

Nov 13, 2018. Sally, Senegal.

Meeting of Subcommittee to Discuss Future Research Priorities for the Peanut Genomic Group. In attendance: Corley Holbrook (Chair), Soraya Bertioli (Secretary), Peggy Ozias-Akins, David Bertioli, Scott Jackson, Mark Burow, Tom Stalker, P. Janila, Brian Sheffler, Kelly Chamberlin, and Josh Clevenger. Unable to attend: Jeff Dunn and Howard Valentine.

Objective: Provide a consensus position from the Peanut Genomics Research Community on future priorities for funding by the Peanut Foundation.

Priorities of PF as of today: aflatoxin, drought, flavor and leaf spots.

The foundation does not have funds at the moment, but the expectation is to obtain 400-500k/year.

Corley – Main priority should be to facilitate use of new genetic technology in cultivar development. How can breeders get genetic data previously funded by the industry to use in their breeding programs? One promising approach would be to work with Intertech to development of a peanut chip that could be used by all breeding programs. We also need to continue phenotyping and genotyping effort to develop additional markers for important traits (eg. Leaf spot, white mold, and drought/aflatoxin). Also need to develop new structure populations and to develop and evaluate new allottetraploids.

Breeders currently have many more markers than were available just a few years ago. Some efforts should be devoted to pyramiding genes for resistance to diseases (eg. Leaf spot, TSWV, nematode, white mold).

Scott – for funds, PF should pair up with programs like AFRI to package disease resistances.

Josh – the position of MARS – the company feels that they already made a large investment. Now they want to invest in things that directly drive their business, like smut resistance, flavor, aflatoxin; and keep some left-over projects running to some level. There is an uncertainty in the plant science sector in the company. As a group, we need to be more pro-active to communicate with the funders. Tom said he could ask to be part of the NPB board, since he will not be asking for funds anymore and therefore will not have conflict of interest.

Scott – we need to be pro-active in DC – the peanut board, PF, growers should lobby in DC, that's how the other commodity boards manage to get funds, the conversations end up trickling down, translating into funds in a couple of years. Another idea is to inform them about the emerging threat of smut.

We decided to invite Bob Parker to meet after the afternoon section.

Meeting – Part II

With the addition of Bob Parker and Greg Hill

Scott – we need to be pro-active in DC, lobbying.

Bob – we cannot lobby, but we can educate them. There is an increase demand for organic products. As of now, the volume of organic peanut produced in the US meets the

demand (produced in New Mexico and Texas), but there is no apparent growth in organic peanut production – and we need peanut with resistances to be produced without synthetic fungicides. – the implication is that we need peanut with disease resistance.

The normal/regular grower does not buy into genomics – many still think that the 6 million were a waste.

To improve communication the NPB has writers who can help transform the stories into laymen's terms. Josh suggested the story that Soraya presented today on the 'globe trotting of *Arachis cardenasii*' would be a good example to present.

The annual NPB budget is around US\$ 2M. It partners with PF, NIFA to make dollars go further. George Birdsong was very influential with the other members of the peanut industry into leveraging funds for the genome project.

Greg- if there are cultivars that need less sprays per season, the grower would not hesitate to adopt.

David – there cannot be a gap in funding – there has to be more funding for the genome to realize its full potential.

Kelly – the group would be doing a disservice to the community if we didn't take the information to the farmers to reduce the costs – "we need to give back". Notable examples are southern blight and leaf spots to reduce costs.

Brian suggested using other crops as examples of the use of genomics to reduce costs.

Corley – George Birdsong will be a supporter if he sees we know where we are going. Peanut Board, Peanut Foundation and George Birdsong where the main players that made the whole thing happen.

We don't expect another 6M kind of funding but enough to keep the work going in a way that the genome information and tools can be used to produce cultivars.

Scott – the soybean board does not pair up with NIFA – it has a large budget and does not want the hassle and overheads that come with the NIFA partnership.

We also discussed the direction of breeding – the industry needs to be clearer on what it wants from the breeders. The main setback at the moment is Smuckers declaring it does not want high oleic varieties (it has issues with it in the production of peanut butter). It may take years for the breeder to redirect the breeding program and produce varieties with the new requirements.

Corley mentioned that after the discussions at APRES this year the industry was supposed to get together to define priorities and let the breeder know what it wants for the future. Presently it is not clear, so he has decided to have both H/O and normal varieties.

Bob said that Virginia should all go H/O, since its main product is peanut in shell that can easily go rancid.

60% of the peanut market is domestic.

Send this information to Steve Brown, Bob Parker, Howard Valentine, Greg Hill ([ggillfarms@gmail.com](mailto:ggillfarms@gmail.com)), Jeff Dune, George Birdsong, Dan Ward (?), Victor Nwosu (?)

