

A vertical photograph of a soybean plant stem on the left side of the slide. The stem is covered in fine hairs and has several green, elongated pods. Small purple flowers are visible at the nodes. The background is a soft-focus green.

# **United Soybean Board Production Program**

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# United Soybean Board

- 68 Farmer directors
- Appointed by the Secretary of Ag.
- Invest soybean checkoff funds in research and promotion
  - 0.5% of selling price at first point of sale.
  - Half stays with states. Half goes to national checkoff.

A vertical strip on the left side of the slide shows a close-up of a green bean pod with a small purple flower on a stem. The background is a light green gradient.

# Production Program Strategic Areas

- Yield
- Composition
- Research Coordination



# Production Summary

- Yield: protect existing yield potential from stress and increase yield potential
- Composition: Improve composition to meet the needs of end-users better
- Research Coordination: Get the best bang for the research buck.



# Yield Strategies

- Increase level of plant resistance to biological and environmental stresses.
- Accelerate introducing new traits into elite germplasm



# Yield Projects


- Increase Resistance
  - Drought
  - Flooding
  - Soybean Cyst Nematode
  - Sudden Death Syndrome
  - Charcoal Rot
  - Rust
  - Aphids
- Increase Yield Potential





# Composition Strategies


- Identify oil and meal traits and the genes that influence them.
- Incorporate genes conferring targeted traits into elite germplasm



# Composition Projects

- Improve oil
  - Reduce linolenic acid
  - Increase oleic acid
  - Reduce saturated fatty acids
- Increase oil without excess loss of protein



A vertical strip on the left side of the slide shows a close-up of a green bean pod on a stem. The pod is bright green and appears to be growing. A small, delicate purple flower is visible on the stem next to the pod. The background is a soft, out-of-focus green.

# Composition Projects

- Increase protein
- Reduce phytate phosphorus
- Increase digestible sugars



# Genomics Projects


- Physical Map
- Marker discovery
- Marker analysis of the germplasm collection
- Support for assembly of sequenced soybean genome
- Functional genomics
- Transformation
- Proteomics and metabolomics



# Research Coordination

## Strategies

- Facilitate coordination among checkoff organizations
- Facilitate communication among researchers to coordinate research, share technical advances, and set strategies and priorities
- Attract, encourage, and train future generations of research scientists



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# Leveraging and Cooperation

- Start the Process/build the base
- Help others do more
- Use the tools
  - Marker analysis
  - Nested Association Mapping
  - Marker Assisted Selection



Questions?