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FUNDING OPPORTUNITIES

• **2016 IPM Enhancement Grants Program**

The Southern IPM Center (SIPMC) has released RFA to solicit proposals that will enhance the development and implementation of Integrated Pest Management (IPM) in the southern region of the United States. All projects must further our mission, which is to foster the development and adoption of Integrated Pest Management (IPM), a science-based approach to managing pests in ways that generate economic, environmental and human health benefits. Eligible applicants include private individuals and institutions, faculty and qualified staff of four-year universities, businesses, commodity organizations, and governmental and non-governmental organizations. Proposals may be submitted for IPM Documents, Seed, Capstone, and Working Group projects. Project period may be no more than one year, with start dates on or after March 1, 2015, and end dates no later than February 28, 2016.

All proposals must be submitted through the online submission system, [http://bit.ly/1iLPWZv](http://bit.ly/1iLPWZv) by 5:00 p.m. Eastern time on Friday, November 20, 2015. RFA and further information on how to apply for IPM Enhancement Grants is available at [http://ipmsouth.com/2015/09/29/ipm-enhancement-grant-rfa-is-public/](http://ipmsouth.com/2015/09/29/ipm-enhancement-grant-rfa-is-public/). It is highly recommend that applicants read through the entire RFA before beginning your planning, as much of proposal format has changed.

• **2016 RFP from Georgia Agricultural Commodity Commission for Blueberries**

The Georgia Agricultural Commodity Commission for Blueberries is pleased to announce the call for proposals for research for the CY16 period (January 1, 2016 through December 31, 2016). Since limited funds are available, the following priorities have been established, however, all projects will be considered on their individual merit and potential success:

- Water Quality
- New/Emerging Diseases
- New/Emerging Insects
- Weed Control
- Varieties
- Pre/Post Harvest Ripe Rots
- Mechanical Harvesting
- Anti-Oxidant values of Rabbit Eye vs. High Bush Varieties
Proposals should be limited to three (3) pages and include:

- Title and investigator(s) names
- Need for research in Georgia
- Potential benefit (how do you propose to evaluate cost/benefit?)
- Objectives
- Procedures and location(s) of research
- Budget: Include request of funds for personnel services and operating costs.
- Copies of proposals must be received in the commission office by December 4th, 2015 in order to be considered.

If you have any questions regarding research proposals, please contact Joe Cornelius, Chairman, at 912-285-1602 or Andy Harrison, GA Dept. of Agriculture (andy.harrison@agr.georgia.gov) 404 586 1405 or cell phone 404 710 1196.

• 2016 RFP from Georgia Agricultural Commodity Commission for Vegetables

The Georgia Commodity Commission for Vegetables is pleased to announce a call for research proposals for 2016 for the following fourteen crops: bell pepper, specialty peppers, broccoli, beets, tomato, squash, cucumber, carrots, eggplant, leafy greens, cabbage, beans, cantaloupe, and sweet potato.

It is the Commission’s intent to focus on projects that will increase the profitability and market opportunities for vegetable growers in Georgia. Proposals containing applied production cost reduction strategies will be given priority in the review process.

The commission expects to award approximately $100,000 for research grants in this round of proposals. While there is no official guideline for the size of grant awarded, the commission expects to award grants in the $3,000 to $20,000 range due to the limited funds available.

The following areas have been established as priorities for project review; however, all projects will be considered on their individual merit and potential for success.

1. Insect Control projects to aid production practices by reducing costs and improving product quality and quantity. Priority will be given to projects addressing problems for these insects:
   • White flies
   • Thrips
   • Diamondback caterpillars

2. Disease Control projects to reduce product damage and improve yields. Priority will be given to projects addressing:
   • Phytophera
   • Bacteria in peppers
   • Bacteria in tomatoes

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3. Production and cultural practices that reduce input costs and improve productivity. Priority will be given to projects which address one or more of the topics noted below:

- Irrigation practices to better utilize water
- Mulching
- New production practices
- Weed control
- Improving fertility

4. Vegetable variety research, breeding and/or trials to
- Evaluate existing varieties
- Develop varieties capable of handling mechanical harvesting

5. Projects to identify new crops that are adaptable to Georgia climate and soils

6. Research addressing BT issues both consumer and production. With regard to ‘production’ issues - specific work to address how to combat secondary pests.

