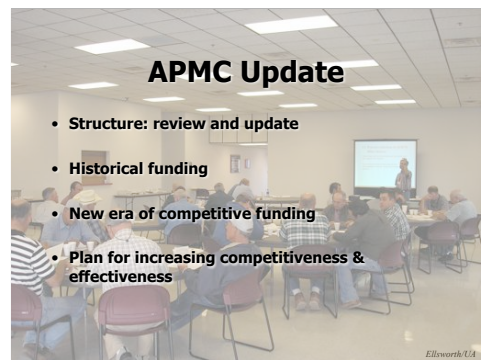
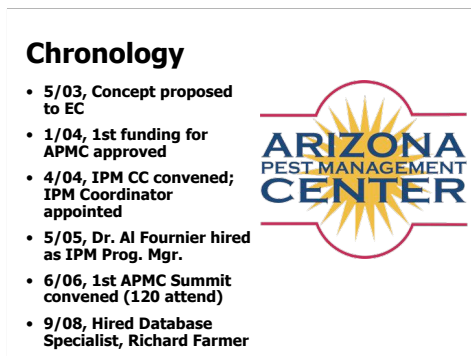


Presentation given to the UA-CALS Executive Council. Those in attendance included Dean Sander and CALS administration: Kaltenbach, Christensen, Cox, Sperr, Pottinger

30 minutes

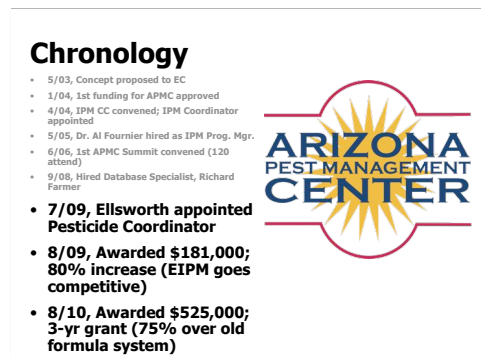


Our goal in this presentation is to review and update the EC on the APMC, review the historical basis of IPM funding in AZ, introduce the new competitive process, and present our strategy for increasing our effectiveness.

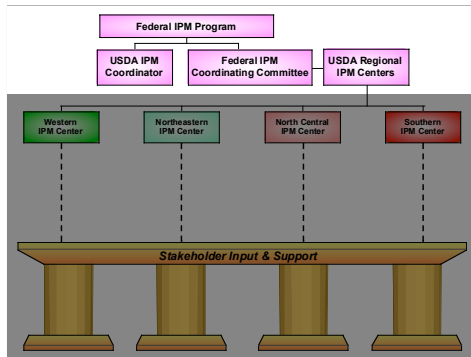


A brief chronology of events that led to the formation and continued function of the APMC. Each event here was reported previously when we last updated the UA-CALS Executive Council (EC) back in July 2007,

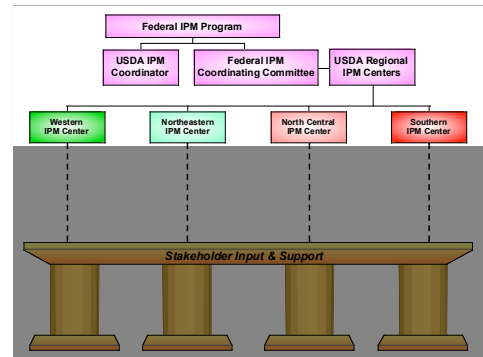
Except for the last one. We hired a Database Specialist to allow us to work with the State and obtain and data-mine nearly 20 years of pesticide use data from AZ. This gives us tremendous insight into current and past practices and is an excellent research and educational resource. We are one of only two states that routinely handles and makes this type of data available (CA and AZ).



Since that time, we have consolidated our Pesticide Programs within the APMC, competed for and been awarded 80% more federal Extension IPM (EIPM) dollars, and secured over half million federal EIPM dollars to help fund our IPM vision over the next 3-years.

