



SDI Review Form 1.6

PART 1:

Journal Name:	<u>American Journal of Experimental Agriculture</u>
Manuscript Number:	2013_AJEA_4788
Title of the Manuscript:	PRE-TUBER APPLICATION OF FLURIDONE: EFFECT ON VEGETATIVE GROWTH AND SEED TUBER DORMANCY IN YAM (<i>D. alata</i>)
Type of the Article	Research paper

General guideline for Peer Review process is available in this link:

[\(http://www.sciencedomain.org/page.php?id=sdi-general-editorial-policy#Peer-Review-Guideline\)](http://www.sciencedomain.org/page.php?id=sdi-general-editorial-policy#Peer-Review-Guideline)

- This form has total 7 parts. Kindly note that you should use all the parts of this review form.



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PART 2: Review Comments

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Compulsory REVISION comments	A pot study (artificial conditions) conducted a single time does not usually represent a study of adequate rigor to merit publication. The fact that none of the PGR trmts had any impact on the key experimental variable = dormancy period would further mitigate against considering this paper for publication as a full paper. There are many cases where the authors appear to be suggesting that the trmt effects were important – but the statistics clearly indicate that there were no “real” differences – and any differences that were observed were transient and of limited overall impact in terms of growth, yields or most importantly – tuber dormancy.	three (not one) carefully designed, time demanding experiments/ studies (one following the other) were conducted to address the object of this paper. -The choice of method (pre-tuber application) and the use of fluridone to inhibit the induction of seed tuber dormancy is unique, has not been reported earlier. Thus worth publishing. - the point: ‘The fact that none of the PGR trmts had any impact on the key experimental variable = dormancy period would further mitigate’ is not good enough justification for rejection. This work is part of a larger study and results are quite indicative. Reviewers 1 and 2 understood this work better than Reviewer 3. Well.. I suppose that the revised vision is clearer



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	The lack of explanation of why the ABA+FLU trmt was included is not helped by the repeated confusion as to which was applied first in the ABA+FLU trmt – the fluridone or the ABA – see the highlighted sections in the paper for this issue. Specific suggestions for improvement of the paper Title – needs to be revised as “pre-tuber” is not an adequate descriptor .. and should include the fact that ABA was also tested. See revised version on the MS.	The relationship between FLU and ABA was highlighted in the introduction. To emphasis the reason why ABA and FLU+ABA treatments were included, section 2.1 has been revised (see red lines) to state why. fluridone was not applied to seed tubers as imagined by this reviewer. This reviewer is used to the usual practice of applying PGRs on tubers. -‘pre tuber’ application of fluridone to the PNC of the plant is a key focus of this paper. -The revised title as suggested does not reflect the import of this paper and the method used. The reviewer’s suggested title is: ‘Effect of applying fluridone and ABA to yam (<i>D. alata</i>) seed tubers on the vegetative growth, tuber yield and dormancy
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	L6 – should indicate what Fluridone is (a PGR/herbicide) L 8 – should indicate what the objective is – to see if the flu will decrease dormancy thereby allowing faster replanting L18 – why 1mL? Why use ABA? Need ti mention that it is thought to extend dormancy (although it did not in this study). L21 – need to clearly indicate when the sprouting data was collected and after storage under what conditions. L 55 – this is not really a definition of dormancy – instead it is description of one adaptive value of dormancy. L 80 – as in vitro cultures can be started at any time – would it therefore not be possible to stagger the cultures so that materials were breaking dormancy at different times?	This was defined in the introduction (see page 3), M &M etc This was defined in the abstract (see first line) and introduction (see last line). An objective must be measurable- ‘thereby allowing faster replanting’ is not evaluted in this study. Importance of ABA has been addressed already. The revised version of this work has made this even clearer (see section 2.4). This may be possible in in vitro cultures. Staggered planting dates is also possible.
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	L 82 – provide the supplier and the complete chemical name for fluridone L 85 and elsewhere – the paper does not stay consistent regarding whether multiple references are presented alphabetically or chronologically. L118 – should indicate how long the tubers had been in storage prior to use. L 120 – why grow in pots – especially as pots are a highly artificial growth environment which will almost inevitably lead to “abnormal” growth relative to field conditions? L 120 – were the fertility levels provided adequate to allow “normal” crop growth? L 137 – injecting chemicals at one point into a plant is not a “common” procedure – especially if the objective is to have this knowledge applied by growers. Since fluridone is a herbicide – why not apply it as such. Similarly ABA is commonly applied as a foliar spray? This seems like a very unusual approach to applying a product and should be clearly explained why this approach was taken common and practical foliar application.	In the text, they are stated according to year of publication; the earliest mentioned first. For the size of mini setts (25 g) planted, 7 inch pot adequate and did not affect tuber development or dormancy. Moreover, the pots were perforated and were arranged on the open field. The weight of the seed tubers that were produced by 25 g mini sets were within the same range as those produced by growth the setts directly in the soil. The target plant organ in this study was PNC, so why spray.
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	L 140 – see previous comments regarding the need to be clearer and more consistent as to a) why ABA+FLU tested and b) which was applied first and why. L 212- how is it possible to have 3 replicates yet to have 24 plants per trmt – this suggests that each replicate contained 8 plants – yet they were grown in small pots = won't fit 8 plants. This is confusing. L231 – all captions on all figures and tables should be more complete and descriptive L 256 and throughout the paper – no need to present data in both the text and in the tables L 267 –and throughout the paper- avoid discussing effects if they are not statistically significant Discussion – this tends to just repeat the data presented in the results section – avoid doing this. As there were few significant trmt effects and they were of limited relevance to the main objectives = shortened dormancy - there is little need to present data	This has been taken care of. It is FLU + ABA Please see insertion on 2.5 for emphasis. Yes, there where 24 plants per treatment with one plant per pot. Thus there were 8 plants/8pots per replicate. Noted and addressed Noted and addressed
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	about trmt effects observed in other crops. Instead simply the discussion to suggestions as to why the trmts did not work as anticipated and then indicate what the next step might be. L327 and 334 – the order of trmts is directly contradictory. See also the materials and methods on (L140) Also see in the various tables the order of FLU + ABA or ABA+Flu changes from table to table. Which is it?	
<u>Minor</u> REVISION comments		
<u>Optional/General</u> comments		