2013 WSSA Committee Progress Report
Summary for 2012 and Action Plan for 2013

Committee Code and Name: Herbicides for Minor Uses (E10)

Committee Chair: Dr. Peter Dittmar, University of Florida (pdittmar@ufl.edu)

Board Coordinator: Pat Clay

Committee Members Rotating Off:
Roger Batts, North Carolina State University.

Committee Members- 2012, (term expiration and region):

Arsenovic, Marija **
Dittmar, Peter (2015, S)*
Armel, Greg (2017, NE)
Bellinder, Robin (2014, NE)
Colquhoun, Jed (2013, NC)
Culpepper, Stanley (2014, S)
Doohan, Doug (2015, NC)
Felix, Joel (2013, W)
Fennimore, Steve (2016, W)
MacRae, Andrew (2014, S)
Miller, Tim (2015, W)
Monks, David (2014, S)
O'Sullivan, John (2015, C)
Wallace, Russ (2014, S)
Zollinger, Richard (2015, NC)

*Chair
**IR-4 Herbicide Coordinator and ex-offico (no term expiration or regional affiliation)

Appropriate Replacements: Armel joined HMUC to increase Northeast representation. Dittmar, University of Florida, nominated and approved as new chair at HMUC meeting in Kona.

2012 Summary of Activities

What were the committee's goals for 2012? To discuss and coordinate important issues related to weed management in minor crops and herbicide registration issues, as well as potential sustainable production.

List the committee's accomplishments (fall 2011-January, 2012):
HMUC typically meets at the annual IR-4 Food Use Workshop, but due to limited attendance by committee members this past September, no meeting was held. The HMUC met at the WSSA annual meeting in Kona, HI, February, 2012. This session was not limited to HMUC members.

Kona Meeting

Attendees: Greg Armel, Marija Arsenovic*, Roger B. Batts*, Sharon Clay, Peter Dittmar, Dirk Drost, Joel Felix*, John Lydon, Andrew MacRae*, Tim Miller*, and Rachel Riddle.
*= committee members

Order of Discussion:

1. Attendance sheet and several handout pertaining to agenda items were circulated.
2. Status of IR-4 herbicide projects was shared by Arsenovic.

A. The following IR-4 petitions were submitted to EPA in 2011:

Product	**Crop or crop group**
EPTC	Watermelon
	Citrus Fruit group 10-10
	Sunflower subgroup 20B
Quinclorac	Rhubarb
	Berry, low growing, except strawberry subgroup 13-07H
Clopyralid	Apple
	Brassica leafy greens subgroup 5B
	Rapeseed subgroup 20A, except Gold of Pleasure
Paraquat	Perennial tropical and subtropical fruit trees
Pendimethalin	Leaf lettuce
	Brassica leady greens subgroup 5B
	Turnip greens
	Melon subgroup 9A
	Soybean, vegetable succulent
	Fruit, small vine climbing, except grape subgroup 13-07E
Quizalofop	Grain sorghum
	Rapeseed subgroup 20A
Rimsulfuron	Bushberry subgroup 13-07B
	Caneberry subgroup 13-07A
Rimsulfuron+ Thifensulfuron	Chicory
s-Metolachlor	Cilantro and garden beets, leaves
Sulfentrazone	Turnip
	Wheat (Pacific Northwest)
	Sunflower subgroup 20B
	Cowpea, succulent (TN only)

B. The following tolerances were established by EPA in 2011:

Product	**Crop or crop group**
Dicamba+ 2,4-D	Teff
Fomesafen	Pepper (bell and non-bell)
	Potato
	Tomato
Sulfentrazone	Vegetable, tuberous and com subgroup 1C

	Brassica, head and stem subgroup 5A
	Brassica, leafy greens subgroup 5B
	Fruiting vegetable group 8-10
	Melon subgroup 9A
	Pea, succulent
	Strawberry
	Flax
Thifensulfuron	Garden Beet

