpointing the single base pair changes small mutations that are regulating or allowing plants to adapt to their environment. It helps us narrow down the hunt dramatically,” said Edward Buckler, a Cornell University and U.S. Department of Agriculture (USDA) research geneticist and a co-author of the May 16 paper appearing in Proceedings of the National Academy of Sciences.

Read full, original post: Discovery in Maize Genome May Lead to More Efficient Plant Breeding