

AgriZim

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ON THE COVER

A early, wet morning along the Mt Nyangani loop road in Zimbabwe's Nyanga National Park.



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QUOTE, UNQUOTE...

"Farming looks mighty easy when your plow is a pencil and you're a thousand miles from the corn field."

- Dwight D Eisenhower

Already the New Year is moving fast as the first month of 2011 is already behind us.

2010 was one of the most difficult years faced by many in our sector with real Dollar values coming into play and the necessary adjustments we all had to make coming on the back of a period of massive hyperinflation.

The issues also affecting our sector such as the relative high

no real investment we have no real production, with no real production we have no real employment and with no real employment we have the break-down of the rule of law.

We again urge our Government to really deal with these issues and finally put to bed



input costs compared to our neighbours, power shedding, excessive bureaucratic charges, not to mention the continued harassment and eviction of our members further illustrates a country in serious need of stability. Let us not kid ourselves that Zimbabwe is recovering – far from it.

All of the above factors are a direct result of the break-down of investment fundamentals, all of which stem from the respect of property rights. Without property rights, we have no real investment, with

a period of our history we would all like to forget. I challenge our Government to have the courage to create a workable win win solution for our sector, on which not only agriculture but the entire economy can really begin to recover. The solution is within our grasp and we as Zimbabweans just need to grab it and create a prosperous future for us all.

Charles Taffs
Vice President CFU

ZIMBAWE

Armyworm Devastates Crops

According to a press release from PanPress, agriculture officials in Zimbabwe have said that large swarms of armyworms had invaded farms in the main cropping northern and eastern areas of the country, threatening to severely reduce crop output.

The report went on to say that the pests were mainly targeting the maize crop, the country's staple food.



Godfrey Chikwenhere, a director at the Plant Protection Institute, said the armyworm was spreading, and feared vast areas in the two regions would be destroyed by the pests, which were also targeting sorghum crops.

He said teams had been dispatched to the affected areas, but progress was slow. The pests were being sprayed, but it appeared the efforts were not enough to control the outbreak.

Zimbabwe is often hit by outbreaks of armyworm which it fails to deal with effectively because of lack of resources such as chemicals.

Chikwenhere said the government had enough chemicals this time, but lacked manpower, stressing that farmers needed to actively participate in helping combat the spread of armyworm.

MOZAMBIQUE

Food Price Controls to Remain in Effect

The Mozambican government has promised to keep in effect, for at least the first quarter of 2011, most of the measures adopted in September to subsidise prices and rein in public expenditure.

The Minister of Planning and Development, Aiuba Cuereneia, said that prolonging these emergency measures for a further three months will allow a softer transition to the following phase, in which seasonal factors and the current festive season are no longer exercising pressure on price rises.

The measures were a response to the riots against price rises in Maputo and the neighbouring city of Matola in early September. The most significant is a subsidy on wheat flour used by bakers, which allowed bread prices to revert to their pre-September levels.

He also warned of an impending end to the freeze on fuel prices. Although international oil prices have moved relentlessly upward, and now stand at over 90 US dollars a barrel, the prices at Mozambican fuel pumps have been unchanged since July.



Cuereneia said that the government will continue to monitor international fuel prices and act accordingly.

UGANDA

High-Yielding Potatoes Discovered

Uganda has discovered sweet potato varieties which can be used to increase food security. This was made possible by the newly-established modern bio-sciences research facility in Nairobi, Kenya. The varieties are yet to be made public.



“Our aim is to support research and build capacity by empowering scientists to lead the coming agricultural revolution,” says the facility director Segenet Kelemu, adding that it puts Africa’s research capabilities at par with that of the developed world.

The facility, housed at the International Livestock Research Campus in Nairobi, was launched on November 5 by Kenyan President Mwai Kibaki.

It is a new part of the African bio-sciences initiative to help African scientists and institutions become big technology users and innovators.

