

## Walnut Marketing Board

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# WALNUT MARKETING BOARD

## RESEARCH COMMITTEE MEETING MINUTES FEBRUARY 13, 2007

The WMB Research Committee met on Tuesday, February 13, 2007, at the Walnut Marketing Board office. Chairperson Earl Lindauer called the meeting to order at 10:23 a.m. Ms. Steindorf called the roll and a quorum was established. All committee members were present:

Earl Lindauer, Chair	Donald Norene
Brent Barton	Shirley Sietsema
Joe Conant	Pete Turner
Walter Deardorff	Bill Waggershauser
Robert Driver	Steve Wulfert
Jerry Moore	

Others in attendance included: David Ramos, WMB Research Director; Bruce Lampinen, Extension Pomologist UC Davis; Duane Lindsay, CWC Technical Support; Shereen Marino, USDA; and WMB staff member Dana Steindorf.

Chairperson Lindauer suggested that the Committee review the continuing projects first, figure out how much money is left from the \$650,000 budget and then review the new proposals. He mentioned that at the September 2006 Board meeting, the Budget and Personnel Committee tried to reduce the Research Committee budget. With enough support from the members of the Walnut Marketing Board, the Research budget of \$650,000 was subsequently approved.

The first agenda item was the approval of the minutes from the June 22, 2006 meeting. Mr. Wulfert made the motion to approve the minutes, Mr. Conant seconded and the motion carried unanimously.

The next agenda item, Update on VOC Emissions, was presented by Mr. Duane Lindsay. He explained that volatile organic compounds (VOCs) are under fire from the regulators, the Air Resources Board of California. Environmentalist organizations have sued the Air Resources Board, so DPR now must do what the court directs them to do which is reduce VOCs by 20%. Mr. Lindsay stated that there is a group headed by Jim Wells who could lead the fight for us on this issue if there is interest from the walnut industry. Jim Wells is retired from DPR and has started his own consulting firm. The cost would be anywhere from \$250 to \$500 per month for his services. There is also another group, the California Specialty Crops Council (CSCC), we could join for a \$5,000 membership fee. The CSCC represents many Boards and Commissions in various regulatory issues.

Mr. Driver stated that he knows Jim Wells and believes that he could be a great asset to the walnut industry in regulatory issues. Mr. Lindsay commented that VOCs the regulators will be looking at include all fumigants, including propylene oxide, methyl bromide and sulfuryl fluoride, and many herbicides also.

Mr. Barton asked Mr. Lindsay for his recommendations regarding retaining the services of Jim Wells and/or joining the CSCC. Mr. Lindsay highly recommended working with Jim Wells directly. Chairperson Lindauer reminded the Committee that they have a budget to keep in mind. Mr. Deardorff stated that the Board should retain Jim Wells, not the Committee. Mr. Barton made a motion that the Research Committee recommend to the Board for approval the hiring of Jim Wells to work with the industry on the issue of VOCs. Mr. Driver seconded the motion. Mr. Driver also commented that the Board should seriously consider joining the CSCC also. A discussion ensued about whether or not the Board should hire Jim Wells directly or work with the CSCC if that organization hires Jim.

Ms. Marino commented that if either hiring Jim Wells or joining the CSCC constitutes lobbying, it cannot be a Board activity. The Committee agreed that it probably should be a Commission activity. Mr. Barton withdrew his motion. Mr. Lindsay will discuss the issue with Dennis Balint and ask him if it is something that can be done through the Commission.

Chairperson Lindauer asked Mr. Lindsay to present the next agenda item, Update on UNECE Activities. First, however, Mr. Lindsay spoke about a Western Institute for Food Safety and Security meeting he recently attended at UC Davis. He sat through five presentations on different categories; for each category, they will create an institute which will require industry support (money) to help with the programs. They appear to be long-term issues, not issues that will help the walnut industry immediately, if ever. Mr. Lindsay distributed a brochure of information for the Committee to look over.

