

Paper submission to LRRD

Dari: Sugi Harto (sgh_undip@yahoo.co.id)

Kepada: reg.preston@gmail.com; preston@lrrd.org

Tanggal: Minggu, 17 April 2022 06.23 WIB

Dear Prof. Preston,

Please find the paper attached entitled "Potential of unripe banana meal as a functional feed ingredient for broiler chickens" for being considered for publication in LRRD.

Thank you very much for your consideration.

Best regards,

S Sugiharto



LRRD - Manuscript April 2022.docx

34kB

220417sgh_u

Dari: Reg Preston (reg.preston@gmail.com)

Kepada: sgh_undip@yahoo.co.id

Tanggal: Minggu, 17 April 2022 23.41 WIB

Hello Sugihato

I am confused by what appear to be “confusing stat ends in the ABSTRACT and in the CONCLUSIONS!!

“In conclusion, unripe banana meals had a good potential as prebiotic for broiler chickens as they could support the growth of *L. casei* during fermentation.

L. casei-fermentation is not recommended for unripe banana meals as it decreased antioxidant activity of unripe banana meals.

Please clarify what seem to be opposing ideas on the two statement!!

Warm regards

Reg Preston

Professor T R Preston, PhD, DSc

Investigador Emérito
Centro para la Investigación en Sistemas Sostenibles
de Producción Agropecuaria (CIPAV),
Carrera 25 No 6-62 Cali, Colombia

Senior Editor, Livestock Research for Rural Development
<http://www.lrrd.org> (The international on-line journal on sustainable livestock-based agriculture)

Tropical Animal Production
<http://www.cipav.org.co/TAP/tapindex.htm>

Matching Ruminant Production Systems with Available Resources in the Tropics and Sub-Tropics
http://www.cipav.org.co/PandL/Preston_Leng.htm

El sitio Web sobre Producción Tropical Sostenible (Universidad de los Llanos, Colombia)
www.producciontropicalsostenible.info

Web site (old) of MEKARN I

<http://hostcambodia.com/mekarn/indexold.htm>

On Sat, Apr 16, 2022 at 6:24 PM Sugi Harto <sgh_undip@yahoo.co.id> wrote:

Dear Prof. Preston,

Please find the paper attached entitled "Potential of unripe banana meal as a functional feed ingredient for broiler chickens" for being considered for publication in LRRD.

Thank you very much for your consideration.
Best regards,

|| S Sugiharto

Re: 220417sgh_u

Dari: Sugi Harto (sgh_undip@yahoo.co.id)

Kepada: reg.preston@gmail.com

Tanggal: Senin, 18 April 2022 05.35 WIB

Dear Prof. Preston,

Thank you very much for your response. We have revised and clarified the "opposing statement" as stated in the previous manuscript.

The revised manuscript is attached in this email.

Once again, thank you very much. Wish you are always healthy.

Best regards,

Sugiharto



LRRD - Manuscript April 2022.docx

35.5kB

(Tidak Ada Judul)

Dari: Reg Preston (reg.preston@gmail.com)

Kepada: sgh_undip@yahoo.co.id

Tanggal: Rabu, 20 April 2022 05.21 WIB

Helo Sugiharto

I have a vision problem with degenerated Maculas in both eyes hence the enlarged text.. Excuse the mistakes.

TRP

These are my comments and queries.

Excuse my ignorance but "functional" feed needs to be explained along with "scavenging" and "anti-oxidant"

Chemical compounds seem to be more important than nutrients in the broiler industry in Indonesia!!

Another major issue is the term "fermentation". The active agent must, I think, always be defined (eg: LAB, "Yeast-fermented " The organism used has a major effect on the outcome

I was raised on a small family dairy farm in North West England. Living and working in that environment told me that the best way to increase production was to improve the welfare of animals – mainly by improving the feed supply (making better hay!!) and to avoid stress when possible... which by definition is the opposite of welfare).

It seems that in the broiler industry stress is a way of life and is a major topic for research. But treating stress with chemicals -- even if they are from natural sources -- does not appear to me as a sensible strategy for the future.

I attach my comments on your paper, copying statements from the text to indicate areas of concern..

I confess that I am confused by many of the elements that seem to be accepted as an integral part of modern Broiler production

I look forward to your comments but I confess to uncertainty as to the relevance of publishing your paper as the conflict between fermentation technology and “functional” attributes has still not been resolved.

