

Agricultural Marketing System - AMS

Postscript 19 May 2012

ZAMIS or ZAMS or AMS (Agricultural Marketing System) is even much more relevant today than it was in December 2010. And Donor indifference is still rampant.

A large part of the problem is creation of the web database system, which takes time (maybe 3 months?) and is done effectively with no guarantee of system adoption by buyers and by sellers.

There is a possibility to start with an AMS-lite – which will use Twitter or Googlegroups-with-gmail in order to fulfil most of the functionality of such a web database system. What is missing can be done with either spread sheets or some simple free desktop application (on the buyer's side of course – and which can be developed by the central organisation).

What probably cannot be done without (i.e. unlike the web database system) is genuine support by some of the buyers and by Government. As with the successful Malawian inputs subsidy, the Donors can be dispensed with if indeed they wish to ignore this important project.

Finally, note that there are some commonalities and similarities between sfmss – small farmer microfinance software system – and ams – find them at <http://cd3wd/sfmss/> and at <http://cd3wd/ams/>

Alex Weir, Gaborone, 19 June 2012

Appendix – some practicalities/ detail on how the Google groups thing would work:

The complete content would be on the subject line only:

Seller or buyer ID (as email address)

Selling or buying

Geographical location

Produce type

Grade

Quantity

Date or date range

Price

Then searches can be done using gmail on the subject line only

All emails before a certain date would be deleted or archived to a different directory (i.e. not the inbox) so that searches did not find old and out-dated records. This may involve buyers and d/or sellers repeating long-term emails every week or every few days do that they remain searchable.

To get so much info in a subject line means use of short codes – this should not be a problem, but will need lookup cards to be printed and dvd player videos to be produced and distributed.

The subject lines can be copied from the gmail window and dropped into a spread sheet by the buyers for manipulation and further searching and sorting..... in fact commas can be used in the subject line to separate fields, and the shading and copying can drop the page into a textfile which is named ams.csv (comma-separated-file). That can then be clicked on to open up as a spread sheet with the separate fields already in place.... Standard excel filters can then be applied to identify sellers and transactions which are attractive and which will be actioned.

Alex Weir, Gaborone Botswana, 19 May 2012

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<http://cd3wd.com/ams/>

Agricultural Marketing Information System – Online Database – draft ver 3 – 20/11/2010

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Problem:

- 1. Producer/seller of agricultural produce expends a lot of time and effort to find a buyer**
- 2. Effort is mainly phoning around possible buyers – this is very labour intensive and of course costly. Alternative is driving around, which is also time and money consuming**
- 3. Failure can result in produce going rotten and/or becoming low-grade**
- 4. Marketing cost has to be absorbed by the enterprise**
- 5. People without easy access to phone and transport have even larger problems. And such people usually have lower volumes of produce to sell.**
- 6. Additionally there is often insufficient knowledge of current wholesale and retail prices for the produce which is being sold.**

Possible solutions:

- 1. Group emails from each buyers to all sellers, and similar group emails from each seller to all buyers – detailing produce, quantity, grade, price and date range of availability. Followed by instant messenger, emails, phone calls or physical meeting to cement deals. Negatives – large**

volume of internet traffic in relation to number of deals done; large volume of reading to be done to glean something of use – i.e. tedious on PC and impossible on smart phone.

- 2. Physical organisation of traditional market places in known locations on known dates. Buyers and sellers both come physically with produce, money and transport. Negatives – maybe OK for onions, tomatoes, cattle etc but less useful for grain crops**
- 3. Producers Cooperative or Marketing Cooperatives are formed to coordinate bulking and scheduling of produce sales. Negatives – problems sometimes with trust and internal fraud.**
- 4. Online database which records:
 - a. Crop**
 - b. Grade**
 - c. Quantity**
 - d. Price or price range**
 - e. Location (note that seller and buyer can offer 1 or more location/price pairs – e.g. farm, collection point or urban center). Ideally the location is a grid reference or GPS reference.**
 - f. Date and time or date range**
 - g. Validity period for offer – e.g. 3 days from date/time of posting sell/buy notice...****
- 5. This data is entered by both prospective buyers and prospective sellers.**