Uganda is also using the facility to research cassava, especially in connection with the cassava

brown streak virus, which is threatening to wipe out the crop in many parts of the country.

“Many of the research findings generated so far have found immediate applications in agriculture,” Melekemu says. The facility is open to African agriculture researchers.

Researchers from Uganda, mainly working with the National Agriculture Research Organisation, along with students, have already benefited from it. The facility uses new technologies and computer science to study organism cells, which is faster than the older methods.

“Because it is faster, solutions to crop and animal problems are found quickly,” they explain. The facility was set up with a \$21m grant from the Canadian International Development Agency.



SOUTH AFRICA

South African Farmers Seeking Greener Pastures

Thousands of white South African farmers are leaving their homeland to work abroad due to post-apartheid land reforms, a shortage of affordable territory and severe water shortages.

The big incentive is the availability of land and water. Many have moved to neighbouring Mozambique where they can rent land at a fraction of the cost paid back home, pay lower wages to workers and make better profits.

Although South Africa will soon join the Bric (Brazil, Russia, India and China) group of global emerging nations, talk of the country being a regional economic powerhouse rings hollow as more and more farming families leave the rainbow nation.

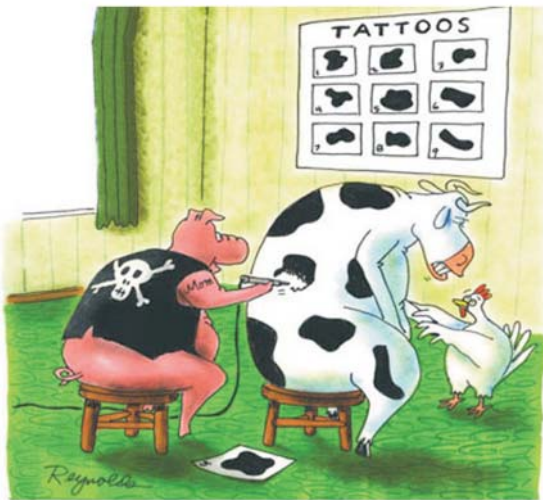
Around 1 500 South Africans have established farms in 23 African countries as far as Egypt and Sudan, most going to Mozambique, in the past

In The News

decade, according to Agri South Africa (AgriSA), the national trade association.

Some countries have already benefited from South African expertise. In only four years food-scarce Zambia has become a net food exporter after a group of 34 South African and Zimbabwean farmers turned around its agricultural output.

Only 10% of Mozambique's arable land is being farmed, though it has four times more high potential agricultural territory than South Africa.



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The Wider Land Tenure Debate in Africa

By Maxwell Mutema

Debate on land tenure has been subject to the ebb and flow of intellectual currents for decades and positions have followed familiar lines of thinking, whether strongly pro-market (as in this paper) or state-managed collectivism or based on ideas of social equality.



While customary land rights in Africa may not be insecure as far as local recognition and not being contested are concerned, this is merely security of possession and occupation but not in the true sense of 'security of tenure.'

Despite a general consensus on the scope and approaches to land policy reforms in Africa, there remain quite divergent views regarding issues such as the appropriate land tenure in response to new economic and social realities.

While customary land rights in Africa may not be insecure as far as local recognition and not being contested are concerned, this is merely security of possession and occupation but not in the true sense of 'security of tenure.'

In the same vein demands of modern land administration cannot be left to customary and traditional authorities and villagers alone. Land



Africa cannot afford to lag behind the rest of the world by clinging to elements of feudal and archaic past at the detriment of its economic development and advancement.



Countries like Namibia, South Africa and Zimbabwe can do the same and lead Africa in implementing an extensive, functional and successful individual land titling programme.

administration in the modern context involves a range of different functions: information on rights transfers, adjudication and arbitration supported by systems for land survey, mapping, land information (including the use of GIS and GPS), valuation, registration of rights, recording of transactions, issue of title and collection of fees or rents.