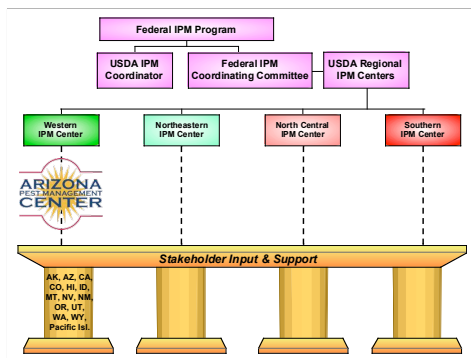


To orient you to the federal Extension IPM organization, let's review. The federal program is governed by a Coordinator and Coordinating Committee. However, Regional IPM Centers were set up 10 years ago...



...to help bridge the gap between State stakeholders and the federal IPM program.

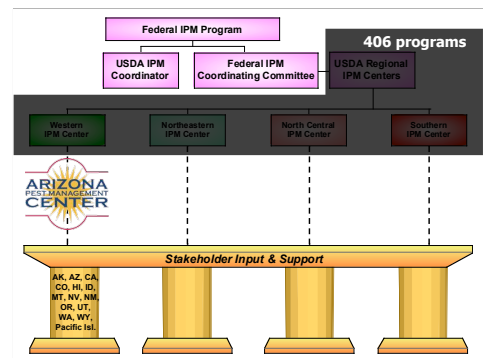
These four regional centers represent the IPM interests of their member states and territories.



In theory, this decentralized system provides a ready conduit from stakeholders to the federal IPM program.

In our specific case, the Western IPM Center is, in part, informed by Arizona's interests through the Arizona Pest Management Center. This is what connects clients & scientists to the federal system and gets our needs and priorities to those agencies who are seeking to fund IPM in the regions.

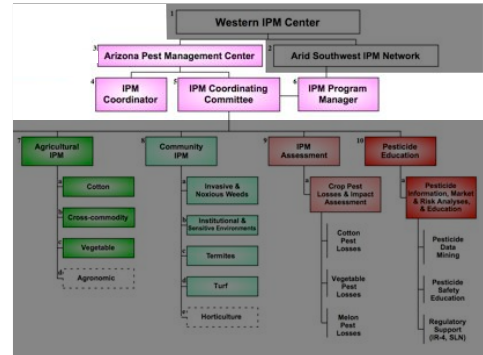
We were one of only a very few states that re-organized to capitalize on this new federal IPM structure by forming our own state "IPM center".



However, these regional IPM centers are threatened by recent federal changes. These centers exist via the section 406 line of the federal budget. This line has been zeroed out by President Obama. However, Congress will be opening up the entire federal budget and re-considering everything. The funding for 406 programs that include these centers, several very beneficial IPM-related competitive programs (RAMP, CAR and Methyl-Bromide Transitions) is thought to be located in the AFRI line now, but without specific and explicit provision for these highly successful programs. So these regional IPM centers could go away, making our state organization even more important to preserving lines of communication with federal partners.

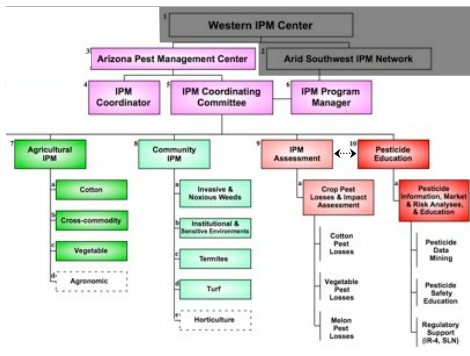


Our IPM Coordinating Committee is an interdisciplinary group of scientists and stakeholders who represent agricultural, natural, and urban communities. Members come from campus, county, and agricultural center environments and include external stakeholders.

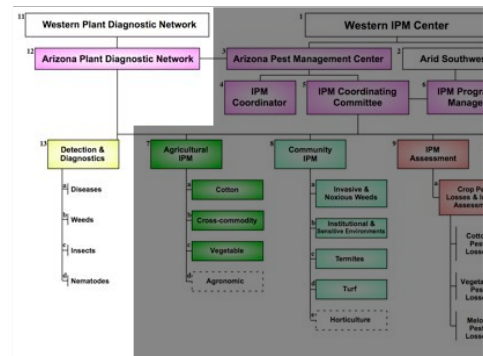


The APMC is managed by myself as State IPM Coordinator and IPM Program Manager (Al Fournier), as directed by a 20-member IPM Coordinating Committee*. Together, we oversee our federal obligation in IPM and Pesticide Safety Education as well as help represent our many diverse IPM programs that make up the APMC.