6. **Searching should be open by everyone and can be used for:**
 - a. **Sellers with small quantities seeking other sellers with whom to aggregate transport**
 - b. **Buyers seeking a group of sellers within a region or transport route of one or several products**
 - c. **Buyers seeking one large producer or trader with one or several products and good price**
7. **Sellers and buyers can at any time break into direct communication by phone or email, or they can use other features of the system, namely:**
 - a. **Buyer makes a price, location and date-time offer on all or part of sellers product(s)**
 - b. **Seller accepts such an offer**
8. **System may also have a process whereby buyer pledges a non-refundable deposit for such a deal – which may typically be 10% of produce value.**
9. **System also has a complaints and counter-complaints logging system (which is never adjudicated) but which enables probable rogue buyers and rogue sellers to be identified.**
 - a. **This system logs multiple choice events such as**
 - i. **Buyer offers only reduced price on produce handover after agreed deal**
 - ii. **Seller fails to show up on time**
 - iii. **Buyer fails to show up on time**
 - iv. **Seller stated grade was exaggerated/falsely stated**
 - v. **Buyer demands cashback from seller in case of electronic payment**
 - vi. **Etc..**

- 10. Transporters should also have access to the system and should be able to interact where buyers who prefer third party transport buy from sellers without transport.**
- 11. Sellers indicate their interests and products, and can receive adverts/messages from buyers and from inputs suppliers (e.g. agrichemical)**
- 12. Are there existing systems which do this kind of thing in other countries?**
- 13. The answer seems to be that there are a few who try, but in my estimate do not succeed – there is esoko.com in Ghana and other countries, and UzaMazao.com in Tanzania. Both tend to use SMS/text messaging, which is very expensive compared to internet usage. Both have very traditional heavy and slow websites which do not cater for low bandwidth conditions. The volumes which they seem to be running are infinitesimally small. Although they may count as successes in donor terms I would classify them as dismal failures.**
- 14. Similar systems are those which collect price information, mainly from traditional markets, and disseminate that info by sms and/or web and/or traditional radio/television. This was a big thing around year 2000, and the main drivers of that was USAID and associated organisations.**
- 15. Note that the system can also display average prices for products for which deals are done or appear to be done inside the system. This can of course be subject to abuse, since buyers can create false transactions using real or false sellers in order to try to drive down prices.**
- 16. A nice feature of such a system would be to also log retail prices, and to display seller price vs. Retail price. The system manager and maybe also general public can also view present and**

historical table and/or graph of seller vs. Retail prices, thus exposing any move by buyers and retailers to squeeze producers, sellers and consumers.

- 17. I imagine that a key aspect of the system will be this geographical positioning element which enables bulking of transportation. It will be necessary before the project starts to concentrate on whether that is a desired feature by buyers and also what form it will take. I am guessing we need to fix certainly absolute position in grid and/or GPS coordinates but also 4 distances, namely:
 - a. Km from several major consumption centres along main tarred road**
 - b. Km as above to get to main tarred road along dirt road (all-season)**
 - c. Km to get to dirt road or main tarred road along dirt road (not-all-season)**
 - d. Km which requires donkey or human carriage. Of course for the lucky locations, b,c,and d will be zero....****
- 18. Cost per kg at the consumption center can be calculated pretty accurately from a cost per kg at the seller location when the above 4 distances are known and the probable volume/mass of produce is known.**
- 19. Another key aspect may be the designation and use of collection points – which may be something as simple as ‘271 km peg on Harare->Bulawayo road’ – i.e. they do not need to be any physical structure or amenity – just a place where seller and buyer meet.**
- 20. One reason why such systems have not yet been forthcoming may be that the necessary seller hardware is literally only in 2010/11 becoming available – the3 Nokia C1 and C2 low-end internet-**

capable smart phones and the Huawei G2200C smart phone (sold by Econet Zimbabwe for US\$ 24).