Therefore, when it comes to embracing private property rights in land as a precursor for private sector investment, Africa cannot afford to lag behind the rest of the world by clinging to elements of feudal and archaic past at the detriment of its economic development and advancement.

Whilst it is commonsense that an imposed social order that is not supported by consensus means enormous enforcement costs, the quest for a market-led economy based on private property rights and private businesses should be pursued wherever it is workable albeit in the case of countries like Zimbabwe where about 35% of the total land area at one time fell under a formal cadastre system. On the other hand just establishment of a national land register without defining the exact distribution of property on the ground and supportive flanking policies will not work.

Africa is poised to join and change the global economic landscape, provided the right economic

framework is in place. African nations that can craft aggressive economic policies will quickly emerge as leaders within the continent and on the global stage. Unlocking a powerful 21st century Africa demands the engagement of the private sector which thrive a lot on strong property rights to land and all other productive assets.

If a Maasai can now be seen hanging around with a cell phone in the bush, it means a lot more in Africa can be achieved if an attractive economic framework is put in place for private investors to operate.

Africa must begin to capture more value from the continent's vast resources including vast fertile agricultural land.

More countries in Africa must do like Rwanda. According to Robert Fogler, managing director of Thousand Hills Venture Fund, "Rwanda has looked at itself like a corporation would. They asked themselves what their comparative advantage was."

Countries like Namibia, South Africa and Zimbabwe can do the same and lead Africa in implementing an extensive, functional and successful individual land titling programme. For example, new land reform beneficiaries could have their land freehold titled as a way of allowing more flexibility and options in their future life plans. For example if a land reform beneficiary opts to exit farming for whatever reason he or she should be able to do so by way of participating in the land market (selling the land at market value) or leasing the land on the basis of a commercial lease agreement. This to me is genuine economic empowerment. After all, in the case of a country like Zimbabwe, it is most likely that most (if not all) of the highly potential, entrepreneurial and business minded newly resettled farmers especially under the A2 model would prefer freehold title deeds to 99 year leases.



ABOUT THE AUTHOR

Maxwell Mutema is a land and property consultant. He holds an MBA in Real Estate and a PhD in Land Management, both from The University of Reading in the UK. In addition he has a Master in Business Administration in Agriculture and the Food Industries from The Royal Agricultural College, Cirencester (UK). His first degree is a BSc Agriculture Honours Degree from the University of Zimbabwe plus a Diploma in Agriculture from Chibero College of Agriculture.



