**USA MESSAGING GUIDE**

*Messaging to spread a fascination of plants for May 18th and beyond*

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| **Goal**  Cultivate a fascination for how plants sustain the environment and provide essential food, medicine, fuels, and fibers for daily life. | **Companion Resources**  Use the [FoPD Resource Guides](http://blog.aspb.org/fascination-of-plants-day/usa-resource-guides/) tailored for specific audiences for resources to further explore the plant science behind these messages. |

**Taglines**

* Plants are not optional. ~US Botanic Garden
* Know plants, know life. No plants, no life. ~Knowplants.org
* The best time to plant a tree is 20 years ago. The 2nd best time is now. ~Chinese Proverb
* Folks are like plants; we all lean toward the light. ~[Kris Carr](http://www.brainyquote.com/quotes/authors/k/kris_carr.html) (author)
* E.T. came here for the plants (CA forest flora samples). ~Unknown
* Use plants to bring life. ~[Douglas Wilson](http://www.brainyquote.com/quotes/authors/d/douglas_wilson.html) (interior designer)

**Social Media Options**

* Use **#FoPD** or **@PlantDay2015**, on Twitter, Facebook, Instagram, Pinterest, Link-in, etc.
* If you have room, please also use **#plantsci** or **@ASPB**, too.
* Share links to the main USA Fascination of Plants day landing page, use this link: http://bit.ly/USAFOPD
* Include or hyperlink to [www.plantday.org](http://www.plantday.org) (international) and http://bit.ly/USAFOPD in any of your communications about FoPD.
* See below for crafting tweets & other statements as you spread word of FoPD.

**Key Terms & Heftier Talking Points**

Numbered items are basic ideas; **each can be tweeted**. Bullet points inspire more exploration and critical thinking.

1. **FASCINATING Plant Functions & Structures**:
2. Plants communicate - in their own way.
   * They don’t talk or text. They express (deliver) or respond to biological and chemical components (messages) via leaves, stems, roots, cell walls, a circulatory system, cell layers and specialized junctions.
3. Plants sustain the world’s supply of air, food and energy thanks to photosynthesis.
4. Like all living things, plants grow, reproduce, respire, and defend themselves.

* Plants respire, too!
* *Stomata* what anyone tells you, plants do respire.
* Flowering plants – at the root of the facts of life.
* Sex, bugs, and pollen’s role - flowering plants are radical!
* Propagation: not all plants need partners.
* Plants can defend themselves against pests and diseases.

1. Diversity matters: from single cells to gigantic trees, plants are a diverse kingdom.
2. The Plant Kingdom: Where the single-celled are just as important as the multi-cellular denizens of other ‘classes.’

1. **FASCINATING Food Facts & Thoughts**
2. Without food, man can live at most but a few weeks; without it, all other components of social justice are meaningless. ~[Norman Borlaug](http://www.brainyquote.com/quotes/quotes/n/normanborl372056.html)
3. To feed 9 billion in 2050, food productivity must increase by 60%.
4. The US agricultural sector is responsible for 1 of every 12 US jobs.
5. Save the earth.  It’s the only planet with dark chocolate, whiskey, beer and wine, all made from plants. ~Wouter Ballizany
6. Scientists can customize chromosomes to counteract environmental stresses in order to sustain or expand crop yields.
7. Numbers: What are we missing out on and what can we count on next?

(consider making an infographic!; tweet the bullet points)

* There are ~400,000 species of flowering plants
* only 30 of these are presently cultivated
* ¾ of a percent (.75%) of plants provide +95% of human food and energy needs
* 7,000 plants have been cultivated during human history

1. Plant science uses Big Data.

* Big Data aids sustainability and informs agriculture and forestry production.
* Integrating plant data from around the globe yields an understanding of the fundamental principles of plant growth in different environments.

1. **FASCINATING Plant Fiber Functions:**
2. Cell walls provide structural support for the plant.
3. The lignin in plant cell walls forms fibers and building materials used by insects, birds and humans.

* Plant cell walls are the building blocks of building blocks.
* Plants grow tall thanks to plant cell walls.
* Do you have plants in your pants? You do if you’re wearing denim, cotton or linen.
* You have genes in your jeans: denim uses cotton and indigo.

1. From disposable spoons to cell phone covers – new plant-based products & industries are growing now.
2. Plants are economically important. They are the root of our agriculture and natural resource industries.
3. **FASCINATING Points on Medicine & Health:**
4. Plant chemistry can benefit human health.

* Nearly 120 pure compounds extracted from plants are used globally in medicine (e.g. volatile compounds & insects; Taxol & cancer).
* Are plants panaceas? If we can research just 5% of the 400,000 known plants, that’s 20,000 more chances to find new treatments and cures.

1. Plant-based diets are healthy.
   * Every item on the [USDA Food Plate](http://www.choosemyplate.gov/) is or links directly to plants.
2. Most any natural product you eat can be traced back to plants.
   * Example: What do beef or dairy cows eat?
3. **FASCINATING Environmental Fundamentals:**
4. Plant species have naturally adapted to stressful environments. What else can they withstand? Plant scientists are working on that!
5. Annual plants are nature's emergency medical service, seeded in sounds and scars to hold the land until the perennial cover is re-established. ~[Wendell Berry](http://www.brainyquote.com/quotes/authors/w/wendell_berry.html) (author & farmer)
6. Being able to predict plant traits from plant genomes increases options for diverse or difficult environments.
7. Potted plants can reliably reduce total volatile organic compound (TVOC) loads, a major class of indoor pollutants, by 75%. ~M Burchett, J Tarran, & F Torpy
8. The biosphere breathes thanks to plants.

* Plants circulate nutrients critical to sustaining all global ecosystems.

1. Plant evolution is at the root of everything.
   * Land plants evolved from ocean-dwelling, algae-like ancestors.
   * Plants have played a major role in the addition of oxygen and ozone to the atmosphere.

* Another plant super power: producing the stratospheric ozone that protects us from the sun’s UV rays.

1. Plant growth and development are under the control of hormones.

* Heat, floods, wind, cold, drought, pests…plants get stressed, too!
* Plants respond to light, gravity and touch.
* Plants have circadian rhythms, too.

1. Plants live in, adapt to, and provide a wide variety of environments.
   * Wildlife in all ecosystems depend on plants.

* Plant diversity sustains all habitats. Diversity must include the simple to sublime.

**Brainy Quotes© on Plants**

1. A man doesn't plant a tree for himself. He plants it for posterity. ~[Alexander Smith](http://www.brainyquote.com/quotes/authors/a/alexander_smith.html)
2. To such an extent does nature delight & abound in variety that among her trees there is not one plant to be found which is exactly like another; & not only among the plants, but among the boughs, the leaves & the fruits, you will not find one which is exactly similar to another. ~Leonardo da Vinci (send in 2 tweets)
3. There are some 4 million different kinds of animals and plants in the world. Four million different solutions to the problems of staying alive. ~David Attenborough
4. It is hard to overstate how valuable it is to have all the incredible tools that are used for human disease to study plants. ~Bill Gates
5. Some bioengineering is good, especially if it results in plants that are more drought-resistant or perennial food crops. ~Margaret Atwood
6. God sleeps in the minerals, awakens in plants, walks in animals, and thinks in man. ~Arthur Young