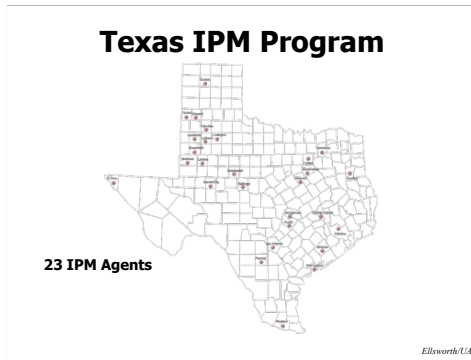
*The IPM CC includes members external to the University as well as internal stakeholders, and is multidisciplinary.



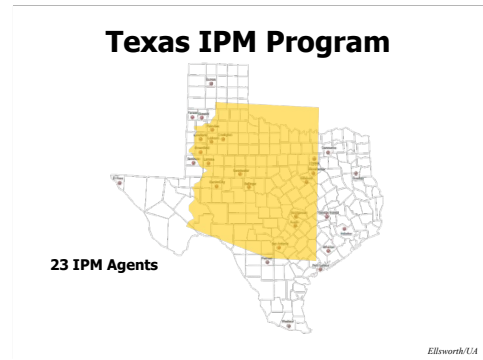
All IPM personnel are organized within 5 focal areas (4 pictured here) into specific teams below. Our personnel are spread very thin; however, we have been increasing the functionality of the overall approach with stronger linkages among programs (e.g., between Pesticide Education and IPM Assessment).



There is a 5th area in Detection & Diagnostics, a focus that is shared with a parallel organization, the National Plant Diagnostic Network. Our efforts here are dedicated to the diagnostics necessary to support pest management decisions, and we deal with the immediate demands of clients. The NPDN portion of diagnostics is dedicated to early detection of invasive pests and other quarantine and regulatory issues. The AzPDN is managed by Judy Brown and Barry Pryor. The APMC and AzPDN committees overlap to ensure ongoing communication between our groups.



When examining the EIPM landscape of this country, Texas has one of the largest infrastructures. They support 23 IPM Agents principally through federal IPM moneys. These are Agents who are entirely dedicated to the interdisciplinary subject area of IPM.



TX is roughly 2.3 times larger than AZ in landmass. However, AZ has not a single dedicated "IPM Agent" or County Extension Educator.


This is an issue of effectiveness, to be sure. However, our ability to secure extramural resources is greatly diminished by our reduced capacity in the terminus of our outreach effort, i.e., county capacity to deliver and deploy IPM locally. This not only threatens our effectiveness in Extension but in all our mission-oriented research as well. IPM demands a client-centered, scientific and outreach approach.

Our current agricultural agents are divided among many, many programmatic areas, e.g., 4-H, Ag Literacy, Water Quality, Urban Horticulture, Crop Production.

Human Resources – APMC

(shared statewide)

- Dr. Peter Ellsworth, IPM Coordinator
- Dr. Al Fournier, Coordination, Assessment
- Theresa Smith, Web Support
- Richard Farmer, Assessment / Pesticides
- Marco Peña, Vegetable IPM



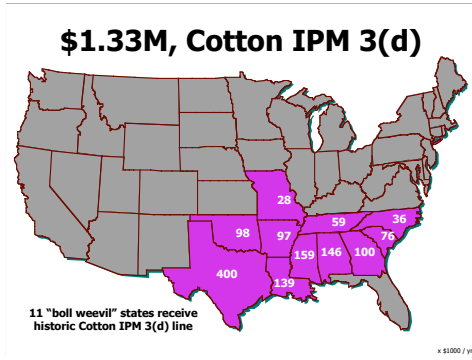
We are not without human resources, however. To some extent, my activities are extended to the benefit of the entire program in representation of our state IPM interests to others. Al is critical to our coordination and assessment capacity. Theresa is a part-time worker who does excellent web work for us. Our database specialist gives us the capacity to conduct research and education on pesticides, use patterns, and trend analysis. Marco is a new hire and Assistant in Extension that works with the Vegetable IPM Team (John Palumbo, Mike Matheron, Barry Tickes and others) to develop some excellent research and outreach programs for our high value crops.

