BEEING IN HARMONY

AMERICAN COUNTRIES SHOULD PROFIT FROM A SUSTAINABLE BEE FARM STRATEGY

Of course, bees are responsible for honey production, but never influence extends beyond that single product category.

Animal pollination, mainly performed by bees, is an important ecosystem service with:

90% of flowering plants

75% of the world's common crops

Pollination service value is almost US$ 200 billion

BEE POLLINATION ARE AT RISK FOR A MULTITUDE OF FACTORS

One factor is the phenomenon called Colony Collapse Disorder, that reaches more than 30% of winter loss in Canada and almost 40% in USA every year.

As global temperature rise, North, Central and South American honeybees ranges are getting smaller. In some central habitats, bees are dying from high heat and in their most northern and southern habitats, they are remaining mostly stable, as their range is shrinking. The southern limits are moving poleward, and European bumblebee species struggle to move northward - by as much as 300 kilometres in some cases.

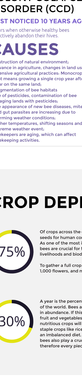
Both bees and plants depend on specific weather cues, like social cues or an internal clock, to let them know when spring has arrived. If weather patterns and temperatures shift beyond the norm, plants and bees may become out of sync, resulting in bees emerging long after the plants are ready to be pollinated.

TO PREVENT BEE COLONIES NUMBER TO DECLINE, WE NEED TO BE INFORMED AND ACTION NOW. SO FUTURE GENERATIONS WILL NOT STRUGGLE WITH FOOD PRODUCTION.

BEES ARE VALUABLE.

BEE COLONIES

1 BEE COLONY
15-20 KG
HUNDREDS MALE DRONES
20000-80000 FEMALE WORKERS



1/3 OF ALL HONEYBEE COLONIES IN THE USA HAVE DISAPPEARED

60% OF USA FARMLAND IS WHEAT, CORN, OR SOY CROPS

COLONY COLLAPSE DISORDER (CCD)

FIRST NOTICED 10 YEARS AGO

Occurs when otherwise healthy bees collectively abandon their hives.

CAUSES

- Destruction of natural environment.
- Advance in agriculture, changes in land use, intensive agricultural practices. Monocropping that means growing a single crop year after year on the same land.
- Fragmentation of natural habitats
- Use of pesticides, contamination of bee foraging lands with pesticides.
- The appearance of new bee diseases, mites and gut parasites are increasing due to pesticide and contamination.
- Higher temperatures, shifting seasons and extreme weather event.
- Beekeepers are aging, which can affect beekeeping activities.

In 2013:

EU

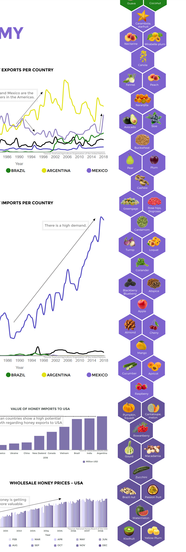
- European Union announced that it would ban the use of neonics for two years, after a comprehensive whether that would help bees mentalitih population.

BRAZIL

- **Brazil lifted restrictions on pesticides,** despite opposition from environmentalists who called it the "poison package". Restrictions had been placed on the products containing chemicals banned in the EU being registered in Brazil in the last three years.

USA

- **USA Department of Agriculture plans to** "Pollinate" Monsanto's Bee Protection Group the causes of CCD, after a group of beekeepers and environmental consumer groups sued the Environmental Protection Agency (EPA) for lack of bee protection.


BEE POLLINATION IMPACT ON FOOD PRODUCTION
Pumpkins
Cucumbers
Cantaloupe
Watermelon
Squash
Almonds
Apples
Cherries
Blueberries
Cranberries
Pears
Plums
Peaches
Nectarines
Apricots
Alfalfa
Canola
Cotton
Sunflowers
Soybeans
Corn
Wheat
Rice
Potatoes
Sweet Potatoes
Tomatoes
Onions
Carrots
Lettuce
Celery
Broccoli
Cauliflower
Cabbage
Brussels Sprouts
Kale
Asparagus
Artichokes
Avocados
Beans
Peas
Peanuts
Sugar Beets
Sugarcane
Coffee
Cocoa
Tea
Vanilla
Cashews
Macadamia
Pecans
Walnuts
Pistachios
Hazelnuts
Brazil Nuts
Pine Nuts
Chestnuts
Sesame
Sunflower Seeds
Safflower
Flax
Mustard
Rapeseed
Cottonseed
Kiwifruit
Pineapples
Papayas
Mangoes
Guavas
Passion Fruit
Dragon Fruit
Lychees
Longans
Rambutans
Durians
Jackfruit
Breadfruit
Tamarind
Star Fruit
Kumquats
Pomelos
Tangerines
Clementines
Mandarins
Oranges
Lemons
Limes
Grapefruit
Bananas
Plantains