7. Post-harvest Handling of Crops, with priority given to projects which address:
- Techniques to improve food safety
- Products or processes to enhance and increase shelf life
- Products that reduce harvest label needs

8. Development of any new technology to aid in the Production/Harvest/Packing/Shipping of Georgia vegetables.

9. Identification of alternative fumigation models to eliminate methyl bromide usage.

10. Economic models/survey establishing costs for Georgia Vegetable commodities, including labor, production, operations, harvest and marketing.

PROPOSAL GUIDELINES

All proposals should be limited to two (2), one sided, white pages with black 12 point font type (preferably Times Roman) and include:

- Investigator name/s with mailing address, telephone, fax number, e-mail address, etc.
- Research title with NEW (or CONTINUED) research project designation
- Need/Justification for research in Georgia
- Proposals evaluating potential benefit (how do you propose to evaluate the cost/benefit?)
- Objectives of the study
- Procedures and locations of the research

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• Budget: Include request of Commission funds, contribution of investigator’s institution, and any other funding sources which will be available and used for this project. Include cost for the following categories: Salary, Wages, Supplies, Travel, Equipment (major items identified), and Other costs.

Reports of research findings will be presented at the 2017 SE Regional Fruit and Vegetable Conference in Savannah and published in the Spring 2017 issue of The Georgia Fruit and Vegetable Grower News.

The Research Committee requests that Department Heads provide a non-binding ranking of the proposal within their respective department prior to submission. Submit your proposal to your Department Head by Wednesday, October 28. Department Heads are asked to submit their rankings to Harald Scherm (scherm@uga.edu) with a copy to Debra Rucker (drucker@uga.edu) no later than Monday, November 2. This may be concurrent with the proposal being entered into the eResearch portal.

After departmental review and ranking (and submission to the eResearch portal), a PDF copy of each proposal should be submitted to the Commission office on or before November 6, 2015.

Questions pertaining to this call for proposals should be addressed to:
Andy Harrison (andy.harrison@agr.georgia.gov)
Charles Hall (chall@asginfo.net)

UPDATES FROM EPA

• EPA Proposes Stronger Standards for People Applying Riskiest Pesticides

On August 5, 2015 the EPA issued a proposal to revise the Certification of Pesticide Applicators rule. The rule would help keep our communities safe, protect the environment and reduce risk to those applying pesticides. Pesticide use would be safer with increased supervision and oversight. The proposed changes will help ensure that the riskiest pesticides are used safely.

EPA is accepting comments on the proposal until November 23, 2015. To comment, please see docket number EPA-HQ-OPP-2011-0183 at regulations.gov

Further information about this proposal is available at:
FROM THE FIELD

Management of Scale Insects in Blueberries

Ash Sial
Department of Entomology, University of Georgia, Athens, GA 30602

This year, we have received several reports from growers about scale infestation in blueberries. Some growers reported moderate level of infestation spread around the field in small patches while others reported heavy infestation spread all across the field. Based on the samples collected by county agents and my own observations in the field, multiple species of scales were present at each site which include both soft and armored scales.

Scales are a large group of insects (superfamily Coccoidea) in order hemiptera that are minute to small in size and sexually dimorphic – males and females are distinctly different in appearance (Daly et al. 1998). They have unusual lifecycle; females have incomplete metamorphosis (egg-immatures-adult), whereas males have complete metamorphosis (egg-immatures-pupal state-adult). Not all scales have both male and female sexes – some are hermaphrodites. They usually have waxy or scale like covering depending the family. Several families of scale insects including soft scales (Coccidae), mealybugs (Pseudococcidae), armored scales (Diaspididae), and giant scales (Monophlebidae) have been cited as pests of blueberries (Marucci 1966, Milholland and Meyer 1984, Antonelli et al. 1992).