Warm personal regards,

Reg Preston

Excerpts from the text to indicate areas of concern

“Functional feed is an alternative to AGP and anti-stress as it contains bioactive components that can benefit farm animal health and growth (Sugiharto et al 2018).

It is suggested to provide the fermented unripe banana meals especially from Klutuk cultivar as functional feed ingredients for improving the intestinal ecology and antioxidant activity of broiler chickens.

“Broiler production is often carried out in a vast and intensive manner, causing stress, physiological abnormalities, and poor health.

“”Unripe banana could be a functional feed for broilers due to its high level of fructo-oligosaccharides (FOS), galacto-

oligosaccharides (GOS) and resistant starch (Anyasi et al 2013; de Andrade et al 2021), which can act as prebiotic for broilers”

“Fermentation is generally regarded as a simple method to produce functional feeds for broilers.?”

“”Fermentation with the lactic acid bacteria converts sugar into lactic acid that can inhibit the growth of pathogenic bacteria and improve the intestinal ecology and histomorphology of broilers” (Sugiharto et al 2018; Sugiharto and Ranjitkar 2019).

“The aim of the study was to investigate the effect of *L. casei*-fermentation on the lactic acid bacteria (LAB) counts, chemical composition and antioxidant activity of different cultivars of unripe bananas”’.

‘In this study, *L. casei* was used to ferment the unripe banana meals **to improve the nutritional and functional properties of the unripe banana meals**. The aim of the study was to investigate the effect of *L. casei*-fermentation on the lactic acid bacteria (LAB) counts, chemical composition and antioxidant activity of different cultivars of unripe bananas’.

‘ The rest of the fermented unripe banana was then sun-dried and used for proximate, antioxidant activity and short chain fatty acids (SCFA) analyses’.

The antioxidant activity of the sample was determined by the 2,2-diphenylpicrylhydrazyl (DPPH) method according to Wu et al (2009) with minor modifications. The absorbance was measured at 515 nm. Antioxidant activity is indicated by the percentage of inhibition’

‘It was apparent that fermentation increased the number of LAB in all cultivars of unripe banana meals. This finding was in accordance with Sugiharto and Ranjitkar (2019) revealing that fermentation increased LAB counts of feed ingredients. Also, our finding suggested that, irrespective of banana cultivars, unripe banana meals could support the growth of LAB especially *L. casei*. Hence, unripe banana meals could be exploited as prebiotic (pr probiotic??) for broiler chickens. Indeed, unripe banana meals contain high amounts of FOS, GOS and resistant starch that can be substrate for the growth of LAB in the intestine of chickens (Anyasi et al 2013; de Andrade et al 2021).’

‘Similarly, Sugiharto et al (2020) reported that fermentation (using shrimp paste rich in *Lactobacillus* sp.) **increased crude fibre content in rice bran.**(because it reduced the nore souble carbohydraes..TRP)!!

In Table 1 it is obvious that fermemntation increases LAB.

‘It was reported in this current study that antioxidant activity of unripe banana meals decreased with the *L. casei*-fermentation process (Table 3). This finding was in accordance with Sugiharto et al (2020) showing the decrease in antioxidant activity of rice bran with LAB-

fermentation. The latter investigators further **suggested that fermentation may damage the phenolic compounds resulting in poor scavenging activity of phenolics against free radicals.** It was shown in this investigation that the extent of reduction in antioxidant activity varied among the banana cultivars. Apart from the difference in the antioxidant activity across the raw unripe banana cultivars (that are greatly affected by genotype, growing condition and ripening stages [Arvanitoyannis et al 2009]), the different degree in phenolic destruction during fermentation may be responsible for the different extent of reduction in antioxidant activity of the unripe banana meals.‘

‘Conclusion

It is suggested to provide the fermented unripe banana meals especially from Klutuk cultivar as functional feed ingredients for improving the intestinal ecology and antioxidant activity of broiler chickens. ‘

TRP

But fermentation reduces the “antioxidant” activity of unripe bananas!! (Table 3).

So what are the benefits of fermentation (with LAB)?? (and how to explain that a sipplement of yeast-fermentatikon rice improves broiler health and productivity)??

The tern “fermemtation”is too broad and must be described with whiach organism??

DPPH scavenging activity

Does this compound occur only in unripe bananas or in all 'funcional' feeds?