C. The following herbicide residue trials were conducted by IR-4 in 2011:

Product	**Crop or crop group**
Diquat	Peppers
	Tomato
	Dry bulb onion
Fluazifop	Strawberry
	Green onion
Flumioxazin	Clover
Indaziflam	Coffee
Mesostrione	Grape
MCPB	Southern pea
NAA	Pomegranate
Pendimethalin	Blueberry
	Caneberry
Rimsulfuron	Cranberry
	Caneberry
Simazine	Currant
s-Metolachlor	Chicory
	Swiss chard
Sulfentrazone	Mint

D. The following crop safety/performance trials were conducted by IR-4 in 2011:

Product	**Crop or crop group**
*Carfentrazone	Asparagus
*Clopyralid	Radish
*Flufenacet+ Metribuzin	Timothy hay

Linuron	Basil
*Mesotrione	Grape
*Pendimethalin	Blueberry
*Pendimethalin	Caneberry
Pendimethalin	Brassica crops
*Quinclorac	Caneberry
Saflufenacil	Succulent pea
*s-Metolachlor	Chicory
*Sulfentrazone	Apple

*= trial will be repeated in 2012

E. The following herbicide and PGR residue trials will be conducted by IR-4 in 2012:

Product	**Crop or crop group**
6-Benzyladenine	Avocado
Clethodim	Hops
Clomazone	Aparagus
Diquat	Banana
Diquat	Sugar apple
Flumioxazin	Grapefruit
Flumioxazin	Lemon
Flumioxazin	Orange
Hexazinone	Blueberry, reduce PHI to 50 days
Metribuzin	Potato, reduce PHI to 30 days
Penoxulam + Oxyfluorfen	Pome fruit
Penoxulam + Oxyfluorfen	Stone fruit
Saflufenacil	Olive
Saflufenacil	Grasses
Trifluralin	Rosemary

F. The following crop safety/performance trials will be conducted by IR-4 in 2012:

Product	**Crop or crop group**
Clomazone	Asparagus
Penoxulam + Oxyfluorfen	Cherry
Sulfentrazone	Edemame
Herbicides	Garden Beets

Several topics in these lists stimulated discussion.
-Miller asked what is the typical timeline from submission of data to a tolerance establishment by EPA. Arsenovic says usually 15-18 months.
-Arsenovic mentioned that more tolerances for herbicides in teff are coming. Carfentrazone and clopyralid can be expected.
-Tolerances for fomesafen in succulent pea and some cucurbit crops are also in the works.
-According to Arsenovic, the sulfentrazone tolerances stated above are all registered now.

-Trislufusulfuron use on garden beets is not labeled yet, but the petition submitted to EPA was for both PRE and POST uses.
-Diquat residue trial for pepper and tomato were targeted at paraquat-resistant parthenium in Florida. It has not shown resistance to diquat, according to Dittmar and MacRae. Drost says he would like to see data showing this. The use in dry-bulb onion is for desiccation.
-It was mentioned Drost that the protocol rates for diquat/sugar apple need to fit the current labeled rates.
-MCPB/southern pea residue trials were initiated in 2011, but severe injury forced cancellation of the study.
-The herbicide screening trial in garden beets for 2012 will include two rates of each of the following herbicides: pendimethalin, pyroxasulfone, amicarbazone, s-metolachlor, and clomazone. It will be conducted in AR, CA, OH, NC, NY, OR, TX, and WA.

3. Discussion of the new IR-4 Food Use Workshop format.

Forty-two Magnitude of Residue (MOR) priorities have been approved for 2012 IR-4 workload. Of these, 8 (~19%) are herbicides: metribuzin/potato (PHI reduction), flumioxazin/orange, saflufenacil/grasses (seed crop), trifluralin/rosemary, clomazone/asparagus, diquat/banana, saflufenacil/olive, diquat/sugar apple. One herbicide screening project (garden beets) was also prioritized and scheduled for 2012. Twenty (~48%) of the forty-two residue priorities are for fungicides/nematicides and twelve (~29%) are for insecticides/miticides. One bird repellent residue project, one fungicide screening (fruiting vegetables), and one insecticide screening project (herbs and spices) are also prioritized. Much discussion occurred on this topic, with lots of good suggestions on how to best maintain a 'place at the table' for herbicide projects.