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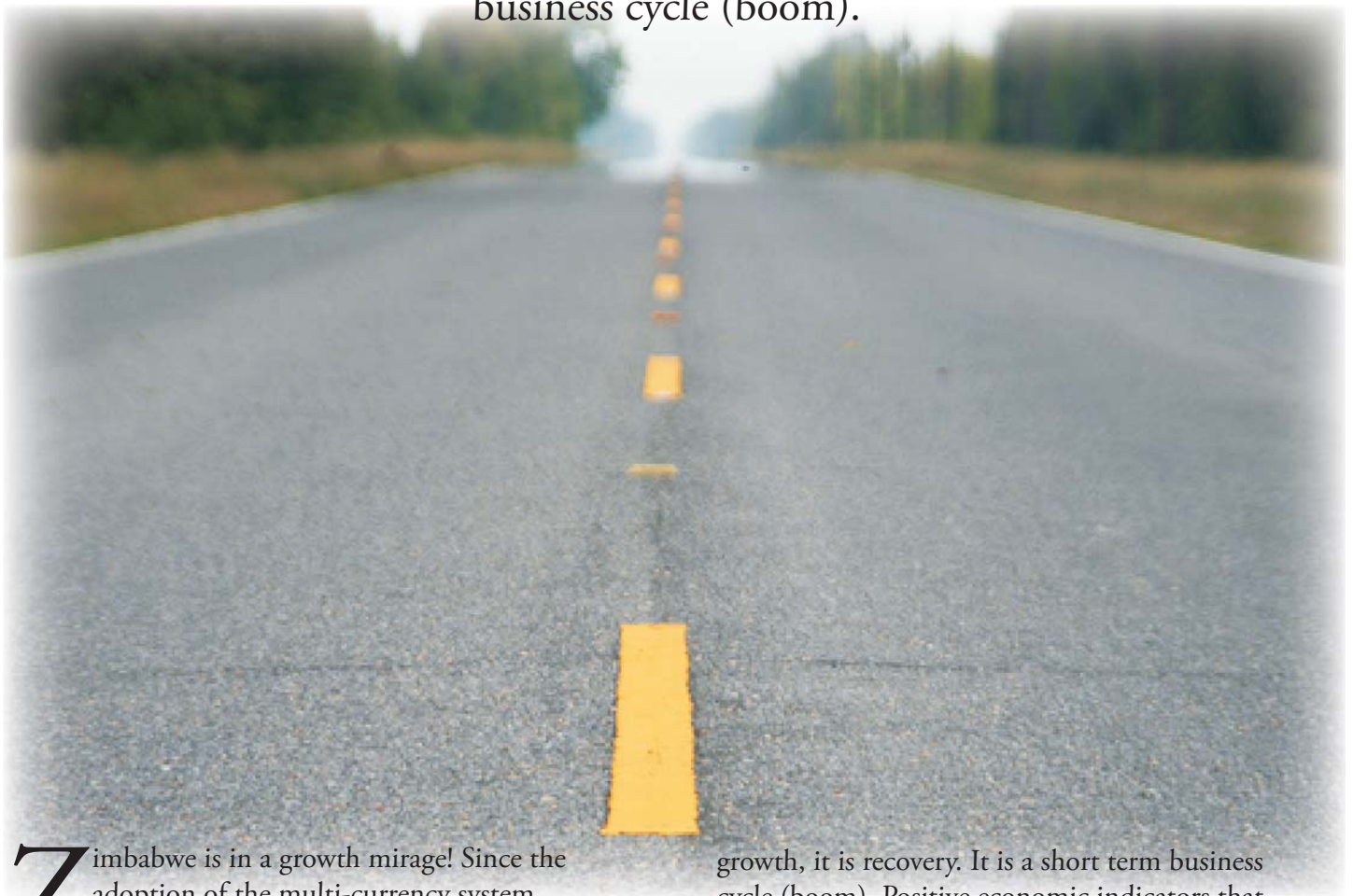
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PAINT CAFÉ

Zim's Growth and Capacity Utilisation Mirage!

“The economic indicators as they stand now, may actually be deceptive for long term planners, financiers, analysts and industrialists. What is being experienced in Zimbabwe is not growth, it is recovery. It is a short term business cycle (boom).”



Zimbabwe is in a growth mirage! Since the adoption of the multi-currency system, the economic outlook has apparently been positive. Industrial capacity utilisation has been recovering (estimated to have “recovered” from less than 5% in 2008 to about 40% in 2010) and the key economic indicators have been positive (GDP growth, CPI etc). The outlook for the economic indicators is still positive. However! The economic indicators as they stand now, may actually be deceptive for long term planners, financiers, analysts and industrialists. What is being experienced in Zimbabwe is not

growth, it is recovery. It is a short term business cycle (boom). Positive economic indicators that are merely in the recovery phase may mean several things. Real growth can only be counted after attainment of full capacity utilisation and when the economic fundamentals get to their pre-decline levels (1996 is usually cited as the peak of positive economic indicators). The very low base from where the economy is emerging from gives an impression of MIGHTY GROWTH, The China and India type!!

What really is economic growth?