I hope I have ben able to express y concerns.

Warm regards

Reg Preston

Professor T R Preston, PhD, DSc

Investigador Emérito
Centro para la Investigación en Sistemas Sostenibles
de Producción Agropecuaria (CIPAV),
Carrera 25 No 6-62 Cali, Colombia

Senior Editor, Livestock Research for Rural Development
<http://www.lrrd.org> (The international on-line journal on sustainable livestock-based agriculture)

Tropical Animal Production
<http://www.cipav.org.co/TAP/tapindex.htm>

Matching Ruminant Production Systems with Available Resources in the Tropics and Sub-Tropics
http://www.cipav.org.co/PandL/Preston_Leng.htm

El sitio Web sobre Producción Tropical Sostenible (Universidad de los Llanos, Colombia)
www.producciontropicalsostenible.info

Web site (old) of MEKARN I
<http://hostcambodia.com/mekarn/indexold.htm>

(Tidak Ada Judul)

Dari: Sugi Harto (sgh_undip@yahoo.co.id)

Kepada: reg.preston@gmail.com

Tanggal: Rabu, 20 April 2022 11.45 WIB

Dear Prof. Preston,

Many many thanks for your comments and suggestions.

Here we have revised the manuscript thoroughly as attached in this email. Wish it is more appropriate.

Once again, thank you very much.

Best regards,

Sugiharto



LRRD - Manuscript April 2022-rev.docx
38.2kB

Re: 220417sgh_u

Dari: Sugi Harto (sgh_undip@yahoo.co.id)

Kepada: reg.preston@gmail.com

Tanggal: Selasa, 3 Mei 2022 10.41 WIB

Dear Prof. Preston,

Excuse me, regarding our submission and revision on the paper (220417sgh_u), we have revised and re-submitted to you on 20 April 2022. Could you please to update us about the status of our manuscript??

Thank you very much for your kind response.

With my best regards,

Sugiharto



LRRD - Manuscript April 2022-rev.docx
38.2kB

Re: 220417sgh_u

Dari: Reg Preston (reg.preston@gmail.com)

Kepada: sgh_undip@yahoo.co.id

Tanggal: Kamis, 5 Mei 2022 06.07 WIB

Dear Author

Your paper is accepted and will be published in the first of June issue of LRRD. Please remind me one week before publication date if you have not received the URL of the proof.

Please ensure in your final revision that you have followed exactly the instructions in notestoauthors. Remember the HTML version is a mirror copy of the original (edited) Word file so please ensure formatting and style are correct (eg: line spacing, headings, reference list ...). LRRD encourages the inclusion of photos in articles that contain topics that relate to different local or regional resources (vegetative and animal species, by-products, breeds/varieties), when these are used in the production systems that are the subject of the research. The sources of the photos should be indicated.

If you wish to change something, in view of the above, please revise and send again.

Please ensure your co-authors have all agreed to the final version. You will receive a link to a copy of the HTML version of the paper on the LRRD Proof Web site. This is to check that the proof reflects the final approved version. Only in special circumstances is it allowed to add or make changes to the proof.

Regards

TRP

Professor T R Preston, PhD, DSc

Investigador Emérito
Centro para la Investigación en Sistemas Sostenibles
de Producción Agropecuaria (CIPAV),
Carrera 25 No 6-62 Cali, Colombia

Senior Editor, Livestock Research for Rural Development

<http://www.lrrd.org> (The international on-line journal on sustainable livestock-based agriculture)

Tropical Animal Production

<http://www.cipav.org.co/TAP/tapindex.htm>

Matching Ruminant Production Systems with Available Resources in the Tropics and Sub-Tropics

http://www.cipav.org.co/PandL/Preston_Leng.htm

El sitio Web sobre Producción Tropical Sostenible (Universidad de los Llanos, Colombia)

www.producciontropicalsostenible.info

Web site (old) of MEKARN I

<http://hostcambodia.com/mekarn/indexold.htm>

On Mon, May 2, 2022 at 10:42 PM Sugi Harto <sgh_undip@yahoo.co.id> wrote:

Dear Prof. Preston,

Excuse me, regarding our submission and revision on the paper (220417sgh_u), we have revised and re-

submitted to you on 20 April 2022. Could you please to update us about the status of our manuscript??

Thank you very much for your kind response.
With my best regards,

Sugiharto