CALS Commitments to APMC

- Divestiture of 3(d) moneys from Kerns & Ellsworth lines
- Release of these funds for program use
- Investment in 50% salary and operations for IPM Program Manager from IPM 3(d) funds
- Appointment of Ellsworth as IPM Coordinator
- Administrative control of IPM 3(d) funds (7/07)
- 10 (9/07), 20 (7/08), then 30% (7/10) State investment in Fournier line
- Commitment to APMC as University Center for IPM (for institutional granting purposes)

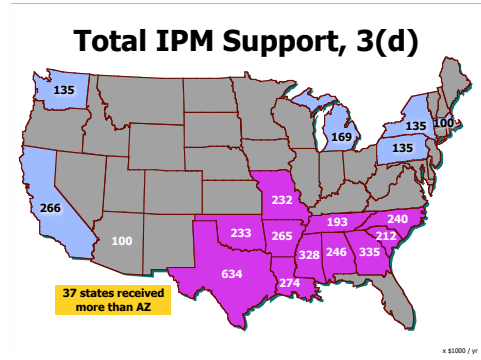
Seven years ago, CALS made certain commitments to the concept we proposed then. These were reviewed with the EC 3 years ago. At that time and since, EC transferred administrative control of the 3(d) funds to our unit. I believe we were good stewards of the old formula funds and this helped us better position ourselves for the transition to a competitive climate. We also were granted a 10% state line commitment to Al's salary, which has grown to 20 and now 30% as of this new fiscal year. These investments have been very positive.

We also rec'd a commitment from CALS to support our role as a University Center for IPM as a means for coordinating institutional responses to IPM calls for funding.



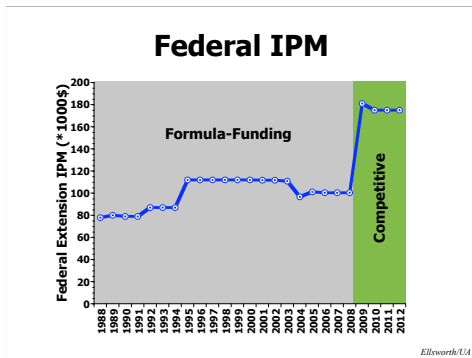
As a matter of perspective, we thought it would be instructive to examine past support structures for IPM nation-wide.

Because of a historical quirk whereby boll weevil was NOT present in AZ at the time the formula was constructed, we never received any "Cotton IPM" 3(d) funds as did these 11 "cotton" states. Over one million dollars used to be distributed each year.

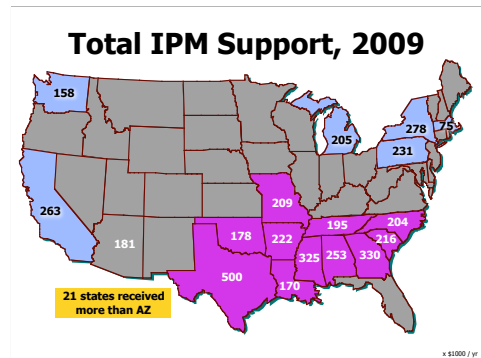


Adding the old, formula 3(d) IPM support to these and a sampling of other states, we start to see a pattern emerge with respect to funding. It will become apparent in a moment why we've selected these other states (in blue) to examine. But just looking at total 3(d) IPM support, even Massachusetts with a land mass smaller than Maricopa County used to receive as much as Arizona (\$100K).

Under the old formula system, 37 states (and territories) rec'd more IPM dollars than AZ.



