



Electronic Vouchers and Fertiliser Subsidies, the Way Forward

1. A brief History of Vouchers

Historically vouchers go all the way back to 1887, when Atlanta businessman Asa Candler used paper coupons as they were called, to encourage people to try a free glass of his new soft drink *Coca Cola*. Between 1894 and 1913 one in nine Americans had received a free Coca-Cola totaling of 8,500,000 free drinks.



After World War's I & II coupons were used in the UK to ration the distribution of food in short supply and beyond the reach of working households. Deserving families registered at chosen shops and were provided with a ration book containing coupons which the shopkeeper would cancel in exchange for specific food items such as sugar, cheese and meat.



During the Great Depression coupons were provided to American families struggling to afford groceries and by the 1940's supermarkets were issuing coupons to attract customers away from neighboring stores and by 1965 half the households in the USA were clipping paper coupons. In 2008 merchants began using mobile phones to deliver electronic coupons to their customers and in 2009 coupons were used by the US government to encourage transition to digital television. In 2011, 20 million disadvantaged children under the age of 18 benefitted from food stamps provided by the government under the Supplemental Nutrition Assistance Program (SNAP), with some disgruntled Republicans

describing Obama's America as the 'food stamp nation'.

2. Electronic Vouchers in Zambia

In 2009, *Zoona* formally known as Mobile Transactions pioneered the introduction of *E-vouchers* in Zambia as an alternative method of delivering payments, targeting subsidies and creating demand for specific products or services.

Some examples of different *E-voucher* platforms include:

The Ministry of Community Development's Mother and Child Health program to provide agricultural inputs and direct cash disbursements to targeted beneficiaries via cash-out points.

The WFP SPLASH programme to provide about 250,000 vouchers to vulnerable households for rations of roller meal, beans cooking oil and soap through collaborating merchants.

The COLALIFE project, - the name is not incidental Coke is everywhere in rural Africa yet essential medicines aren't, - to provide mothers the opportunity to discount vouchers at selected rural outlets to purchase Yamoyo anti-diarrheal kits.

DUNAVANT COTTON: In the past season 26,000 farmers achieving 100% loan repayment received 'top-up' (payment loaded) bonus vouchers which could be discounted at the company's new agro-input outlets or at 40 rural retailers across 6 Districts for the purchase of household items. Work is in progress to extend payment for Cotton deliveries through *E-voucher* platforms.

The CFU: In 2009, the CFU engaged *Zoona* to develop an E-voucher platform to remunerate its Lead Farmers (LF's) for the provision of CF training services. Prior to the 2011/3 planting season for example, 119,000 farmers attended 4 practical training sessions provided by 1,850 LF's on different CF topics. The LF system was designed by the CFU to enable the delivery of cost effective and quality training services to as many farmers as possible.

Before the introduction of *E-vouchers*, payment had evolved from the delivery of physical inputs, extremely costly and difficult to manage, through to the provision of paper coupons discountable at selected agro-dealers. We were well behind Asa Candler of *Coca Cola* fame on this curve!

The benefits of the scheme are numerous. The most important being a secure and efficient system for paying LF's for the delivery of training services and a method to incentivise agro-dealers to stock CF related hardware and inputs at 94 cooperating dealerships. Not only for LF's, but for the much wider catchment of farmers persuaded at training sessions and CFU field days, (4,165 held between February and April last year attended by 120,501 farmers), to convert to CF. If the products aren't readily available it can't be done.

3. E-Vouchers and the Farmer Input Support Programme

The gross inefficiencies of the FISP and its predecessors have been a rich field for the media, seminars and academic treatise for almost 2 decades. The disadvantaged who are the expected beneficiaries of the subsidy are often excluded; leakage is excessive; the costs of delivering the programme are exorbitant and inputs are often delivered long after the optimal Maize planting window, etc.

Who knows what the real economic cost of delivering FISP pan-territorially is, but what about the depressive effects on national production, the output side of the equation? The blanket recommendation for small and medium scale Maize farmers in the form of D compound and Urea in units is 110-N, 40-P and 20-K + S + B. The table below shows the efficiency of fertiliser use based on application *converted to the above rates* by different categories of farmers.

Farmer	Kg of Maize per Kg of N	Kg of Maize per Kg of Fertiliser	Yield of Maize Tons/ha Range (plus/minus)
Zambian Small Scale farmer below 1ha	13.60	3.73	1.5 - 2.0
Zambian Medium Scale farmer 10h & above	12.46	3.46	1.4 - 1.9
Zambian Commercial Farmer	36.00	11.00	4.4 - 5.0
US Commercial Farmer	58.00	15.95	6.4 - 6.6

Note: Authors interpretation from various research sources

There are of course many factors that influence these figures either positively or negatively; rainfall patterns, pH, existing soil nutrient credits, SOM levels, use of appropriate fertilises mixes, timely planting, efficient management etc. Nevertheless, irrespective of the relative disadvantages faced by smallholders there is no reason why they should not be able to double grain returns per kg of fertiliser applied in any given season. Many thousands of CF adopters go a step further achieving the same results as Zambian commercial farmers.

