INSECTIVOROUS BATS ARE INTEGRAL COMPONENTS OF TERRESTRIAL ECOSYSTEMS – CONSUMING NUMEROUS HERBIVOROUS INSECTS THAT CAN AFFECT PLANT REPRODUCTION AND REDUCE PLANT BIOMASS PRODUCTION, DIVERSITY AND DISTRIBUTION

ANNUAL APPLICATION OF SYNTHETIC PESTICIDES WORLDWIDE; 600,000 TONS IN THE US ALONE

2,500,000

ECOSYSTEM SERVICES PROVIDED BY INSECTIVOROUS BATS TO THE US AGRICULTURAL INDUSTRY AVERAGE 22.9 BILLION US$ (RANGE 3.7–53 BILLION) ANNUALLY

CHIROSURVEILLANCE MAY BECOME A STANDARD STRATEGY FOR INTEGRATED PEST MANAGEMENT – BIG BROWN BATS SEASONALLY CONSUME INVASIVE BROWN MARMORATED STINK BUGS, DETECTING THE INSECTS 3–4 WEEKS EARLIER THAN EXISTING MONITORING TOOLS

LARVAE OF THE GENUS DIABROTICA ARE THE CORN ROOT WORMS, PROBABLY THE SINGLE MOST IMPORTANT AGRICULTURAL PEST IN THE US – THE ADULT BEETLES ATTACK CORN, SPINACH AND VARIOUS CUCURBIT VINES

$1,000,000,000

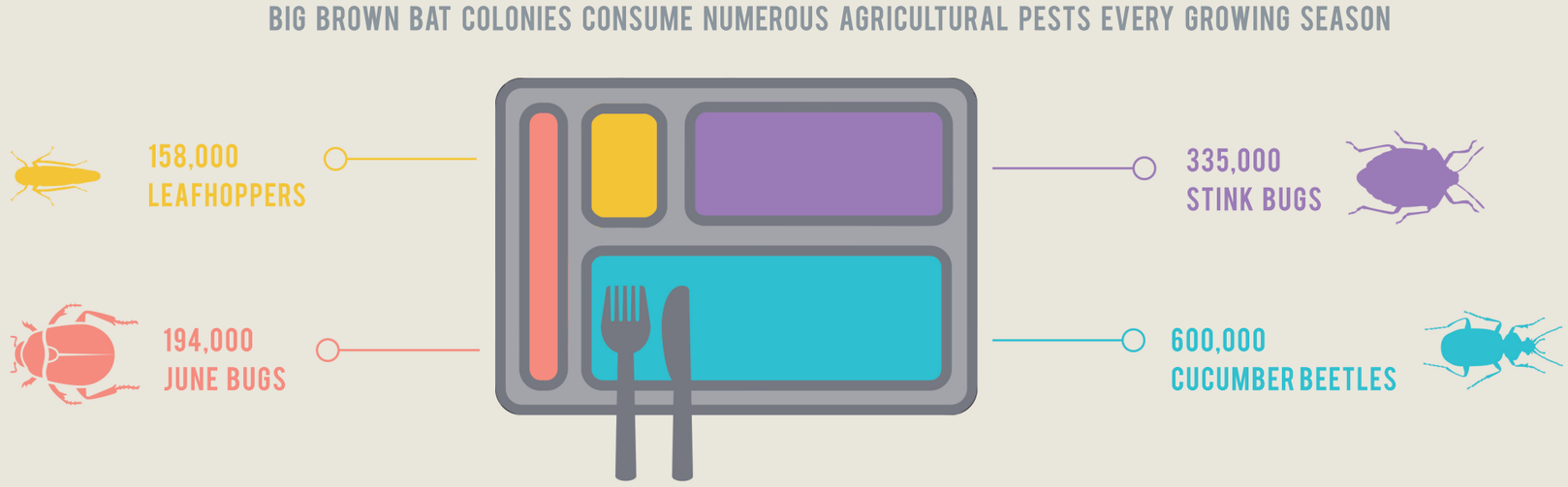
CORN ROOT WORMS COST FARMERS IN THE US CA. 1 BILLION ANNUALLY

GLOBALLY, BATS BOLSTER THE QUALITY AND QUANTITY OF CORN VIA A TROPHIC CASCADE, SUPPRESSING DAMAGE TO ECONOMICALLY VALUABLE ROW CROPS DURING BOTH REPRODUCTIVE AND VEGETATIVE STAGES

