# Article information:

Allele-defined genome of the autopolyploid sugarcane Saccharum spontaneum L. | Nature Genetics  
<https://www.nature.com/articles/s41588-018-0237-2>

# Article summary:

1. Cultivated sugarcanes (Saccharum spp.) are polyploid interspecific hybrids with complex genomes, and have been domesticated for ~10,000 years.

2. Modern sugarcane cultivars are interspecific hybrids with approximately 80% chromosomes from S. officinarum, 10–15% chromosomes from S. spontaneum, and 5–10% recombinant chromosomes.

3. A haploid (1n = 4x = 32) S. spontaneum was used to assemble a prototypical version of the sugarcane chromosome set using sequencing and assembly techniques such as flow cytometry, BAC libraries, Hiseq 2500, ALLPATHS-LG, SPAdes, SOAPdenovo2, PacBio RS II system and Canu.

# Article rating:

Appears well balanced: The article presents the information in a reliable and balanced way, without biases and prejudices. The claims made in the article are well supported and, where applicable, all sides of the argument are given opportunity to present their point of view. The article appears trustworthy and reliable.

# Article analysis:

The article is generally reliable and trustworthy in its reporting of the research conducted on the allele-defined genome of the autopolyploid sugarcane Saccharum spontaneum L., providing detailed information on the methods used to sequence and assemble the genome as well as an overview of the history of sugarcane cultivation and domestication. The article does not appear to be biased or one-sided in its reporting; it provides a comprehensive overview of both the history of sugarcane cultivation as well as the research conducted on its genome sequencing and assembly. Furthermore, it provides evidence for all claims made throughout the article in terms of both historical facts about sugarcane cultivation as well as technical details regarding sequencing and assembly techniques used in this study.

The only potential issue with this article is that it does not explore any counterarguments or alternative perspectives on this research; however, given that this is a scientific paper detailing a specific research project rather than an opinion piece or debate article, this is understandable and does not detract from its overall trustworthiness or reliability.

# Topics for further research:

* Sugarcane domestication history
* Sugarcane genome sequencing techniques
* Autopolyploid genome assembly
* Allele-defined genome analysis
* Sugarcane genetic diversity
* Sugarcane breeding strategies

# Report location:

<https://www.fullpicture.app/item/fa35d6b7601bf6ba7de97b4287b50e8d>