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DATE: November 20, 2023

TO: Researchers

FROM: Nathan Sano, Manger

RE: **Request of Proposals**

The following is a list of research priorities discussed and approved by the California Dry Bean Advisory Board. While the Board recognizes the importance of the breeding program, Council members expressed their desire for more research projects focused on weed and insect control as these issues continue to impact production each year. With the concerns over nitrogen use and future monitoring there is some interest in nitrogen studies. These priorities reflect current issues and would complement the breeding research program.

If there are any questions about the research priorities, please contact Nicholas Clark of UCCE Kings/Tulare/Fresno Counties, Michelle Leinfelder-Miles of UCCE, San Joaquin County or Board manager Nathan Sano.

Baby Lima Council

Breeding

1. Yield/Better setting Varieties

- 2. Lygus resistance
- 3. Nematode resistance
- 4. Drought tolerance

Agronomics

- 1. Lygus
- 2. Black bean aphid
- 3. Plant growth regulator work to 3. Product Innovation help with bloom set
- 4. Water efficiency/Drip Irrigation
- 5. Symphylans

Large Lima Council

- 1. Yield/ better bloom set
- 2. Lygus
- 3. Nematodes
- 4. Mite Control
- 5. Centipedes
- 6. Drip/materials within drip
- 7. Fertility/Nitrogen

Food Science

- 1. Food Innovation
- 2. Nutrition

Blackeye Council

Breeding New Varieties

- 1. Adding lygus and aphid resistance into blackeye varieties
- 2. Adding Fusarium and Nematode Resistance to Blackeye 50
- 3. Continue development of fusarium and nematode resistance into Blackeye 46 prototypes
- 4. Breeding for a more upright plant
- 5. Water efficiency and drought tolerance
- 6. Continue with existing varietal development for full season, high-yielding varieties
- 7. Get seeds of promising lines into growers' strip trials as soon a possible for realistic evaluation

Agronomic Priorities

- 1. Protection against weeds (nightshade, Pigweed, morning glory and nutsedge)
- 2. Protection against lygus
- 3. Protection against aphids and other insects

Garbanzo Council

Plant Breeding Priorities

- 1. Yield
- 2. Seed Quality
- 3. Ascochyta Resistance
- 4. White Mold/Soil Disease Resistance
- 5. Temperature and Regional Acclimation
- 6. Fusarium Resistance
- 7. Salt Tolerance
- 8. Color Consistency

Agronomic Priorities

- 1. Weed Control
- 2. White Mold
- 3. Virus Control/Education
- 4. Sanitation Education
- 5. Irrigation Levels and Timing
- 6. Yield Variations between Test Plots and Growers' Fields
- 7. Nitrogen/Soil Health Study

Common Bean Council

- 1. Development or evaluation of higher yielding varieties for California Production
- 2. Development of cultural practices including safer crop protection techniques to cut production input costs, and meet future challenges
- 3. Development of a plant with a better root system
- 4. Development of a variety that will produce under organic growing conditions and cultural practices
- 5. Water efficiency and drip irrigation