4. Upcoming EPA review of herbicides of interest to specialty crops.

Macrae led the group through a listing of herbicides that will be going through registration review at EPA in the next few years. He noted that if researchers and extension personnel don't stay aware of public comment periods on these, we could be surprised by what EPA rules on them. He advised the group to make comments early in the process of these decisions. He says he is nervous about the pending decision on DCPA because scientists didn't get involved early.

5. Sharing of interesting observations and planned projects

-Batts highlighted a Weed Technology article about the disproportionate representation of weed science and weed scientists at land grant universities in the US and its territories (Derr, J. F., and A. Rana. 2011. Weed science research, teaching, and extension at land-grant institutions in the United States and its territories. Weed Technol. 25:277-291). He said the data in this article supports the HMUC concerns with the new IR-4 Food Use Workshop format (i.e, chances of gaining high priorities for herbicide projects are low due to demographics of meeting participants).
-Batts mentioned that he applied strips of Sandea at 0.5 and 0.75 ounces plus NIS over the top of established field chives and saw no injury. He will put out formal trial in 2012.
-Batts has several sites conducting trifluralin crop safety trials in turnips grown for roots this spring. After approaching Dow about this and being encouraged by their interest, a set of treatments was worked out that would satisfy Dow's data requirements.
-MacRae explained that flazasulfuron looks good for nutsedge activity and crop safety on tomato, pepper and eggplant when applied under the plastic mulch
-Miller discussed using activated charcoal for spinach grown for seed to help reduce injury from herbicides. It is applied in a narrow strip over the seed line at planting and then PRE herbicides

can be broadcast. Felix also has experience with activated charcoal. He says in crops with some natural tolerance of the herbicide(s), the charcoal can really be beneficial. Miller pointed out that it handles like talcum powder and can therefore be a bit messy. Felix mentioned that he has used it on silt loam soils and is not sure how it will safen on coarse soils. Miller and Drost both added that more and more safeners are coming onto the market and that they may make meaningful additions to specialty crop weed control programs.

6. HMUC roster and appointment of new chair, discussed above, was the last item before adjournment.

Meeting was adjourned at approximate 11:40 am.

What information was posted on the WSSA website? I am aware of none.

How much funds were requested? How much was spent? I am aware of no fund requests or expenditures made by this committee.

What was the impact of the committee activities/accomplishments on the following: membership, publication, policy, legislation, and/or education? HMUC members are engaged in the USDA IR-4 Project, which coordinates testing and data submission to US EPA to help growers of these high-value, small-acreage crops obtain new herbicidal tools. Many of our members also hold extension appointments at their institutions and are in excellent positions to share research weed control findings directly with growers.

What is the current state of the committee's projects and activities? The HMUC is highly active in its pursuit of weed control solutions for minor/specialty crop production. Through direct meetings and other communications, we share data and ideas on new weed control solutions. Cooperation and communication from researchers across all regions of the country is particularly strong in this committee.

2013 Plan for Committee Activities

Goals for 2013: To continue to identify and resolve field-level weed control issues in minor/specialty crops and to stay abreast of legislative issues that will affect protecting specialty crops from losses due to weeds.

Plan of Action: Through direct meetings (IR-4, WSSA, and others) and through intra-committee correspondence, issues can be identified and through data and idea exchange, resolutions can reached through a consolidated approach.

What is needed to further the goals of the committee/project? Continued participation in the committee by members and other interested parties is critical. This may include identification of emerging weed control problems as well as data exchange on weed control agents.

Communication with regulatory agencies on weed control issues involving specialty crops will also be essential.

Recommendations for Board/Society Action:

Funds requested for 2013: None

Other requests for the Board: None