Soft scales secrete a waxy covering that is part of their body. Of the soft scales, Indian wax scale, Ceroplastes ceriferus (Fabricious) (Fig. 2), Terrapin scale, Mesolecanium nigrofasciatum (Pergande) (Fig. 3) and European fruit lecanium, Parthenolecanium corni (Bouché) (Fig. 4) can cause economic damage to blueberries. Recently, Azalea bark scale, Eriococcus azaleae Comstock (Eriococcidae) (Fig. 5) was also reported to feed on blueberries (Walton et al. 2006). The armored scales do not secrete honeydew; they concentrate and incorporate anal secretions into the scale cover (Foldi 1989). Among the armored scales, Lesser Snow scale, Pinnaspis strachani (Cooley) (Fig. 6) and Putnam scale, Aspidiotus ancylus (Putnam) (Fig. 7) can cause the most damage to blueberries.

Mealybugs are morphologically different from the other scales insects because they possess functional legs throughout their lifecycle. The infested plants look snowy because of the white waxy body filaments. The blueberry mealybug, Dysmicoccus vaccinii Miller & Polavarapu has been reported to infest blueberries. Based on circumstantial evidence, blueberry mealybug has been implicated as a vector of the Ringspot virus, the causal agent of the Red Ringspot disease in blueberries (ScaleNet).

The cottony cushion scale can be distinguished easily from other scale insects. The mature females (actually hemaphrodites) have bright orange-red, yellow, or brown bodies (Ebeling 1959). The body is partially or entirely covered with yellowish or white wax. The most conspicuous feature is the large fluted egg sac, which will frequently be two to 2.5 times longer than the body. The egg sac contains about 1000 red eggs (Gossard 1901). Cottony cushion scale has a wide host range and was reported to feed on blueberries in Bacon County (GA) earlier this year.

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Scale insects insert their piercing-sucking mouthparts into the plant tissues and siphon the plant sap. As they feed, soft scales and mealybugs excrete large amounts of a sweet, sticky liquid referred to as “honeydew” which provides an excellent medium for the growth of black fungus called sooty mold. Accumulation of honeydew and sooty mold on foliage interferes with photosynthesis which can reduce plant vigor and slow plant growth. If the feeding occurs on the fruit, grade loss can occur due to the presence of unsightly honeydew and sooty mold. Sooty mold usually weathers away following the control of scale infestation (Buss and Turner 2004).

Honeydew also attracts ants and when ants are observed, plants should be closely examined for scale infestation. If active scale populations are suspected in a blueberry orchard, double-sided sticky tape should be put around canes in close proximity to the eggs sacs. Tape should be changed at least every other week and looked under the microscope to determine when eggs begin to hatch which is extremely important because crawlers (the first instar nymphs) are the only mobile stage and are readily controlled by oil or most insecticides.

The best strategy to management scale insects is to prune the old wood annually. Dormant pruning of old, weak canes and scale infested wood removes a large pool of eggs and prevents the scales from increasing their population density. The most scale populations have historically remained below economic threshold as a result of natural biological control. However, the increased pesticide use against spotted wing drosophila over the past couple of years might have disrupted the natural biological control in blueberry orchards leading to higher populations of scales and other secondary pests.

If scale insect pressure is high, winter pruning should be followed by dormant oil applications before the bloom. If the temperatures are high enough for insect development to occur, insect growth regulators can be applied in combination with oil earlier in the season. Achieving 100% control of scales using pesticides is a major challenge because adult females and eggs are protected from virtually any pesticide. The crawlers (first instars nymphs) are the only mobile and susceptible stage, and therefore timing of chemical applications to target the crawler activity periods is critical.

In order to control heavy scale infestations, high spray volumes (100-200 gallons per acre) should be used to ensure thorough coverage of all parts of blueberry bushes. It is not advisable to apply oil sprays at or below 32°F, but rather at temperatures above 50°F under calm conditions. Also, oil should not be applied after fruit set because it will remove the bloom and the resultant spotted berries will be unmarketable for fresh markets.