Mr. Lindsay then distributed a comparison chart for EU and USDA inshell walnuts. He indicated that the German delegate, Dr. Bickelman, wants to reduce mold to 1% on extra class. This could ultimately push us over into Class II, costing the industry money. The problem facing us is that we are only one vote; the EU members can get together and make a decision and we will have no recourse. Ms. Sietsema asked if we have an allies and Mr. Lindsay indicated that Italy and Turkey have sided with us. Mr. Lindsay stated that Mr. Balint has invited Dr. Bickelman and a contingent to come visit California at the end of March. The purpose is to preempt the UNECE meeting and to educate her on the industry. She does not understand that this is an inshell product, we have no way of seeing inside the shell, and 1% mold is way too low. Mr. Lindsay indicated that the Europeans have been known to associate mold with aflatoxin. Walnuts do not have an aflatoxin problem.

Dr. Ramos gave a brief update on the next agenda item, Extension Service. He indicated that Mr. Balint has had extensive discussions, along with the Almond Board, with the administrators for Cooperative Extension. The purpose of the discussions have been to get them to acknowledge the problems we have with farm advisor positions not being filled and the concerns we have about the future. Dr. Ramos stated that there has been some positive response and the position previously held by Wilbur Reil is being filled. The Merced position, primarily an almond position, is also being filled. The latest word on the next round of positions going through final review indicates that the Tulare position is about number two on the list. Butte ranks in the top three also.

The next item on the agenda was the Review and Recommendation of the Fiscal Year 2006/2007 Research Proposals. Chairperson Lindauer stated that we have almost \$1 million in requests and only \$650,000 to spend. He suggested that the Committee review the on-going projects first and then review new projects with the remaining funds.

**CONTINUING PROJECTS:**

***Budget  
Recommendation:***

- |  |                     |        |
|--|---------------------|--------|
| <b>1. Using Aerosol Pheromone "Puffers" for Areawide Suppression of Codling Moth in Walnuts<br/>– 05 WMB 7</b> |                     |        |
| Pickel, Grant  | (Continuing 3 of 5) | 35,000 |

Dr. Ramos stated that this should be a high priority. They are into the third year of puffers and the initial results indicate the puffers are working. Dr. Ramos commented that this project and the next one (07 WMB 1) are in tandem and should either be approved or rejected together. His recommendation is for the Committee to support both projects.

- 2. Development of Cost Effective Pheromone Mating Disruption for Codling Moth in Walnuts – 07 WMB 1**  
Welter (Continuing 2 of 4) 30,453

After some discussion, the Committee agreed to fund both projects 1 and 2.

- 5. Epidemiology and Management of Walnut Blight – 03 WMB 7**  
Adaskaveg (Continuing 2 of 3) 42,000

Chairperson Lindauer commented that in addition to his work on blight, Jim Adaskaveg is our only source for new materials. Dr. Ramos distributed a revised budget for this project (copy attached). The new request is for \$52,000 (\$10,000 more than original proposal). The additional funds will go to IR-4 (USDA branch that handles registration of materials for specialty crops). IR-4 will develop the residue data that is required for us to register kasugamycin.

- 6. Epidemiology Approaches to the Control of Walnut Blight – 03 WMB 6**  
Lindow (Continuing 2 of 3) 26,800

The Committee discussed the effectiveness of this project. Dr. Ramos asked the Committee to refer to his recommendations (copy attached). He suggested the Committee not fund this project, but refer it to the PRAC Plant Pathology working group for review and recommendation.

Mr. Barton made a motion to approve project number 5 (03 WMB 7) at \$52,000 and leave project #6 on the table for the time being. The Committee can review #6 again at the end of the day.

Dr. Ramos indicated that if the Committee does not approve project #6, Buchner will have to realign project #7 in order to work closer with Adaskaveg and proposal #7 will need to be re-written.

