21st PSSST Annual Meeting and Scientific Conference
Apo View Hotel, Davao City
May 2-5, 2018

FIRST ANNOUNCEMENT

Innovations in Soil Science for Improved Ecosystem Services

Soil is a very diverse ecosystem and plays an important role in ecological cycles for carbon, nitrogen, oxygen, water and nutrients. Soil also contributes to ecosystem services ranging from waste decomposition to acting as a water filtration system to degrading environmental contaminants.

The **21st PSSST Annual Meeting and Scientific Conference** is being organized to showcase innovations in soil science for improved ecosystem services. This event is one way of strengthening collaboration and networking among soil science experts and partners and also in providing current information on innovations in soil science. It is also a great opportunity of showing and sharing research outputs that will definitively contribute in addressing soil-related problems.

This 21st PSSST Annual Meeting and Scientific Conference will be held at **Apo View Hotel, Davao City** on **May 2-5, 2018**. This year's theme is **Innovations in Soil Science for Improved Ecosystem Services.**

The following are the schedule of fees:

1. Registration Fee
   a. Regular members – **Php 6,500**
   b. Rate for students – **Php 3,250**

   Registration fee includes payment for the conference kit, hotel accommodation for 3 nights (May 2, 3 and 4) and meals and snacks during the conference (breakfast, lunch, dinner, and snacks on May 3 and 4; while breakfast, lunch and snacks on May 5). However, tour fees are excluded in the registration fee.

2. Membership and annual fees:
   a. Annual dues (for regular members) – **Php 200**
   b. Membership fee (for new members) – **Php 100**
   c. Life membership fee (optional for new and regular members) – **Php 2,000**

Call for papers

Volunteer speakers (for oral and poster presentation) should submit an **extended abstract** not later than **March 15, 2018**. Extended abstracts must be an original work by the author(s), not currently under review in the same form by another entity and not submitted elsewhere prior to the notification date.

Format of the extended abstract

The author(s) should submit an extended abstract for oral or poster presentation following the prescribed format.

Title (Calibri, 12 pt, bold, centered)

Author name/s (Calibri, 12 pt, centered)

Author's position, affiliation and full address (Calibri, 12 pt, centered, italicized)
Author's telephone, fax and e-mail address (Calibri, 12 pt, centered, italicized)

Introduction

The body of the extended abstract begins here. It should provide brief information about the study. It states the problem and the objectives of the research study.

Methodology

This part briefly explains the materials and methods applied in the conduct of the study in relation to the objectives.

Results and Discussion

This part briefly explains the major and significant results of the study. Include the most significant figures and/or tables related to the highlights of the study. Complete caption describing the graph and/or table should be placed above the table or below the figure.

Conclusions

This part should provide the key implication of the highlights of the study and the recommendation.

Keywords: Please provide a maximum of 5 keywords immediately after the abstract.

References

The **list of reference** should follow the APA format of citation. Below are some examples:

Iijima M., Morita S., Zegada-Lizarazu W., & Izumi Y. 2007. Water Acquisition from the seasonal wetland and root development of the intercropped pearl millet in flooding ecosystem of northern Namibia. Plant Prod. Sci. 10 : 182-188

Kato Y., Kamoshita A., Yamagishi J., Imoto H., & Abe J. 2007. Growth of rice (Oryza sativa L.) cultivars under upland conditions with different levels of water supply. Plant Prod. Sci. 10: 3-13

Reminders to author(s)

1. Do not include scientific or engineering symbols, acronyms, numbers, or lists inside the abstract. It should be single-spaced in **12 pt Calibri**. Authors are requested to limit the extended abstracts to maximum 3 pages (ca **1000 words**) including graphs and/or tables.

2. Avoid general and plural terms and multiple concepts (avoid, for example, "and", "of") in the keywords. Use abbreviations sparingly; only those firmly established in the field may be eligible. These keywords will be used for indexing purposes.

3. Author(s) may opt not to include their submitted extended abstract in the printing of the Conference Proceedings. Just indicate upon submission of extended abstract.

4. Author(s) can present a study as oral paper or as a poster at the same time. However, they can only compete in one category, the Best Paper or Best Poster Competition. Author(s) must indicate to what category they would like to compete upon submission of the extended abstract.

5. The author(s) should submit a full paper to be qualified for the Best Paper Competition. Prizes await the winners for Best Paper (Junior and Senior Category) and Best Poster competition.