It is the positive change in the level of production

of goods and services by a country over a defined period of time. Nominal growth is defined as economic growth including inflation, while real growth is nominal growth which is adjusted for inflation. Real economic growth is usually brought about by technological innovation and positive external forces. Wikipedia (not Wiki leaks!) defines economic growth in the context of increased per capita gross domestic product (GDP) or other measures of aggregate income. It is often measured as the rate of change in real GDP.

The Difference!

There is a fundamental difference between short-term economic stabilization (or economic recovery, which is of a business cycle nature) which Zimbabwe is apparently experiencing at the moment and long-term economic growth which is driven by an improvement in economic fundamentals such as technology, increased and improved capacity, expansion in markets etc. The concept of economic growth is primarily concerned with the long run. The short-run variation of economic growth is identified as a business cycle.

Barring the challenges of qualification and scientific measurement, an increase in Gross Domestic Product is supposed to imply a general improvement in the standard of living of the citizens of the country. The implication is that over reasonably longer periods, even small rates of annual growth can have large positive impacts on the population through compounding.

Creative destruction and economic growth

Entrepreneurship is viewed as having a major influence on a society's rate of technological progress and thus economic growth. Entrepreneurship forces "creative destruction" across markets and industries, at the same time creating new products and business models. In this way, creative destruction is largely responsible for the dynamism of industries and long-run economic development and growth.

If we put this in Zimbabwe's context, we note that there is virtually no creative destruction taking place. There is simply the recycling of old ideas, old companies being acquired, merged, unbundled, sold off, listed, delisted etc, Very tired strategies indeed!. The typical entrepreneur in Zimbabwe is one who adopts other people's creative ideas (particularly from overseas) and replicates them locally often late.

The role of technological change in economic development and growth is also crucial. It is even more important than the accumulation of capital. The development and adoption of technology creates labour efficiency since people can be more productive

given a stock of capital. The argument here is that capacity utilisation induced growth can reach a dead end if it is based on redundant technology. Outdated products will suddenly not find a market. To talk of growth where water taps are dry, electricity availability is erratic, rail infrastructure is in a state of decay, roads are full of potholes, schools do not have books etc is an abuse of economic fundamentals..

Financial institutions financing such kind of growth may also suddenly find themselves stuck with subprime assets. Funding capacity utilisation for firms that are utilising dilapidated equipment and outdated technology is suicidal. It is better to be proactive and fund the adoption of recent technology, retooling with the latest equipment etc. Financial institutions will soon realise that the blind funding of generic retail and importation of goods will lead them into trouble. Long term sustainability should guide short term actions. There is nothing like quick win. Because of diminishing returns to capital, industries will eventually reach a point at which no new increase in capital will create growth. This point is called a "steady state". To overcome this steady state and continue growing, firms have to adopt new technology. The process by which countries continue growing despite the diminishing returns is "exogenous" and represents the creation of new technology that allows production with fewer resources. Technology improves, the steady state level of capital increases.

If we take this argument, mineral extraction dependant growth is dangerous. In fact that is why African countries are poor. Very rich in naturally available resources but poor in ideas that transform the resources to goods and services.

What about Human Capital?

Often ignored! Unlike physical capital, human capital has increasing rates of return. Firms should equally be preoccupied with human capital development. Talking about growth when the largest university in the country has no functional facilities makes a mockery of the commitment of policymakers to real growth and development. Equally firms that acquire equipment but do not develop the capacity of their employees and expose them to modern technological trends will be involved in self defeating initiatives.

Recent empirical analyses suggest that differences in cognitive abilities, related to schooling and other factors, can largely explain variations in growth rates across countries. Cognitive abilities comprise intelligence and knowledge and are more important than education itself.

Desirable effects of economic growth

World Bank argues that the rapid reduction in global poverty is in large part due to economic growth. The decline in poverty has been the slowest where growth performance has been the worst (Africa is often cited as an typical example). Happiness has been shown to increase with a higher GDP per capita. Poor people are seldom happy and free!

Can Zimbabwe Grow with Resource Exploitation?