Mr. Norene revised Mr. Barton's motion to approve project #5 (03 WMB 7) for \$52,000, to decline funding for project #6 (03 WMB 6) and to fund proposal #7 (95 WMB 5) at \$13,042 with instruction for Buchner to work closely with Adaskaveg. Mr. Driver seconded the motion and it carried unanimously.

- 7. Walnut Blight Control Investigations – 95 WMB 5**  
Buchner (Renewal 1 of 2) 13,042

See above.

- 9. Biology of *Brenneria rubrifaciens*: the Causative Agent of Deep Bark Canker of Walnut – 05 WMB 6**  
Kluepfel (Continuing 2 of 2) 10,000

The Committee agreed to fund this project.

- 10. Biology and Management of *Phytophthora* Crown and Root Rot on Walnut – 04 WMB 2**  
Brown (Renewal 1 of 2) 16,900

Dr. Ramos stated that this project is a continuation of a prior three-year project. The Committee agreed to fund this project.

- 11. Methyl Bromide Alternatives – 01 WMB 3**  
McKenry (Continuing 2 of 4) 24,000

The Committee agreed to continue funding on this project.

- 12. Nematode Management in Walnut Orchards – 03 WMB 8**  
Westerdahl (Continuing 2 of 3) 12,830

Mr. Driver made a motion to discontinue this project. Ms. Sietsema seconded the motion and it carried unanimously.

- 13. Functional Genomic Analysis of Walnut-Nematode Interactions – 06 WMB 2C**  
Dandekar (Continuing 2 of 4) 35,000

The Committee agreed to fund this project.

- 15. Walnut Orchard Management: Pilot Projects, Field Testing, Adaptive Research and Problem Solving by CE Farm Advisors and Specialists – 92 WMB 1**  
Lampinen (Ongoing with review) 37,718

The Committee agreed to continue funding for this project.

- 21. Walnut Improvement Program – 92 WMB 2**  
McGranahan (Ongoing with review) 113,709

The Committee agreed to continue funding this project.

- 22. Clonal Propagation of Walnut Rootstock Genotypes for Genetic Improvement – 02 WMB 1C**  
McGranahan (Renewal 1 of 2) 41,740

The Committee agreed to fund this project.

- 23. Paradox Diversity Study – Orchard Trials 2007 – 00 WMB 3**  
Grant, et al (Continuing 8 of 8) 6,000

Dr. Ramos stated that this is the eighth and final year of this project. Mr. Barton asked if there was the possibility of doing a viability study of this project in 10 years time. The Committee agreed that would be a good idea.

The Committee agreed to fund this project.

- 24. Evaluation of Wild *Juglans* Species and Paradox Rootstock Selections for Crown Gall Resistance – 06 WMB 3C**  
Kluepfel (Continuing 2 of 3) 9,000

Mr. Deardorff stated that with the matching \$9,000 coming from IAB, we should continue to fund this project. The Committee agreed to fund.

- 25. Create an On-line Walnut Research Index with Links to pdf Files of the Research Reports – 06 WMB 5**  
Seaver (Continuing 2 of 2) 3,900

The Committee agreed to continue this project.

- 26. Consulting Contracts**  
Hackett, Leslie, Olson (Ongoing with Review) 26,200

Dr. Ramos distributed a document that defined what the researchers with consulting contracts have performed (copy attached). The Committee agreed to continue funding for the consulting contracts.

Mr. Driver made a motion to approve on-going projects 1, 2, 5, 7, 9, 10, 11, 13, 15, 21, 22, 23, 24, 25 and the consulting contracts as described above for a total of \$454,462. Mr. Deardorff seconded the motion and the motion carried unanimously.

Ms. Sietsema stated that the Committee has \$195,538 of the \$650,000 total approved budget left to allocate. Mr. Deardorff stated that it will be difficult for the Committee to approve the new genetic improvement projects (18, 19 and 20) because they are financially prohibitive. Dr. Ramos indicated that he is aware that the Committee will not be able to fund those three new projects. He stated that his

recommendation is to defer them for now and take the issue up later. These are projects that we can begin building towards over the next couple of years.