Cover page of the extended abstract for submission

Cover page of the abstract

The 21st PSSST Annual Meeting and Scientific Conference.
Theme: Innovations in Soil Science for Improved Ecosystem Services
Date and Venue: May 2-5, 2018, Apo View Hotel Davao City

Abstract paper submitted for: *Please mark **X** on the preferred presentation and indicate if for competition:*

_____ **Oral paper presentation**
_____ **Poster paper presentation**

Category: *Please mark **X** on the chosen category*
_____ **Senior Category**
_____ **Junior Category**

Title of Paper:	

Author(s):	
Presenting Author: *	
Corresponding author's email address:	
Corresponding author's contact number:	
For inclusion in the printing of the conference proceedings (Yes or No)	

Sample extended abstract that can serve as a template (see next page):

Characteristics and Fertility Status of Conducive and Suppressive Soils to Panama Disease

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Introduction

Banana is an important agricultural crop in the Philippines. But this million-dollar industry is at risk of the dreadful disease caused by *Fusarium oxysporum* f.sp. cubense Tropical Race 4 (TR4; known as Panama disease, PD), a soil-borne fungus, that invades the vascular system of the banana plant through the roots (Ploetz, 2005). It is widely observed (Stotzky and Martin, 1963) that the rate of PD spread is faster in some soils than in others, suggesting that some soils are suppressive to the disease, while other soils are not. Several studies (Stotzky and Martin, 1963; Domínguez et al., 2003) revealed the importance of soil edaphic properties with respect to the expression of PD symptoms in banana. In this study, we hypothesize that soil properties can be used as proxy in predicting the occurrence or absence of PD in banana plantations. Such a holistic rethinking is perceived to optimize the use of certain land for banana production leading to a sound and sustainable management of these soils. The aim of this study is to elucidate the physical and chemical properties of suppressive and conducive soils to PD and to evaluate the fertility constraints of these soils.

Methodology

The study sites are banana plantations in San Jose and Maribulan, Alabel, General Santos. The selection of these areas was based on: (1) the suggestion of our industry partner, which is a large-scale banana plantation company in the area and (2) the initial results of the PCR analysis of plant and soil samples that were collected in the study area which tested positive for Foc TR4 . Conducive soils were collected from areas or plots where there were observed PD symptoms, whereas suppressive soils were collected from areas or plots where there were no PD symptoms (Domínguez et al., 2003) using a stratified random sampling scheme. Soil samples were collected from three depths: 0-10, 10-30, and 30-50 cm using a Dutch auger. Soil physical (particle size distribution) and chemical (pH, organic matter (OM), available P, total N, exchangeable Ca, Mg, Na, and K, cation exchange capacity (CEC), and Boron (B)) analyses were performed at the Bureau of Soils and Water Management in Davao City. Site qualities were evaluated using the methods described by Navarrete et al. (2013). All data were analyzed using JMP version 11 software.

Results and Discussion

Soil characteristics. Significant differences ($P<0.05$) in OM, total N, available P, exchangeable Ca and K between suppressive and conducive soils (0-10 cm) were observed in Maribulan (n=5) and San Jose soils (n=9). Conducive soils had high OM, total N, available P, exchangeable K and B, but with low exchangeable Ca, Mg, and Na compared to the suppressive soils. These results suggest that soil characteristics can be a good predictor for differentiating suppressive and conducive soils, which will

optimize the use of land for banana production leading to a sound and sustainable management of these soils.

Differences of soils based on soil properties. All studied soils are differentiated into the 2 Principal Components (PC) (Fig. 1), with PC1 and PC2 explaining 48% and 16% of the total variance, respectively. In PC1, Maribulan contributed to the positive loadings, whereas San Jose soils contributed to the negative loadings. High CEC, clay and exchangeable Ca and Mg are responsible for the largest positive loadings, whereas sand contributed to the negative loadings. With some overlaps, conducive (positive loading) and suppressive (negative loading) soils characterized the PC2. Total N, OM and B are responsible for the positive loadings, whereas total P and silt are responsible for the negative loadings. Together, these results suggest that PCA analysis was applicable in differentiating study sites and into suppressive and conducive soils, which conform to our hypothesis that soils can be used as proxies in predicting the presence or absence of PD in those sites studied.