Modern economies do not grow based on resource exploitation. They grow based on resource transformation! This is where human capital investment and technology comes in. Some of the richest countries on the globe have nothing in the ground. Some of the countries are covered by ice for the greater part of the year, but the people eat more than those with fertile soils and lots of inland fresh water. Israel is green despite being located in a desert.

Having an abundance of natural resources is not a guarantee of better living standards. In fact those with less natural resources enjoy better living standards. An overexploitation and inefficient exploitation of natural resources puts future generation in an even more serious disadvantage!

What Then?

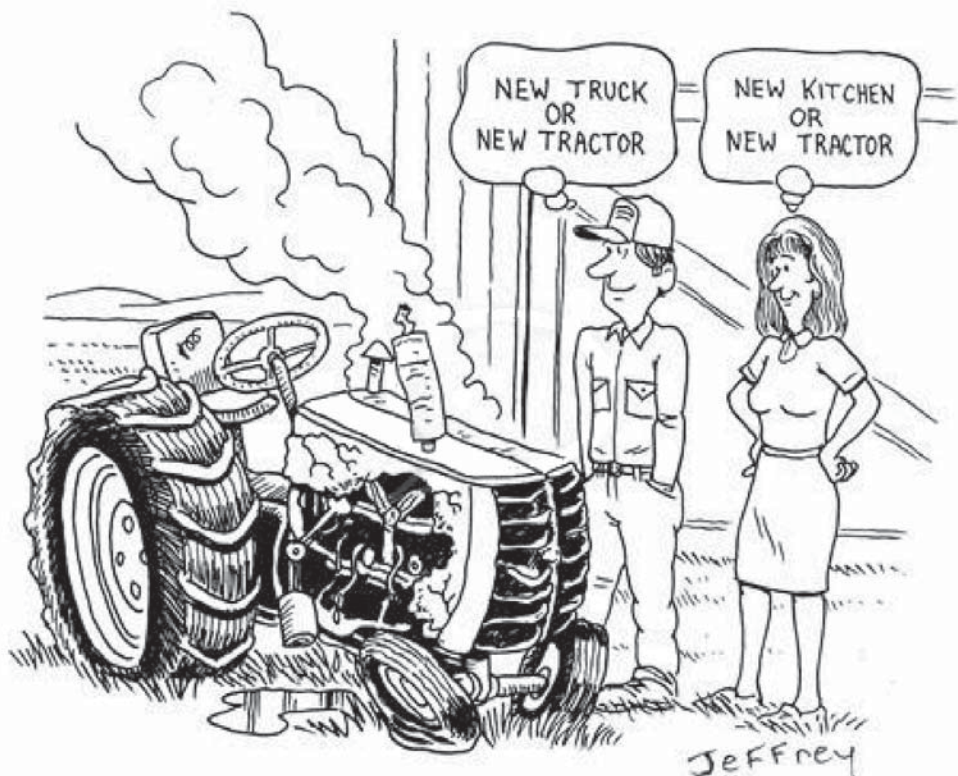
Businesses, financiers and economic planners should plan fully aware of the fact that recovery type of growth may come to an abrupt end. When that happens, real growth (either negative or positive) begins. That type of growth reflects a country's real relative and absolute advantages. Fundamental to such growth is sustainability of the resources that support manufacturing (or production), nature of technology adopted, efficiencies brought about by the combination of technology and human capital, size of markets (domestic, regional and international), equitable distribution of income. (Researchers at the Overseas Development Institute noted that in Uganda, where

during a period of annual growth of 2.5% between 2000 and 2003, the percentage of people living in poverty actually increased by 3.8% highlighting the importance of equitable distribution of income). Growth on its own does not automatically imply a reduction in poverty.