Mr. Deardorff stated that the Walnut Marketing Board needs to stand behind this type of research and increase the Research Committee budget in order to accommodate projects such as these. Dr. Ramos commented that the new genetic improvement projects and many other new projects were generated as a result of the PRAC review process. He indicated that he is looking for the Committee's guidance as to whether or not to spend any more time pursuing the genetic improvement projects. More than likely, the Research Committee will have to approach the Walnut Marketing Board for more funding.

Mr. Barton asked Dr. Ramos if, eventually, over the next 12 to 36 months, we approve some form of the genetic improvement projects, and we have the construction of a genetic map, then what? How is that helpful for him as a grower? Dr. Ramos stated that ultimately, if you have the genetic map available, it will begin supplying tools to a breeder or people who are looking for markers to identify the presence or absence of some trait.

Chairperson Lindauer asked Dr. Ramos if he had spoken to Abhaya Dandekar about completing the genetic mapping in increments. Dr. Ramos indicated that he did speak to Abhaya and the suggestion from the researchers is to put together a single proposal that would outline over about a four year period how and who would do what. Dr. Ramos would like to see Abhaya orchestrate with Mali and Dvorak and come up with a combined proposal. Dr. Ramos believes that in five years the Committee will have a hard time justifying a breeding program if they don't move in the direction of molecular approaches. Dr. Ramos also commented that Gale McGranahan is probably going to retire in two years and there will be dramatic changes when it comes to managing the breeding program. We need to begin planning for those changes and the only way to attract a top notch scientist is to provide the genetic tools they need to work with.

Chairperson Lindauer had asked Abhaya if we could set the project up with incremental funding each year for three or four years. Dr. Ramos stated that he did follow-up with Abhaya about that and that Abhaya is going to come up with a proposal that requests \$150,000 per year, matched at \$150,000 from BioStar, for a four year period. Dr. Ramos told Abhaya that the Committee will probably not be able to come up with that amount per year and another possibility is to set aside some funds left over from this year and allow that to be added to the next budget cycle so that the two amounts added together would allow us to begin the project. Chairperson Lindauer stated that we cannot fund multiple year projects. Mr. Stefani stated that any uncommitted funds are refunded to the handlers at the end of the marketing year. Funds can be committed to a project up until the end of the current marketing year even if it is not invoiced until the next year. If the marketing order referendum is approved, next year the Board will have the capability of carrying over unused funds from one year to the next.

The Committee agreed to table projects 18, 19 and 20. They will review the remaining new projects and then revisit those three if there is any money left over.

**NEW PROJECTS:**

- |   |                            |
|---|----------------------------|
| <b>3. Enhancing Insecticide Performance: Evaluation of Insecticide and Pear Ester Combinations under Commercial Conditions – 07 WMB 2</b> |                            |
| Welter  | (New 1 of 3 - PRAC) 28,582 |

Mr. Barton and Mr. Wulfert expressed interested in this project. Mr. Wulfert stated that it reduces insecticide use, however, he would like to see them screen more than two products. He commented that Guthion was probably put in to represent an OP, so maybe they should add Lorisban. Dr. Ramos stated that with the long-standing history and knowledge of Guthion, it serves as a useful marker or indicator chemical. Dr. Lampinen stated that the RAC rated this project high.

The Committee agreed to fund this project.

- |   |                            |
|---|----------------------------|
| <b>4. Walnut Aphids as an Increasingly Important Component of Walnut Pest Management – 07 WMB 3</b> |                            |
| Mills   | (New 1 of 3 - PRAC) 22,113 |

Mr. Barton commented that this is problem that he would like to see solved, however, he feels that this researcher has a complete disconnect from what the growers are experiencing out in the field.

The Committee decided to not fund this project.