The most negative influence of the FISP in terms of national Maize production is the late delivery of inputs. Timely planting is critical, as every day of delay from the first opportunity to plant, reduces yield by 1.5%. This is why savvy farmers will go to any lengths to purchase fertiliser from commercial outlets before the onset of the rains if they can find it. Conversely, the farmer who waits for FISP inputs and plants a month after the optimal time loses 45% of his yield which far outweighs the value of the subsidy. For smallholders farming a hectare or less, - the intended beneficiaries, - late deliveries can drive them from modest surpluses through subsistence to food insecurity.

During the 2007/8 season 50,000 tons of FISP fertiliser was distributed in 1 hectare packs of 4 bags of D compound, 4 bags of Urea and 20kgs of Maize seed. According to the CSO/FSRP analysis of the MACO Crop Survey Forecast data, small and medium scale farmers reported purchasing 61,350 tons from private commercial traders, while only 14,830 tons was reported as acquired from FISP. This suggests that large quantities of subsidised Government fertiliser was being resold by beneficiaries and re-purchased through various direct or indirect channels. Of the 267,480 farmers using fertiliser that season, 78% reported that the main source was 'private commercial traders'.

The statistics indicate that there is substantial purchasing power in the rural areas to access fertiliser at the full commercial price or somewhere between this and the subsidised price, and that this fertiliser is being acquired by larger farmers. This in turn probably explains the massive 62% increase of farmers cultivating between 5 and 20 hectares over the past decade – *'The Rising Class of Emergent Farmers IAPRI Working Paper 69 October 2012'*. However, as the table above indicates these farmers are no more efficient in converting the fertiliser they acquire into Maize.

In 2010/11, the FISP distribution was expanded to 178,000 tons and the pack was reduced to 0.5 ha increasing the number of beneficiaries to 890,000. Administering a programme of this size with all the difficulties it entails is bound to increase the probability of excessive delays in supply. This incurs a double whammy because private suppliers are crowded out and farmers who have the resources to purchase commercial fertiliser and plant their Maize at the onset of the rains can't find it.

If Government intends to continue subsidising Maize inputs at whatever level, *E-vouchers* are the way to go. Target specific Maize belt Districts initially, identify the genuinely deserving, let the private sector compete openly to supply fertilisers for all farmers and pressurise mobile phone providers to extend coverage to enable future expansion of targeted subsidies.

The devil lies in the detail and identification of beneficiaries presumably by MAL staff, configuring an appropriate *E-voucher* platform, loading databases with beneficiaries names and National Registration Card numbers, validating the entries, identifying and training cooperating rural dealers and capitalising a discrete voucher account would require sufficient lead time to ensure the system is functioning by early September. The detailed planning involved should not faze Government as it has all been done before but timing is critical.

For those families who for whatever reason cannot feed themselves throughout the season, the MOCD, WFP and COLALIFE initiatives provide a good example of cost effective aid delivery option for the needy. Governments the world over are keen to ensure that the beneficiaries of public money know where it is coming from. An appropriate logo on *E-vouchers* would do the trick, much like Asa Candler's globally recognised logo on his coupons!

4. The Tip of the Iceberg



The photo on the left is of CF adopter Mr. Siamangoma's field in Mbabala. He hired in a mechanised Min-Till service provider to rip his Maize field in October.

In the background is an excellent crop of Maize which he planted in late November with seed and fertiliser purchased at the full price. He also applied herbicides successfully after attending thorough training by his Lead Farmer.

The crop in the foreground was planted with FISP inputs for which he had to wait until mid-January. The crop is unlikely to produce anything unless the rains extend well beyond normal.

On the right are Mr. and Mrs. Mwaanga in front of a promising Maize crop planted in November. Simon born in 1944 is partially disabled. They farm 0.5 ha without assistance from their adult children. Since converting to Min-Till Basins 3 years ago they have been food secure and are able to sell a small surplus. Mr. Mwaanga explained that he had given up on FISP and this season had purchased 10 kg of Maize seed and 2 bags of fertiliser for cash.

A short distance away is a farmer who also owns a shop in Choma with his brother and grows 6 hectares of Maize. He explained he'd received 16 bags of fertilise from FISP but complained it has arrived late.

It's time for a new approach.

P.J. Aagaard CFU 3.03.2013