Images:

Figure 1. Cottony cushion scale (Photo: Sturgis McKeever, Georgia Southern University)

Figure 2. Indian Wax scale. (Photo: Lyle Buss, University of Florida)

Figure 3. Terrapin scale (Photo: Jerry Payne, USDA)

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Figure 4. European fruit lecanium (Photo: Jerry Payne, USDA)

Figure 5. Azalea bark scale (Photo: Vaughn Walton, Oregon State University)

Figure 6. Putnam scale (Photo: Jerry Payne, USDA)
**Figure 7.** Male tests and female Lesser Snow scale (Photo: Lyle Buss, University of Florida)

**Figure 8.** Scale infestations observed in blueberries during 2015 field season (Photo: Brian Little, University of Georgia)
References:


**E. coli O157:H7 - Petting Zoos, Farms, Food**

Judy Harrison  
Department of Foods and Nutrition, College of Family and Consumer Sciences, University of Georgia

I have been asked to make sure ANR agents and 4-H agents in your offices see the following message as well as FACS agents.

Agents,

It is the time of year when pumpkin patches, fall festivals and Christmas tree farms are operating and many of them have petting zoos and also sell food products.

This is an excellent opportunity to remind your clients of potential health risks associated with these venues and improper hand hygiene.

Two children – one a 20 month old boy and the other a 17 month old boy – in the state of Maine have been infected with *E. coli* O157:H7 after visiting a petting zoo at a county fair in September. The 20-month old has died, and the other has developed HUS and is still battling for his life.

The facts are that petting zoos and farms can be a source of *E. coli* transmission.

The Centers for Disease Control and Prevention have a website devoted to this topic. [http://www.cdc.gov/features/animalexhibits/](http://www.cdc.gov/features/animalexhibits/)

CDC warns that: “When people forget to wash their hands after petting an animal, or bring food or drinks into an area where animals are exhibited, they are at risk for becoming ill.”

Advice for parents, teachers, etc. to help keep kids safe from the CDC includes the following:

- Be sure to visit handwashing stations at petting zoos, festival locations and farms.
- Always make sure that children wash their hands right after petting animals or touching the pens, etc. where the animals are housed.
- Even if children do not touch the animals, wash their hands after exiting the animal holding areas.
- Always wash hands before touching food or drinking, before preparing food or drinks, after removing soiled clothing or shoes after visiting farms or petting zoos, etc.

- Keep food and drinks out of areas where animals are held.
- Prepare, serve and eat food only in areas where animals are not permitted.
- Do not eat or drink raw, unpasteurized juices, cider, milk or cheeses.
- Supervise children under age 5 constantly in animal holding areas.
- Do not allow children to put thumbs, fingers, pacifiers or other objects in their mouths while in the animal areas.
- Do not take strollers, bottles, pacifiers, cups or toys in animal areas.
- Supervise handwashing.

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According to CDC:

Handwashing with soap and running water is best. If these are unavailable, use hand sanitizers, but also wash hands well as soon as a sink is available.

Remember:
Hands should be washed with soap and running water for at least 20 seconds paying special attention to clean between fingers and around fingernails.

For more information on this topic, visit http://www.cdc.gov/features/animalexhibits/
(Source: UGA Extension listserv)

AWARDS AND HONORS

UGA Researcher Wins $2 Million Grant from USDA, National Institute of Food and Agriculture to Develop Organic Management Strategies for Spotted Wing Drosophila

Reproduced from Georgia Trends Daily (http://www.georgiatrend.com/Georgia-Trend-Daily/)

J. Merritt Melancon reports that a tiny fly is having a huge impact on American fruit farmers. Known as spotted wing drosophila, the insect is costing farmers more than $700 million a year in lost produce and prevention costs. This week, the U.S. Department of Agriculture's National Institute of Food and Agriculture tasked University of Georgia researchers with developing a long-term management plan for the flies. The $2 million NIFA grant will be led by Ashfaq Sial, a national leader in spotted wing drosophila management and an entomologist in the College of Agricultural and Environmental Sciences.

For further details please visit http://news.uga.edu/releases/article/NIFA-2-million-grant-control-blueberry-destroying-fly-1015/

FRIENDS OF SOUTHERN IPM AWARDS

The Friends of Southern IPM Awards program recognizes extraordinary achievement in research, Extension and implementation of Integrated Pest Management (IPM) in the southern region of the United States. Winners are chosen by a two separate award panels, one for the regular awards, and one for the graduate student awards. Call for Nominations is OPEN. Deadline for nominations is Friday, December 18, 2015.