Then, as we predicted as far back as 2003 and reinforced here with the EC in 2007, this federal line went "competitive". The first year was 2009 and the change caught nearly every state by surprise. We, however, were prepared and this was reflected in our ability to significantly increase our state's award through this competitive process. We rec'd an 80% increase in 2009, in a transitional 1-yr grant cycle. Now, we are in the 2010-2012 grant cycle, which we wish to focus on with you today.



In the first year of this new "competitive" process, many states and regions complained and tried to overturn the process. However, AZ has fared better. In the 2009 award process, 21 states rec'd more than AZ. However, we now have the 2nd highest funding in the Western region behind only CA.

Honoring Our Commitment

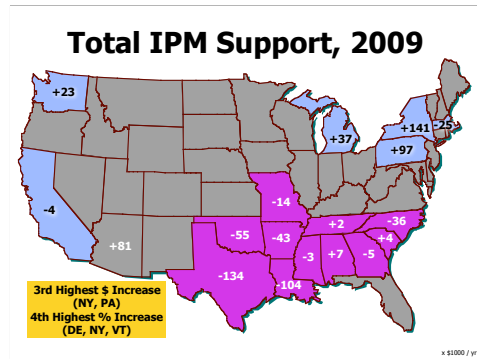
- **Opportunity**
 - Changes in federal climate
- **Focused Excellence**
 - Re-organize our resources
- **Relevancy**
 - Develop & deliver premiere IPM programs



Ellsworth/UA

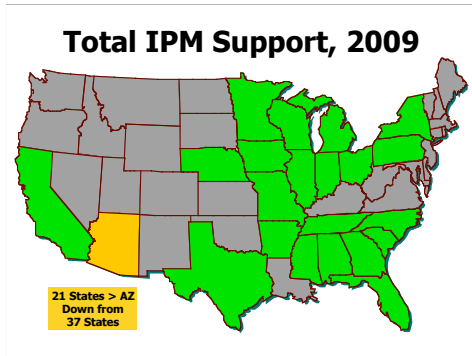
This slide was presented 3 yrs ago to the EC. Not only did we honor and continue to honor our commitment, we anticipated and capitalized on the new changes in the federal climate.

All this was done in an environment of transparency and with the goal of making Arizona's IPM programs as competitive and effective as possible.



For perspective, this is the net change in federal IPM funding going to states in 2009 (in thousands of dollars). We had the 3rd largest increase and 4th highest % increase in the country, while most states stayed fairly close to their old formula levels of funding.

The "static" nature of this reflects that the 2009 and now the 2010-2012 program actually funded ALL requests. I don't know many truly competitive programs that fund 100% of submissions, which is not to say that everything was fully funded. On the contrary, because panels were faced with funding everyone, they had to cut many very worthy programs, ours among these.



Needless to say, there are whole regions that would like to see the old system preserved and they still carry heavy influence over the "competitive" system. The midwest and southern regions in particular all benefit from higher budgets than in AZ (all green states receive more federal IPM money than AZ).

I would argue that supporting millions of midwestern acres in corn and soybeans, we are funding much redundancy in capacity. In contrast, AZ has unique agriculture and unique IPM needs for which we need significant funding.

APMC Summary (25 grants)

IPM Programmatic Effort	Amount	IDC
APMC Foundation Awards	\$ 604,823	\$ 50,801
Stakeholder Engagement	\$ 91,259	\$ 14,812
APMC Enabled Projects	\$ 4,671,591	\$ 960,015
APMC Supported Projects	\$ 190,360	\$ 13,000
Total Competitive	\$ 5,558,033	\$ 1,038,628
*State Support, IPM Program Mgr.	\$ 38,134	\$ -
Support, Database Specialist	\$ 75,000	\$ -
Other Extension Support	\$ 27,500	\$ -
Total IPM Effort	\$ 5,698,667	\$ -

Ellsworth/UA

Since inception of the APMC, we have secured or helped to secure 25 IPM grants. We can see a rather impressive return on the College's investment in the APMC.

We routinely return from 5 to 10 dollars for every dollar invested by our institution in our IPM programs and this is much higher than many better funding structures. E.g., The NY State IPM program at Cornell reports a 1:1 leverage on their state support.