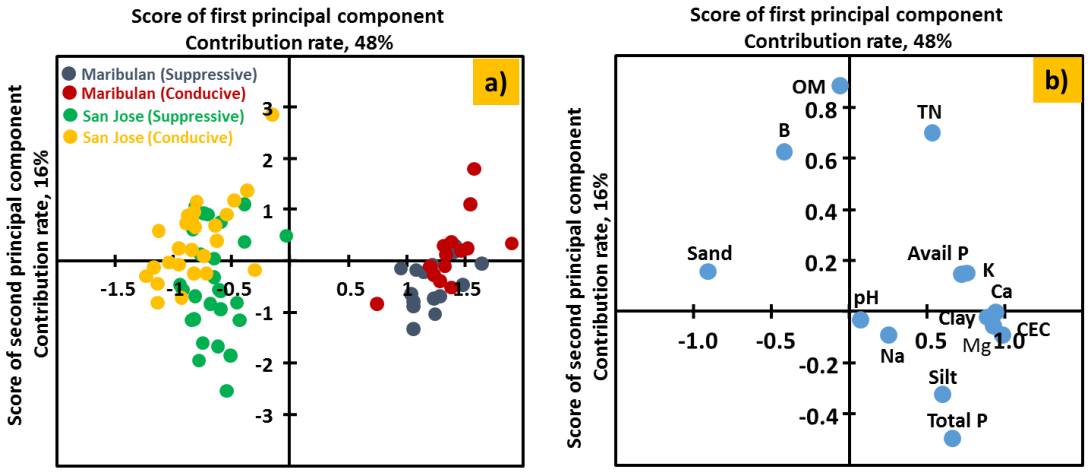

Figure 1. Plots of the first and second principal components (PC) extracted from the principal component analysis (PCA) of all selected soil properties. (a) distribution according to areas and (b) distribution according to soil properties after varimax factor rotation. The first PC is the line through the data points along which the variance is maximized.

Nutrient status. Soil texture, soil pH, available P and exchangeable Ca, Mg and K are suitable for banana production, whereas OM and total N are the limiting nutrients. Application of N-containing fertilizer is needed for improved banana production.

Conclusion

Conducive soils have high OM, total N, avail P, exchangeable K and B, but with low exchangeable Ca, Mg, and Na compared with suppressive soils. PCA was applicable in differentiating study sites into suppressive and conducive soils and conforming our hypothesis that soils can be used as proxies in predicting the presence or absence of PD in those sites studied. Nitrogen is the most limiting nutrients in the soils. Finally, the results of this study provide confirmation that soil properties can, indeed, be used as proxies in predicting whether an area is suppressive or conducive to the growth of Panama Disease.

References

Domínguez, J., Negrín, M.A., and Rodríguez, C.M. 2003. Evaluating soil sodium indices in soils of volcanic nature conducive or suppressive to Fusarium wilt of banana. Soil Biology & Biochemistry. 35: 565-575.

Navarrete, I.A., Tsutsuki, K., and Asio, V.B. 2013. Characteristics and fertility constraints of some degraded soils in Leyte, Philippines. Archives of Agronomy & Soil Science. 59: 625-639.

Ploetz, R.C. 2005. Panama disease: An old nemesis rears its ugly head. Part 2. The Cavendish era and beyond. APSNET feature story. APS. St. Paul, Minnesota.

Stotzky, G., and Martin, R.T. 1963. Soil mineralogy in relation to the spread of Fusarium wilt of banana in Central America. *Plant and Soil*. 16: 317-337.

Submit the Extended Abstract with cover page to:

Dr. Nenita Dela Cruz
Chair, Technical Paper Committee
pssst1998@yahoogroups.com and nenet_dc@yahoo.com

Call and submission of nominations for 2018 Achievement Award

Please send your nominations with supporting documents not later than March 10, 2018 to

Ms. Redia N. Atienza
Chair, Awards Committee
pssst1998@yahoogroups.com and redia_neypes@yahoo.com

For consistency and continuity of the selection policy, the Committee shall adopt the criteria used for the 1998 and 1999 PSSST Achievers Awards, which are as follows:

"Men and women, soil scientist, teachers, administrators or managers of organization involved in soil-related activities, who have:

a) significantly contributed to or
b) have done promising work for the advancement of soil science or
c) had an impact in the economy of the country,

shall be given the award. They may have already passed away (posthumous) retired or still actively working. Foreign national/who have spent significant length or time in the Philippines and who met the above criteria could qualify for the award."

For further information, please contact any of the following:

Ms. Rowena L. Castillo
Press Relations Officer
International Rice Research Institute
Phone: 0930-968-6935 Email: r.castillo@irri.org

Ms. Angelita C. Marcia
Secretary
Bureau of Soils and Water Management
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Dr. Fe B. Perlas
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Important dates to remember

March 15, 2018 - Deadline for submission of extended abstract

March 30, 2018 - Start of notification of acceptance of extended abstracts for oral and poster presentation

April 15, 2018 - Deadline for confirmation of attendance for processing of hotel accommodation Participants who will confirm their attendance beyond April 15 are requested to handle their own accommodation.

March 10, 2018 - Deadline for submission of nomination for Achievement Award

April 15, 2018 - Deadline for submission for full paper for Best Paper competition