The implication for businesses and financier alike are far reaching. For financiers it implies that lending should be discrete. Emphasis on capacity utilisation other than capacity renewal (new technology, new products etc for new markets), retooling of old equipment introduces funding (credit) risk and technology risk! In the same vein, it has also to be noted that growth has its negative effects such as Growth 'to a point', consumerism, resource depletion and environmental impact, so emphasis on growth alone will be parochial. There is more to economic transformation and development than growth.

In a Nutshell!

If i were to put all the above in a nutshell I would say: To achieve real and sustainable economic growth – Policymakers need to focus on modern technology and infrastructure, and human capital development; – Financiers need to focus on funding business that are going forward (other than the one going backwards, by restarting old equipment) – Firms need to adopt new technology, come up with new products and open new markets in the competitive global market place.



Conservation Agriculture Programme

Union Project Conservation Agriculture Programme 2009-2010 Season



“Advancing Smallholder Agriculture through Contract Farming”

Introduction

On 18 November 2010 the Union Project Conservation Agriculture Programme (UP/CA) held its end-of-season workshop

at the Mandel Training Centre in Harare. Participants in the workshop included the President of the CFU, Directors of CFU and ZCFU, representatives from ZFU, FAO, private sector companies, and NGOs, and UP/

CA staff and consultants. In his opening remarks the current UP/CA Board Chairman, Philip Tuvayanago, presented a brief history and outline of the programme. The programme’s objective of commercializing

smallholder farmers through conservation agriculture and private sector linkages was reflected in the day's theme "Advancing Smallholder Agriculture through Contract Farming".

Objective of the workshop was to share experiences from the past 2009-2010 cropping season, and look forward to this year's season, with special focus on contract farming and the role of private sector companies in the programme. In line with this objective, presentations were made by selected UP/CA Consultants and Private Sector Companies to highlight results, successes and challenges of the 2009/2010 season. Guest speaker of the day, Professor Mandivamba Rukuni, reflected on aspects of contract farming and the unique challenges in communal agriculture in Zimbabwe, including the competition with food aid. He also shared his views on rural development in general with the participants. CFU President, Deon Theron, emphasized that communal farmers are needed in rebuilding the agriculture sector in Zimbabwe.

This article is a reflection from the presentations made during this workshop and the discussions around them. It is not an exact report of the proceedings, but rather tries to bring together experiences from the past season, and changes and suggestions for the coming season. This is done along the line of the four main elements, or pillars, of the programme. Finally, some reflections on the future of the UP/CA programme are discussed.

Extension

This covers aspects of implementation of the



Farming is a high risk business and farmers may lose their crop through no fault of their own and be unable to repay any inputs received on credit. The UP/CA is investigating ways of helping farmers to get some form of insurance for input repayment.

programme with emphasis on the use of Conservation Agriculture (CA) techniques to grow maize. The programme's Agricultural Supervisor, Graham Bowker, presented an overview of the results of the 2009-2010 season and the preliminary figures for the 2010-2011 season. The number of farmers participating in the programme rose from 2400 last season to 3650 in this season, which is well over the target of 3000 set for the programme. In contrast to this 50% increase in beneficiaries, the number of field officers and consultants involved increased only by around 10%, thus reducing the extension cost per farmer. The number of programme sites will not change, but rather the number of farmers per site will increase. In the coming season farmers will form small groups and each group selects its own lead farmer. The lead farmer will provide extension support to the group members

and monitor their performance. This approach will further increase the efficiency of the extension work.

The basic CA technique of holing out was discussed at some length after questions and observations from various participants. This technique is seen by farmers as "a lot of work". Holing out has however shown to be worth the effort, as it allows the farmer to plant at the right time, as he is no longer dependent on animal traction, or hiring of a tractor. Different planting dates on demo plots clearly showed the negative effect on maize yields caused by late planting. In line with the pilot nature of the UP/CA programme, a number of animal and machine drawn CA implements (rippers, planters) will be tested in the coming season. This will enable farmers to plant larger areas while still using CA techniques.