21. Risks to starting up the system:

- a. Buyer interest and involvement is essential – if the buyers are onboard the sellers will follow. If the buyers see the system as a means of driving up prices they may refuse. If the sellers see the system as a way of driving down prices they may refuse.**
- b. Adoption of the phone hardware and using the internet is essential. If in addition to ZAMIS other useful schemes can come online then so much the better (internet banking would be one such system – and CABS are already operating such a system)**
- c. Bad behaviour by buyers and sellers can scupper the project. By buyers is relatively easy to rectify through government pressure; by sellers is more difficult since diffuse – exhortation does not always work as everyone knows.**
- d. Internet data pricing is problematic – unlike Mascom in Botswana, Econet Zimbabwe treat data/internet as something for the middle or upper classes – it is not possible to run data from a voice airtime topup, as it is in Botswana. This situation should be rectified before system startup – it may take high-level intervention to pressure Econet to behave better and more in the interests of the country. Moreover they have just engineered a major change in their services and may plead ‘impossible to make more changes at this point in time..’. Very poor excuse. Very bad management.**

- 22. Despite the above risks, I feel that benefits from the system would be real and significant. The necessary steps should be taken and pledged before the system starts up and/or before system construction begins.**
- 23. The system should be designed of course for multi-language prompts. And in cases where sellers are numerate but illiterate, maybe symbols or numbers should be used instead of text prompts (!).**
- 24. The system should be multi-country also, and looking forward to a sadcc or Comesa future, then cross border purchases should be possible and multi-currency transactions.**
- 25. Apart from those things, the system should be kept as simple as possible. And should be kept to core business.**
- 26. Volume-wise, we are thinking about a start of 5,000 users with growth to 1 million users within 2 years. Sales Transactions per user will be probably an average of 1 per week (?). History does not need to be kept but aggregate history will be kept.**
- 27. I would propose a SQL Server database with an ASP.net C# front end. Most logic would and should reside in the database itself, which would facilitate porting to an open source system in future and/or for other installations. The alternative to this platform would be a PHP programming together with a MYSQL database. I would recommend using my web hosting company brinkster.com in the USA – I have a very good deal with them at the moment. The only negative might be the limited database storage capacity – maybe we can work on this.**

Alex Weir, Wednesday 17 Nov 2010-11-17

28. Some additional ideas on the practicalities of the system:

29. Seller after registration inputs the following information on his produce:

- a. Crop/product
- b. Quantity
- c. Grade
- d. Date range available
- e. Location and price pair (e.g. may offer delivery at one price or collection at a lower price or delivery to an intermediate collection point)

30. Buyer inputs his produce requirements:

- a. Crop/product
- b. Quantity
- c. Location
- d. Price
- e. Date range

31. There are now at least 2 scenarios:

- a. The buyer actively searches on data input by the seller
- b. The buyer sets up requirements in advance (which may be a weekly buying pattern, subject to adjustment upwards or downwards on all or specific items), and the system

automatically searches out seller input which matches the buyer's criteria. This approach means that as soon as a seller is inputting his/her produce they can receive one or several immediate offers. It also means that the PC-based activity by the buyer becomes very low, and therefore cheaper.

- 32. Whichever scenario the buyer(s) use – manual or automatic – then the next stage is that the buyer makes an offer to the seller, the seller accepts or declines, and/or a negotiation process goes on – which may involve price and/or location/date-time for collection. If a deal is struck then the system status is modified for the seller's product so that it no longer appears on offer.**
- 33. The buyer may make a deposit, if the system has facility for this activity**
- 34. Collection/delivery takes place, quality is checked at that time, and of course poor quality can cause deal modification or cancellation. The system entry is flagged to completed. If the deal falls through then it re-appears on the system as a seller offer.**
- 35. If either party feels aggrieved then they may enter a complaint on the system, and the other party may if they wish enter a counter-complaint.**
- 36. After some time the actual record is archived or deleted and the data is added to aggregate history.**
- 37. Note that some people will prefer to identify sellers through a search and then do everything manually after that using mobile phone. The system will have to allow that to take place. In fact that in itself is a great driver towards the automatic-buyer approach – where the seller will**

immediately receive an offer as he finished input of his produce information – this will appear on the screen after he submits his data....