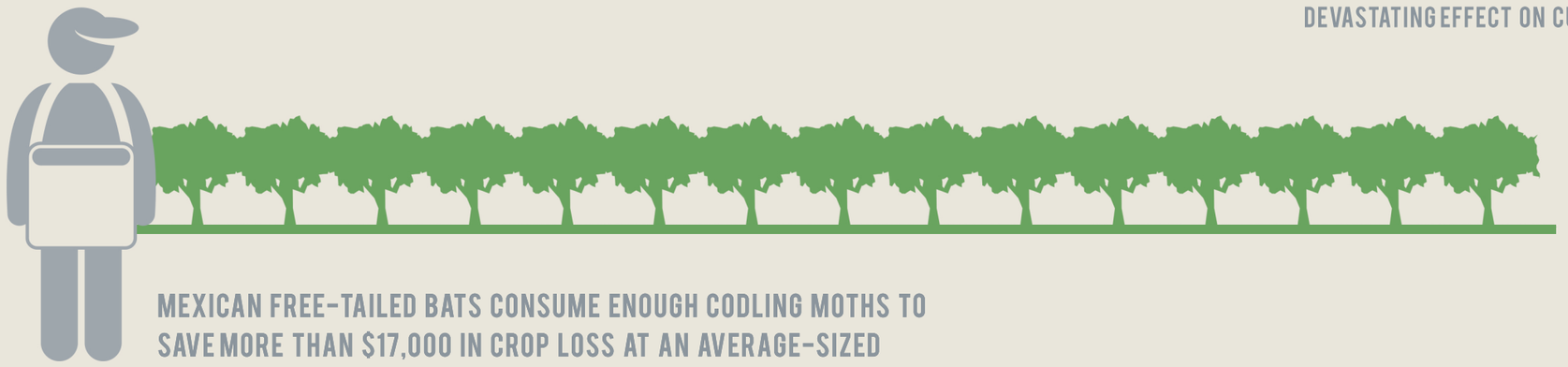
SCIENTISTS VALUE THE SUPPRESSION OF HERBIVORY ON CORN ALONE MAY BE MORE THAN 1 BILLION USD GLOBALLY, AND BATS FURTHER BENEFIT FARMERS BY INDIRECTLY LIMITING PEST-ASSOCIATED FUNGUS AND MYCOTOXINS

MILLIONS OF MEXICAN FREE-TAILED BATS ASCEND TO HIGH ALTITUDES TO EXPLOIT THE SEASONAL MIGRATIONS OF BILLIONS OF MOTHS, INCLUDING CORN EARWORMS AND FALL ARMYWORMS FROM CROPS IN THE LOWER RIO GRANDE VALLEY OF NORTHERN MEXICO AND SOUTHERN TEXAS

BIG BROWN BAT COLONIES CONSUME NUMEROUS AGRICULTURAL PESTS EVERY GROWING SEASON



CONSUMPTION OF LARGE NUMBERS OF ADULT CUCUMBER BEETLES PROTECTS AMERICAN FARMERS FROM ~ 33 MILLION LARVAE, WHICH COULD HAVE A DEVASTATING EFFECT ON CULTIVATED CUCUMBER AND CAUSE MILLION US$ LOSSES



MEXICAN FREE-TAILED BATS CONSUME ENOUGH CODLING MOTHS TO SAVE MORE THAN $17,000 IN CROP LOSS AT AN AVERAGE-SIZED WALNUT ORCHARD.

$1,700,000

ESTIMATED VALUE OF ANNUAL PEST CONTROL SERVICES TO WINTER GARDEN, TEXAS COTTON GROWERS

$12.2 MILLION TO $70.1 MILLION – ANNUAL COTTON PEST CONTROL SERVICES BY MEXICAN FREE-TAILED BATS