Our programs have been exceptionally successful in capturing highly competitive and highly prized federal grant dollars. But we can do even better, with increased investment in the APMC.

Goal

- *Our goal is to increase the ability of Arizona citizens and professional pest managers to put IPM knowledge into practice in diverse environments, with the end result of reducing environmental, human health and economic risks to end-users.*

Ellsworth/UA

Approach

- *Through this grant, we will enhance local "on-the-ground" outreach through the deployment of additional personnel resources (Extension Assistants) specifically dedicated to supporting IPM demonstration, outreach, implementation and evaluation. This will synergize our existing capacity to conduct translational research and outreach across major program areas statewide.*

Ellsworth/UA

The goal of our program as articulated in our last federal EIPM request is to increase our ability to meet client needs in very diverse environments.

Our approach is transparent. We need more personnel on the ground to make us all more effective. Quite literally, many of us cannot do any more than we currently do. Our Agents and Specialists are severely overburdened as it is. So the only option to extend our effectiveness is through very well-placed, strategic human resources.

Our Vision for Success

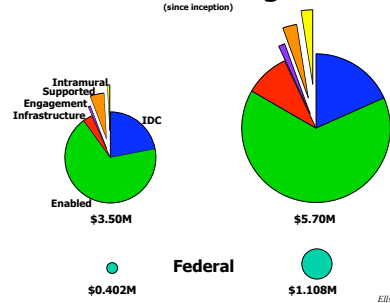
- Strengthen & stabilize our IPM infrastructure
- Invest in human resources critical to deployment of IPM programs
- All through aggressive leveraging of other research and outreach funds

Ellsworth/UA

None of this is even possible without extremely aggressive leveraging of our other research and outreach funds, mostly extramural competitive funding.

This is even on top of the considerable, individual programmatic granting accomplishments of each team member.

IPM Leverage



So how do we fund all this activity? Not nearly just with our federal 3(d) allocation. While critical to our infrastructure, this allocation has been leveraged 5 to 10-fold by other sources of funding, mostly extramural and mostly competitive grants.

We do have small intramural investments made by Extension. But everything else is extramural. We even write grants to support our stakeholder engagement efforts, and our infrastructure. The APMC also supports others in their pursuit of program grants. However, our largest fraction comes in the form of grants that we believe would not otherwise be possible if not for our organization as the APMC, i.e., "enabled".

Pictured left is where we were in 2007 and right where we are today since APMC inception.

EIPM Panel Comments

- "Excessive" budget dominates negative aspects of the proposal
- The number of staff; Sustainability questionable
- "Concept gets better with a substantially reduced budget"(!!!)
- "The concept of hiring state specialists [sic] should be the responsibility of permanent institutional budgets."

Ellsworth/UA

So while we are enjoying higher levels of federal funding, we didn't get everything we asked for in our \$1 million request. And here's why.

I do not cover the many positive comments from the panel. Suffice it to say, they recognized that we had a "high probability of success". However, the negative comments and all comments overall were colored by one aspect of the proposal, the budget, which they considered "excessive".

I have never had a scientific or technical "concept" in any other grant ever considered "better" if it didn't cost so much!

Note the last quote which places much of this animosity at the feet of our institutions, which they believe should be footing a larger share of the bill.

IPM, An Interdisciplinary Environmental Science

- Sustainability
- Agricultural change
 - Biofuels
 - "New" crops
 - Novel crops
 - Food safety
 - "Invasive" pests
- Perceived lack of investment in infrastructure
 - Our proposal...



Ellsworth/UA

"But we're already doing such a good job!" you say. True, but our effort is still overall very small and not nearly upsized to the point where we can deal with a wave of change that is already upon us. IPM is an agricultural science, but also an interdisciplinary environmental science that will take us into the future where issues of sustainability are all around us every day! Where major agricultural change is likely, and where urban pressures will only intensify consumer interest in the source, and quality of their food as well as the safety of their children and environment. Demand for IPM (unlike traditional agricultural programs) is only going to increase. [Just last week, we detected a new invasive pest in Maricopa County, a stink bug from Africa which can attack hundreds of plants.] Bottom line, others perceive a lack of investment by our institution.