- 38. End of Section - Some additional ideas on the practicalities of the system:**
- 39. Note also that some buyers may wish to prefer sellers with whom they have done business successfully before. The system should allow such sellers to be selected (manually or automatically) before other sellers are selected.**
- 40. Some sellers may even be content to be listed on the system only viewable by their preferred buyer (!), but then that negates a large part of the idea of the system – which then effectively becomes a number of private systems operating on the same computer server and web database system.... There should probably be system-wide parameters to allow or control such choices, and also buyer-specific parameters to do the same or similar.**
- 41. A general note: the system will have a few ‘faces’ – to sellers (through smart phone and/or PC). To buyers – through PC mainly, but also through smart phone for the collection process. Possibly to Transporters. To the System Owners through a management console. There is little need for a pretty facebook-type interface – the emphasis should be on creating a business system which delivers monetary value to those who participate.**
- 42. Note that the system generally will have the capability to automatically email sellers (and of course buyers). Therefore sellers should be encouraged to have their own (free) email address (gmail is probably best). This does involve a small additional complication to the logistics of getting the system started/up and running.**

- 43. Internet banking – CABS internet banking is perfectly capable of being used on a smart phone. This should also be encouraged as part of the project., although it would not at the start be integrated.**

Alex Weir, Saturday 20 November 2010

Appendix – some screen-shots of similar systems globally -

http://www.esoko.com/?co=network#sid=115;t=0;commodity_id=100233152;misc=B;m=offers

untry	Commodity	Quantity	Grade	Price	Expires in	
	Ghana Shea (nuts, unshelled)		5,000 kg		-	Unspecified (negotiable) 3 days
	Details					
	Ghana Shea (nuts, unshelled)		5,000 kg		-	Unspecified (negotiable) 3 days
	Details					
	Ghana Shea (nuts, unshelled)		5,000 kg		-	Unspecified (negotiable) 9 days
	Details					

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Ghana Shea (nuts, unshelled)	7,000 kg	-	Unspecified (negotiable)	10 days
Details				
Ghana Shea (nuts, unshelled)	7,000 kg	-	Unspecified (negotiable)	10 days
Details				
Ghana Shea (nuts, unshelled)	5,000 kg	-	Unspecified (negotiable)	10 days
Details				
Ghana Shea (nuts, unshelled)	3,000 kg	-	Unspecified (negotiable)	10 days
Details				
Ghana Shea (nuts, unshelled)	5,000 kg	-	Unspecified (negotiable)	10 days
Details				
Ghana Shea (nuts, unshelled)	5,000 kg	-	Unspecified (negotiable)	11 days
Details				

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Powered by Esoko

x

Shea (nuts, unshelled)

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Offer to Buy, 5,000.00 kg, Unspecified (negotiable)

Expires in 3 days

Network: esaka networks Price: Unspecified (negotiable)

Origin: -- Grade: --

Quantity: 5,000.00 kg Valid Until: 18 Nov 2010

Details

Offer Date: 04 Nov 2010 Will Be Delivered By: immediate

Payment Method: -- Documents: --

Delivery Point: -- Type: --

Contact

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Appendix – some links to similar projects and sites

<http://uzamazao.com/>

http://www.idrc.ca/en/ev-8527-201-1-DO_TOPIC.html

<http://blogs.america.gov/ip/2009/12/23/a-virtual-marketplace-for-small-farms-in-kenya/>

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google - agricultural system matching buyers with sellers

google - agricultural marketing information system

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