Nominate a graduate student (Masters or Ph.D.) or a colleague for one of our friends of IPM Awards. Award categories consist of the following:

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Graduate Student awards:

Masters or Ph.D. student. Each department may nominate one candidate for masters and one for Ph.D. Masters award is $2,000 and Ph.D. award is $3,000, in addition to a presentation in a venue of the winner's choice.

Professional awards:

- **Bright Idea**: Innovative technology or research project
- **IPM Educator**: Excellence in teaching or Extension education, also can be involved in public school system.
- **IPM Implementer**: "Boots on the ground" person who implements IPM.
- **Future Leader**: Promising faculty member early in his or her career.
- **Pulling together**: Team award.
- **Lifetime Achievement**: Faculty member or any individual from a category above who is nearing the end of a career.

Nomination needs to include the following: a nomination form and 2-page max essay about the nominee's qualifications for the award. Further information is available at Southern IPM Center website (http://ipmsouth.com/2015/10/12/nominate-a-graduate-student-or-colleague-for-the-friends-of-southern-ipm-award/). If you have specific questions about the Friends of IPM Award or the nomination, contact Rosemary Hallberg at 919-513-8182 or Henry Fadamiro at 334-844-5098.

UPCOMING EVENTS

GETTING THE BEST OF PESTS: 2015 WEBINAR SERIES

UGA-CAES Announces 2015 Webinar Schedule
The University of Georgia CAES Extension, in cooperation with the DI Group @ Georgia College, announces the 2015 Getting the Best of Pests webinar series schedule. Register at www.gabugs.uga.edu. Webinars are 8:00 to 10:00 AM U.S. east coast time and to-date provide continuing education credit in GA, FL, AL, SC, NC, and TN. This year’s speaker line-up represents some of the greatest minds working in the area of urban pest management research and consulting.

October 21, 2015  Insecticide Mode of Action; Pesticide Safety
Dr. Scharf returns to present a one hour webinar on insecticide mode of action—a topic that every pest management professional should be aware of. Dr. Phil Koehler is an Extension & Research Professor of Urban Entomology at the University of Florida where he holds the Margie & Dempsey Sapp Endowed Professorship of Structural Pest Control/FPMA Endowed Professor of Urban Entomology. Dr. Koehler will highlight the safe use of pesticides.

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December 9, 2015  Ants
Dr. Robert K. Vander Meer is a senior research scientist and Research Leader of the Imported Fire Ant and Household Insects unit at the USDA-Agricultural Research Service’s Center for Medical, Agricultural and Veterinary Entomology in Gainesville, FL. He is a world class expert on ant communication, particularly the study of pheromones. His presentation will be “Chemical Communication in Ants”. Dr. Chow Yang Lee is a Professor of Urban Entomology in the School of Biological Sciences at the Universiti Sains Malaysia, in Penang, Malaysia. He’s an authority on the biology and management of pest ants, termites, and German cockroaches. He will talk about ant baiting and principles of baiting.

To learn more about the webinar series, contact Dr. Daniel R. Suiter at the University of Georgia (USA) at 770-233-6114 or email him at dsuiter@uga.edu Webinar Registration: gabugs.uga.edu

October 8-18, 2015  Georgia National Fair
The annual, official state-sponsored Georgia National Fair, October 8-18, 2015, is a family event that is “Famous For Fun!”

The Georgia National Fair has promoted the state’s heritage, people, and agriculture since the first Fair in 1990. The Fair offers a safe and clean, family-oriented environment. The Fair is well-known for its comprehensive youth and home and fine arts competitions and exhibits. The Georgia National Schoolhouse attracts pre-K through high school students from throughout the state to tour the educational and livestock displays. The Georgia National Fair appeals to everyone with its livestock and horse shows, competitive exhibits, food, midway rides and games, commercial vendors, major concerts, street entertainers, family entertainment, circus, and nightly fireworks.


The Georgia National Fair is located at the Georgia National Fairgrounds & Agricenter, Perry, GA 31069. Further information is available at http://www.gnfa.com.
October 13, 2015 The Dirt on Soils, Fertilizers and Watering

Knowing your soil is the basis for good plant selection and garden success. Learn the characteristics of three soils, possible issues and how to amend them. The instructor will be Jamie Burghardt. The event will cost $14 per person and is located at the Coastal Georgia Botanical Gardens at 2 Canebrake Road Savannah, GA 31419 Annex.

