An Overview: Small Grains Advisory Committee

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Presented to the:

Texas Vegetable RoundTable

Texas A&M AgriLife Research
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Improving Life through Science and Technology.
Overview of TAM Small Grains Program

Amir Ibrahim, Jackie Rudd, Shuyu Liu, Qingwu Xue, Dirk Hays, and Joseph Awika
STATE WIDE
- Grain yield
- End-use quality
- Forage production
- Rust resistance
- Greenbug resistance

High Plains
- Drought tolerance
- Water-use efficiency
- WSMV resistance
- Russian wheat aphid

Rolling Plains
- Drought / high temp
- Hessian fly

Blackland
- Septoria diseases
- Powdery mildew
- Hessian fly

Central / South Texas
- High temp tolerance
- Low/intermediate vernalization
- Hessian fly
TAM Wheat

- Texas is consistently one of the top 5 wheat producing states
- Texas is the southern most state; thus affected more by drought and high temperatures
- South Texas is the forefront for *Puccinia* *spp.*
- TAM wheat cultivars have done well in the U.S. Great Plains (Texas, Oklahoma, Kansas, Nebraska, and Colorado) across the years
  - ‘TAM 105’
  - ‘TAM 107’
  - ‘TAM 111’
  - ‘TAM 112’
Major Accomplishments

- Biomass at anthesis is important for maintaining high yield under drought in the Southern High Plains (Xue et al., 2014).
- Newer cultivars such as TAM 111 and TAM 112 use soil water more efficiently than a relative older cultivar. Both cultivars are drought tolerant but have different mechanisms to respond to drought (Pradhan et al., 2014; Reddy et al. 2014).
- Cooler canopy contributed to higher yield in new drought tolerant cultivars (Pradhan et al., 2014).
Small Grains Advisory Committee
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• **Academia-Industry partnership: Members include**—
  
  – **Texas Wheat Producers Board** (TWPB), Amarillo-based.
    • Rodney Mosier, Executive Vice President
    • Involves TWPB staff and TWPB President & Research Committee Chair.
  
  – **Texas A&M AgriLife Research**
    • Involved Unit Heads —Soil & Crop Sciences, Entomology, Plant Pathology, Resident Director (Amarillo & Vernon).
    • Executive Associate Director —Bill McCutchen
    • Texas Foundation Seed Service— Steve Brown
    • Chair: Don Robinson (1998-2007); John Sweeten (2008-present).
  
  – **Texas A&M AgriLife Extension Service**
    • State Program Leader, Ag & Natural Resources— Travis Miller
    • Associate Department Head, S&C Extension— Larry Redmon
  
  – **AgriLife Faculty members (3):**
    • Peer-elected by Small Grains Workers Group— Amir Ibrahim, Clark Neely, & Jackie Rudd.
    • Recused from proposal selection process.
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• **Key “Ingredients”:**
  – **Statewide Strategic Plan**, 2008-present
    • Guides structure, operation, membership, etc.
    • Names 2 Centers of Excellence: Amarillo & College Station.
    • Established broad statewide objectives and priorities.
    • Reference & guidance document for RFP.
    • Guides new and replacement faculty positions
    • Needs updating (?)

  – **Unit-level commitment**, esp. as to funding model & unit faculty strength.

  – **Agency-level commitment**— strategic investments.

  – **Funding model**—<see next slide>
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• **Funding Model & Sources:**
  - **Texas Wheat Producers Board**, checkoff (2 cents/bushel)
    - *Standard seed grants, e.g. $225,000-$292,000/yr*
    - *Special grants, on rare occasions, discretionary.*
  - **Faculty-leveraging grants** — e.g. USDA-NIFA, BCS, etc.
  - **Texas A&M AgriLife Research** —
    - *Wheat Royalties* — have increased to $500k - 800k range.
      - Generated by licensees from certified wheat sales;
      - Sales managed by TX Foundation Seed Service;
      - Distributed by TALR to faculty/staff inventors and contributing Units, per formula.
      - Accumulated pooled royalties at Unit level (3)--Managed by Small Grains Advisory Committee. Vernon, Amarillo, Soil & Crop Sciences. Involves set-aside for combines.
    - *Matching equipment grants* -- discretionary, as available/appropriate.
  - **Texas A&M AgriLife Extension Service:**
    - *Matching equipment grants* -- discretionary, as available/appropriate.
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• SGAC Operating “calendar”:
  – Typically built around 3 meetings per year:
    – **August meeting**: usually in College Station or Amarillo.
      • Small Grains Workers Meeting — faculty & key staff
      • SGAC meeting—
        – **RFP review**, edits/changes; establish priorities for RFP;
        – Disallows salaries for permanent staff; encourages grad students, temps.
        – Decide on **RFP release date**;
        – **Set SGAC calendar**, including proposal review meeting;
        – Decide **project report deadlines** for PIs.
        – Receive **coordinated faculty requests/suggestions** for **capital equipment** for later review, further coordination & later action.
    – **Aftermath/followup:**
      – **(October) RFP is issued** at agency Directors offices: Drs. Bill McCutchen and Travis Miller.
      – (early January) **Proposals received** from small grains scientists.
January meeting:

- Scheduled **3 weeks prior to TWPB Budget Committee** and full TWPB Board meeting in February.

- SGAC **reviews all TWPB grant proposals; recommends** which proposals to fund & funding levels; TWPB Board members participate (n=3 or 4).

- Decide (provisionally) on capital equipment purchases from small gains royalties; **request agency co-funding** as available & appropriate.

Aftermath/followup:

- (February) TWPB reviews the proposals, makes preliminary decisions on each proposal; contingent on **projected** revenues/budget.

- (February-March) Agencies decide on **co-funding capital equipment**.

- (May) TWPB makes **final decision** on funding level for each proposal, after wheat crop projections are reasonably firm.
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- **May meeting:** often in conjunction with a wheat field day.
  - **TWPB announces grant proposal funding!**
  - Interface/vetting --industry issues, AgriLife issues.
  - Plan August meeting, joint with Small Grains Workers.
- **Aftermath/followup:**
  - (June/July) TWPB lump sum checks arrive, per agency for deposit & distribution to successful PI;s.
  - (May/June)—PIs are notified; receive composite review comments on their proposal(s).
  - (Sept. 1st) **Grant project year starts; TWPB** reporting dates set, currently March 15th & August 15th.
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• A few final observations:
• Requires organization, persistence, sacrifice, sharing, patience, etc.
• Staff commitment
• Agency commitment to the big picture.
• Ego-sharing & team work.
• Synergism: 1 + 1 = 3