

Budget Justification for Flint-Garcia, USDA-ARS in Columbia, MO

The Flint-Garcia lab takes the lead in developing two F2:3 QTL mapping populations and a series of near isogenic lines in the B73 background. The Flint-Garcia lab also leads the phenotypic evaluation of these materials in Missouri, as well as assists in phenotypic evaluations in the highland and lowland sites in Mexico. Finally, the Flint-Garcia lab coordinates high-throughput phenotyping workshop to be held in Columbia, MO each year of the grant.

Senior Personnel

- Flint-Garcia (co-PI) requests no salary as she is a permanent ARS employee.

Other (Non-Permanent) Personnel:

- One GS-11 post-doctoral position in years 2-5 to focus on the F2 population evaluations, and NIL population development and evaluations: **beginning at \$67,159 per year and increasing by 3% per year, assuming cost of living increase**
- Hourly workers in years 1-4 will provide support for field operations including planting, pollinating, and phenotypic data collection, as well as for collecting leaf samples for genotyping the plants: **\$1,000 per year**

Fringe Benefits

Fringe benefits are applied to personnel salaries using USDA-ARS approved rates:

- Post-doc: **30% in years 2-5**

Travel

- PI travel to a national meeting to present research results: **\$500 per year for years 1-5**
- Post-doc travel to attend a national meeting to present research results: **\$1000 per year for years 2-5**
- Post-doc international travel to Mexico for two weeks each year to assist in phenotypic data collection of the F2:3 mapping populations at the highland and lowland sites. Funds will cover airline, hotel, and meals: **\$4000 per year in years 2-3**

Other Direct Costs

Materials and Supplies:

- Lab supplies for genotyping during the development of the NIL and F2 populations (DNA collection plates, extraction kits): **\$500/year in years 1, 3, and 4, and \$5,000 in year 2**
- Field supplies (shoot bags and pollination bags, row and plant tags, and stakes): **\$2,000 in year 1 and \$1,000/year in years 2-4**

GBS Genotyping

- GBS genotyping of the 1000 individuals in the F2:3 populations – Leaf samples will be sent to Cornell's Institute for Genomic Diversity for genotyping at a cost of \$30 per individual: **\$30,000 in year 2**

Land charges

- Land charges for summer field seasons in Missouri at Genetics Farm and/or Bradford Research Center in Columbia, MO, for evaluating the F2:3 populations in years 2 and 3, as well as nursery space for developing and evaluating the NILs in years 1-5: **\$1,000/year in years 1, 4, and 5 and \$4000/year in years 2 and 3**
- Land fees, seed shipping costs, and pollination supplies for the winter nursery seasons in Puerto Rico: **\$5,000 in the first year, and \$500/year in years 2-4**

Indirect Costs

The indirect rate for the USDA-ARS is **11.11%**.