Opportunity

- An institutionally backed and supported, comprehensive VISION for IPM in Arizona's future
 - Research
 - Teaching
 - Dedicated Outreach & Deployment of IPM
- UA must become full partner in sustainability

Ellsworth/UA

We have an opportunity to re-define ourselves for us and our federal partner(s). To do so, we must advance a vision for IPM that encompasses research, teaching and outreach.

We need significant and consistent state-based dollars for UA to become a full partner in IPM. This allows us to address our critics and quite frankly addresses key sustainability issues for our programs.

Proposed Budget – Salaries

A. Senior/Key Personnel			CALS Request		Dept. Lines	Other EIPM	Total Grants Effort
No.	Name / Team	Base	(%)	(\$)			
1	Dr. Al Fournier	69379					
B. Other Personnel (salaries)							
1	to be hired (MCC)	50000					
1	to be hired (MAC)	50000					
1	Marco Pena (YAC)	38846					
1	Richard Farmer	54079					
1	Tilak Mahato	35020					
1	Graduate Student	22872					
1	Theresa Smith	26100					
		346296					

Ellsworth/UA

So what is it going to take? We asked for \$350,000 per year from the feds. We have to cut to \$175,000 per year (50%) from that budget.

The bulk of our budget was in salaries. A state of this size and complexity and burgeoning population will need to have more feet on the ground to bring the best we have to offer to citizens (& students) of this state.

This shows in general terms what we were seeking : Three Assistants in Extension strategically focused and located throughout the state to assist Agent/Specialist/Researcher teams & achieve critical goals, plus the core of our shared APMC staff. To this we add a grad student that we see as critical to addressing nagging issues of diagnostics capacity.

Proposed Budget – Salaries

A. Senior/Key Personnel			CALS Request		Dept. Lines	Other Grants	Total Effort
No.	Name / Team	Base	(%)	(\$)			
1	Dr. Al Fournier	69379				27752	
B. Other Personnel (salaries)							
	1 to be hired (MCCCE)	50000			25000		
	1 to be hired (MAC)	50000			25000		
	1 Marco Pena (YAC)	38846			13596		
	1 Richard Farmer	54079			9013		
	1 Tilak Mahato	35020			0		
	1 Graduate Student	22872			9149		
	1 Theresa Smith	26100			979		
		346296			110488		33%

Ellsworth/UA

Here’s what we can invest from the EIPM budget to these lines, ca. one third of the need.

Proposed Budget – Salaries

A. Senior/Key Personnel			CALS Request		Dept. Lines	Other Grants	Total Effort
No.	Name / Team	Base	(%)	(\$)			
1	Dr. Al Fournier	69379				27752	20814
B. Other Personnel (salaries)							
	1 to be hired (MCCCE)	50000			25000		0
	1 to be hired (MAC)	50000			25000		12500
	1 Marco Pena (YAC)	38846			13596		19423
	1 Richard Farmer	54079			9013		18025
	1 Tilak Mahato	35020			0		12257
	1 Graduate Student	22872			9149		0
	1 Theresa Smith	26100			979		4894
		346296			110488		87912
					33%		27%

Ellsworth/UA

Here’s what we leverage in other extramural grants. Between these two sources alone, we bring to the table 60% of what we need.

Proposed Budget – Salaries

A. Senior/Key Personnel			CALS Request		Dept. Lines	Other Grants	Total Effort
No.	Name / Team	Base	(%)	(\$)			
1	Dr. Al Fournier	69379			20814	27752	20814
B. Other Personnel (salaries)							
	1 to be hired (MCCCE)	50000			20000	25000	0
	1 to be hired (MAC)	50000			7500	25000	12500
	1 Marco Pena (YAC)	38846			13596		19423
	1 Richard Farmer	54079			9013		18025
	1 Tilak Mahato	35020			14008	0	12257
	1 Graduate Student	22872			0	9149	0
	1 Theresa Smith	26100			979		4894
		346296			62322	110488	87912
					19%	33%	27%

