Left or Right: Which direction should we go?

Improving lives through science and technology

SWOT Analysis of Texas Vegetable & Fruit Industry

Bill McCutchen, Ph.D.
Texas A&M AgriLife Research
Executive Associate Director

June 5, 2013
What is SWOT?

- An in depth analyses of Strengths, Weaknesses, Opportunities and Threats – commonly utilized in major corporations.

- Identifies the positives and negatives internal to and outside of an organization.

- In this case, the exercise was utilized to develop a comprehensive awareness of research, development and extension activities across vegetables and fruit.

- These data and results will aid in strategic planning and resource allocation for priority areas.
Who We Engaged

Internal

- Research & Extension faculty involved with V&F programs
- 63 respondents completed the survey
- Method: Online survey

External

- Industry, growers, & constituents of the Texas V&F industry
- 80 respondents completed the survey
- Method: Phone survey
Locations & Stakeholders

SWOT Team Members
Danial Leskovar – Chair
Marco Palma
Bhimu Patil
Parr Rosson
Juan Landivar
Monty Dozier
Internal Survey

Multiple AgriLife units and disciplines represented
Broad representation of crops
SWOT Analysis
Internal & External

**Strengths**
- Faculty & staff capabilities
- Reputation & credibility
- Demand for US products

**Weaknesses**
- Personnel - doing more with less
- Institutional support
- Critical mass for breeding new varieties

**Opportunities**
- New funding programs
- New Specialty crops
- Technology advances applied to agriculture

**Threats**
- Reduced budget & personnel
- Critical mass for developing and selecting new products
- Food safety
More than 80 participants answered the survey.

Representing between 85,000 – 95,000 acres of vegetable and fruit production (over 1/3 of the total acreage in Texas).

An incredible response, comprising 75% conventional & 25% organic producers and related industry.
Where We Are – Current Activities

Internal

- Diagnosis & control of disease.
- Health benefits & nutritive value.
- Plant disease-vector interactions.
- Quality.
- Integrated pest management (IPM).
Where We Should Head –
Future Activities for Support - Internal

- Irrigation & water management.
- Germplasm & commercial variety evaluation (GxE).
- Use of Marker Assisted Breeding (MAB) to develop varieties/lines for use in/across regions of Texas.
- Diagnosis, control, and resistance breeding for a complex of vegetable diseases.
Top Five Priority Areas – Internal

1. **Plant breeding & variety trials** – water use efficiency, plant morphological & physiological adaptation to stress, diagnosis & control of disease, health benefits & quality.

2. **Cropping systems** - water use efficiency, diagnosis & control of disease, quality, & herbicide, insecticide & fungicide R&D.

3. **Integrated pest management** - diagnosis & control of disease, quality, & herbicide, insecticide & fungicide R&D.

4. **Food safety.**

5. **Consumer & market research.**
Top Ten Areas for Research & Demonstration - External

1. Irrigation technologies – 4.45
2. Water-use efficiency – 4.43
3. Product diversity and quality – 4.39
4. Food safety – 4.34
5. Diagnosis & control of disease – 4.20
6. Plant disease – vector interactions – 4.10
7. Control of soil borne diseases – 4.08
8. Integrated pest management – 4.05
9. Health benefits/nutritive value – 4.03
10. Product appearance – 4.01

Top areas from both pre- and post-harvest survey. Scale 1-5
Approximately 50% of respondents believe that new crops need additional breeding in order to create improved variety for Texas.
Factors that Influence the V&F Industry – External

1. Water quality
2. Cost of production
3. Product price
4. Government regulation
5. Food safety
**SWOT Conclusions:**
Significant Overlap and Meet in the Middle

**INTERNAL**
- Plant breeding & variety trials
- Cropping systems
- Integrated pest management
- Food safety
- Consumer & market research

**EXTERNAL**
- Irrigation technologies
- Water-use efficiency
- Product diversity and quality
- Food safety
- Diagnosis & control of disease

**Advanced Breeding & Variety Trials**
- Water
- Cropping Systems
- Food Safety
SWOT Analysis
Internal & External

**Strengths**
- Faculty & staff capabilities
- Reputation & credibility
- Demand for US products

**Weaknesses**
- Personnel - doing more with less
- Institutional support
- Critical mass for breeding new varieties

**Opportunities**
- New funding programs
- New Specialty crops
- Technology advances applied to agriculture

**Threats**
- Reduced budget & personnel
- Critical mass for developing and selecting new products
- Food safety
What are the greatest and most important opportunities?

What are the most important and significant issues?

What are the next steps as we further explore the potential of transgenic specialty crops?
Thanks &
Gig’Em