- 8. An Ecological and Molecular Study of the Biocontrol Agent *A. rhizognes* K84 and its Effectiveness in Controlling Crown Gall of Walnut – 07 WMB 4**  
Kluepfel (New 1 of 1 - PRAC) 12,000

Dr. Ramos commented that this is a one year project and thinks it will have a useful outcome. Mr. Driver stated that he is not happy with the proposal and that K84 has to be used just right or it will not work.

After further discussion, the Committee agreed to fund this project.

- 14. Differences in Walnut Rootstock Sensitivity to Over-Irrigation – 07 WMB 5**  
Shackel (New 1 of 3 - PRAC) 20,497

Dr. Ramos distributed a re-write of this proposal based on the comments from the RAC. He explained that this project came out of the Orchard Management working group of PRAC. Dr. Lampinen explained some of the details of the revised proposal.

The Committee decided not to fund this proposal. They may revisit it at the next meeting if there are funds available.

- 16. Walnut Quality as Influenced by Orchard and Within Tree Environment – 07 WMB 6**  
Lampinen (New 1 of 3 - PRAC) 15,583

Dr. Lampinen stated that this project came about for several reasons, one because last year there orchards with yellow and black nuts in the lower canopy. We know these problems occur in the lower canopy, probably related to light and temperature. The idea is to go and look at the conditions that are creating the quality problems in the nuts. Mr. Wulfert commented that he associates the yellow pellicle with walnuts that have gotten wet after hull split and then dried out again in the orchard.

The Committee discussed the various situations that could be causing discoloration. Mr. Norene made a motion to approve funding for this project. Ms. Sietsema seconded the motion. The motion failed with five members voting yes, five voting no, and one abstaining.

The Committee decided not to fund this project.

- 17. Improving Walnut Storage Quality using Moisture Content, Temperature, and Storage Time as Predictors of Kernel Darkening and Rancidity – 07 WMB 7**  
Mitcham, Thompson (New 1 of 3 - PRAC) 39,416

Dr. Ramos stated that this project came about in response to PRAC and handler input.

The Committee agreed to not fund this project.

- 18. DNA Sequence Analysis of Genes Expressed in Various Walnut Tissues – 07 WMB 8**  
Dandekar (New 1 of 3 - PRAC) 85,548

- 19. Construction of High-Density Genetic Linkage Maps of Walnut (*Juglans regia*) using Standard Bi-parental Cross and Association Mapping Approaches – 07 WMB 9**  
Aradyha (New 1 of 4 - PRAC) 93,185

- 20. Construction of Physical Map for Walnut (*Juglans regia*) – 07 WMB 10**  
Dvorak (New 1 of 4 - PRAC) 166,780

Mr. Conant made a motion to approve projects 3 and 8. Mr. Barton seconded the motion and it carried unanimously.

Mr. Wagershauser made a motion to approve project 19 at \$93,185. Mr. Conant seconded the motion. Mr. Barton commented that this type of research needs a careful look, it is long-term, and the price tag is unknown. He would like to see the project go back to PRAC and give us an idea where we are heading, what the 10-year monetary commitment might be and if there is federal funding available. Mr. Deardorff suggested that Dr. Ramos approach Abhaya about combining the three genetic mapping projects into one and having him present a proposal at the next Research Committee meeting. After further discussion, the motion failed with two yes votes and nine nos.

Ms. Marino commented that last year the Board delegated authority to the Research Committee to make recommendations directly to USDA. However, for this year, that has not happened. At the Board meeting on February 23<sup>rd</sup>, she suggested that the Chairperson ask the Board to ratify the recommendations from today and also make a recommendation for the Board to delegate authority to the Research Committee to recommend the rest of the projects for this year.

Ms. Sietsema stated that there is \$154,956 left from the total budget of \$650,000. The Committee will get together again to discuss the use of those funds. Dr. Ramos will talk to the three genetic mapping researchers and have them present a single proposal at the next meeting.

The time and place of the next meeting will be left to the discretion of the Chair. There being no further business, the meeting adjourned at 2:45 p.m.