For more information, contact the Coastal Georgia Botanical Gardens at 912-921-5460 or email elubrani@uga.edu.

October 20, 2015 Pesticide Safety and Handling Training Class

The Harris County Extension office in Hamilton will be hosting a Pesticide Use, Safety and Handling Training class for commercial pesticide license holders on Tuesday, October 20, 2015 from 8:40am - 3:45pm. Earn five hours of Georgia Commercial Pesticide Credit to apply in 15 categories including 21, 22, 23, 24, 25, 26, 27, 31, 32, 35, 36, 37, 38, 39 or 41.

Find registration info online at www.ugagriffincontinuinged.com and look under “Upcoming Events” or call (770) 229-3477 or email conteduc@uga.edu. Pre-registration is $40.00 or $50 at the door (Space is limited so register early). The class will be held at 121 N Old College St Hamilton, GA 31811.

October 22, 2015 Pollinators – Home Gardening

Home Gardening Seminar. A look at the value of pollinators with an Introduction to beekeeping. The seminar is free of charge. Contact Douglas County Library at 777-920-7172 to get on the roster. Seminar will be held at Douglas County Library 6810 Selman Drive Douglasville, GA 30134.

November 2-4, 2015 Brantley Country Area Blueberry Meeting

Annual Meeting of Georgia Association of County Agricultural Agents is scheduled to be held November 2-4, 2015 at UGA Tifton Campus, Conference Center, Tifton, GA. October 23 is the deadline to register. Further information is available at http://www.gacaa.com/ampic.htm

November 5, 2015 Brantley County Area Blueberry Meeting

Brantley County Extension will hold a fall blueberry meeting on November 5, 2015. The meeting will begin at 6:30 pm. We will have presentations on trace mineral applications, bark management and fungicides. Please call Ashley Mesa at the Brantley County Extension office at 912-462-5724 to RSVP. Meeting will take place at Okefenoke REMC 14384 Cleveland St Nahunta, GA 31553.
November 15-18, 2015 Annual Meeting of Entomological Society of America

The Entomological Society of America will co-locate their Annual Meeting with the American Society of Agronomy, the Crop Science Society of America, and the Soil Science Society of America in Minneapolis, Minnesota, November 15-18, 2015.

Connect with 7,000 leading scientist in academia, government, and industry who will share the latest research, industry advances, and product development related to entomology and the agricultural societies. This important event offers you valuable opportunities to gain exposure for your research, learn what's new and exciting, and make valuable one-on-one connections with the top scientist from all four societies. Registration includes access to the American Society of Agronomy, Crop Science Society of America, Soil Science Society of America, and the Entomological Society of America. For further information please visit http://www.entsoc.org/entomology2015

January 7 - 10, 2016 Southeast Regional Fruit & Vegetable Conference

The Southeast Regional Fruit and Vegetable Conference is the LARGEST educational conference and trade show in the southeastern United States that unites growers, vendors and suppliers. Anyone with an interest in specialty crop agriculture is invited to be a part of this event. Through more than 80 hours of educational sessions, we will address food safety concerns, specific commodity issues on production practices and increased yields, and marketing strategies. Participate in our growing and dynamic TRADE SHOW, where you’ll browse through more than 85,000 square feet of space filled with key suppliers and growers.

There has never been a more vital time for the fruit and vegetable industry to come together for a brighter and more profitable future!

Further information is available at http://www.seregionalconference.com

description
Dear Readers:
UGA Integrated Pest Management Newsletter is a monthly journal for Researchers, Extension agents, Extension specialists, and others interested in pest management. It provides most updated information on legislation, regulations, and other issues concerning pest management in Georgia.

Do not regard the information in this newsletter as pest management recommendations. Consult the Georgia Pest Management Handbook and other Extension publications, or appropriate specialists for additional information.

Your input in this newsletter is encouraged. If you wish to be added to the mailing list, just call us at 706-542-1320. Or write us:
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