Ellsworth/UA

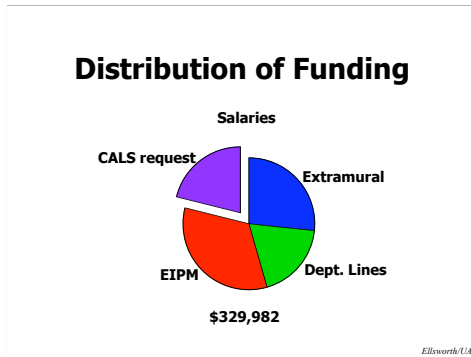
Add to this, departmental commitments of state lines and we finance nearly 80% of our original vision.

Proposed Budget – Salaries

A. Senior/Key Personnel			CALS Request		Dept. Lines	Other Grants	Total Effort
No.	Name / Team	Base	(%)	(\$)			
1	Dr. Al Fournier	69379	0%	0	20814	27752	20814
B. Other Personnel (salaries)							
	1 to be hired (MCCCE)	50000	10%	5000	20000	25000	0
	1 to be hired (MAC)	50000	10%	5000	7500	25000	12500
	1 Marco Pena (YAC)	38846	15%	5827	13596		19423
	1 Richard Farmer	54079	50%	27040	9013		18025
	1 Tilak Mahato	35020	25%	8755	14008	0	12257
	1 Graduate Student	22872	60%	13723	0	9149	0
	1 Theresa Smith	26100	15%	3915	979		4894
		346296		69260	62322	110488	87912
				21%	19%	33%	27%

Ellsworth/UA

What we are seeking from you today is the final fiscal piece to the puzzle and the explicit institutional commitment needed to convince us and others that UA is a full partner in our IPM vision. We request \$69,000 in base salary dollars (and associated ERE) to complete our strategic vision. This is just a fraction of the overall effort and does not include our additional investments in travel and operations, which we are supporting. All together this leverages about 0.5 million dollars per year in IPM effort and is still exclusive of time and money invested by individual Specialists, Agents and other researchers.



As you can see, we are close to realizing the full vision, largely because we have been so successful with extramural moneys.

What Does This Buy?

- **Competitiveness**
- **SCBG** - Specialty Crop Block Grant Program (ca. \$1 million / year in Arizona)
- **SCRI** - Speciality Crop Research Initiative (\$47.3 million / year nationally)
- **AFRI** - Agriculture & Food Research Initiative (\$176.4 million / year nationally)
 - 60% to Land Grant Universities;
 - 40% Mission-Linked
 - 30% Integrated Research, Education & Extension
 - New emphasis on teams; research & outreach
 - Re-positioned 406 programs?

Ellsworth/UA

So what does this get us?

#1 Competitiveness and along with this far more effective programs.

But it puts many other things in play. SCBG, SCRI, and AFRI will continue to be large sources of competitive moneys that can support IPM in this state.

AFRI in particular has undergone a large transformation and the NRI program is gone. The new emphases and targets for AFRI funding should be beneficial for our well-organized IPM teams and our linkages to other states and regions. Our teams will not be standing still and I would expect that we will leverage more and more funding over time.

Getting from Here to There

- UA funding of \$69,000
- Decision Package
 - Other legislative action
- IPM Endowment
 - Chair
 - Broad programmatic support
 - IDC re-capture for APMC
- ADA / ADEQ / UA Partnership
 - Feed & fertilizer mill tax
 - Pesticide sales and/or user fees
 - Line item legislative support for IPM

We last looked at these items (in gray) 3 years ago. They were each ideas for meeting the challenges before us to grow in effectiveness and competitiveness. However, much has happened in the last 3 years and the fiscal collapse has all but eliminated pursuit of many of these things in the short-term.

To advance our goals, the model is clear. A greater UA investment is needed at this time. This can come in the form of honoring our request for ca. \$69,000 per year for the next 3 years. But we must also look at other potential funding streams. We have brought in over \$1 million in IDC to the UA since APMC inception. Perhaps a fraction of this should be re-captured for sustaining some of our core functions.

Thank you for considering our request.

Photo by Tim Knight ©