Several of the UP/CA consultants contributed on

the benefits of the holing out technique in presentations and discussions. Holing out concentrates water and nutrients right at the plant, providing a higher rate of germination and better plant survival during droughts. Maize can be securely planted after only 15 mm of rainfall. The other basic element of CA is the use of mulch and compost. Compost is a cheap substitute for chemical fertilizers, while mulching has several beneficial characteristics. Proper mulching conserves water and nutrients in the soil and suppresses weed growth, while in the longer term it will improve the soil structure. Mulching has even a beneficial influence on pest management as it provides a habitat for predatory insects.

One of the participants wanted to know whether the programme monitors soil fertility in connection with the use of compost and/or mulch. Currently, soil samples are taken at every site only at the beginning of the season for testing on pH. Most programme sites have low to extremely low pH levels. For this reason all farmers are provided with lime to apply to the planting holes.

The establishment of demonstration plots, and the weekly training sessions at these plots, have proven to be invaluable training tools, and are the backbone of the UP/CA extension programme. The demo plots are designed by the Area Consultants in collaboration with the private sector company involved. On the demo plots the effects of variations of planting date, fertilizer applications, and the use of mulch/compost are shown. One of the lessons learned from last season's demo plots was that there is not much yield increase from an increase of CAN fertilizer application from 300 to 400 kg/ha. The recommendation for CAN for the coming season is now 300 kg/ha. instead of 400 kg/ha., thus reducing the farmer's input cost. During his presentation, Rob Fisher, one of the UP/CA consultants, showed how photos can be used to illustrate various elements of the demo plot and of crop management by farmers. Photos are a powerful tool in training activities.

Maize yields on UP/CA sites varied from 2 to 4 tons/ha. According to interviewed farmers this was double the yield of their neighbours, who were not supported by the programme. The average maize yield realized in the UP/CA sites was roughly four times as high as the national average for communal farmers. Some



A crucial element in marketing is access to reliable and independent market and other information. Communal farmers most often lack this access and depend on informal and often unreliable sources of information.

active and committed farmers realized yields of 6-7 tons/ha. This is a good indication of the potential of Conservation Agriculture combined with appropriate input support.

One of the requirements for farmers to participate in the UP/CA programme is that they have at least 1 hectare of land available. At least at one site it was found in the past season that farmers have much less land available. The question is whether the programme should be adjusted to smaller cultivated areas.

Input Support

The UP/CA programme provides participating farmers with an input package for maize on credit basis. The package consists of seeds, lime, NPK and CAN fertilizers, and a herbicide. For the 2009-2010 growing season it was decided by FAO to use only one variety of maize seed (PAN 413) for all UP/CA sites. On drier sites the variety did well, but in areas with more rainfall, especially during the harvest time, there were varying degrees of cob rot resulting in significant yield reduction. This and some

other factors complicated the repayment for the maize input package. Sites that were located far from Harare, or that were relatively new in the programme, however showed remarkably high repayment rates. For the current season the farmers' preferences were taken into account, and a number of maize seed varieties were procured and distributed. Several seed companies use the programme's demo plots for showcasing their products.

One of the reasons that made farmers reluctant to repay the maize inputs received from the programme, was the availability of inputs at subsidized cost through the government voucher system. It was remarked that this voucher system is open to misuse by farmers and agro-dealers.

Besides this a number of NGOs continued to distribute inputs free of charge, which undermined to some extent the efforts and results of the programme. Rob Fisher made a passionate plea for the UP/CA to liaise with other organizations to come to a coordinated approach to input supply, and stop distribution of free inputs. At some sites, notably those close to Harare, there is a "saturation" of NGOs, which causes farmers to use more of their time in meetings, trainings, food distributions, and the like, than they spend on their farms tending to the crops.

It remains the programme's strong conviction that farmers have to pay a price, subsidized or not, for their inputs. Farmers who are required, by contract or

otherwise, to repay the inputs they have received, will be more motivated to manage their crops well and achieve optimum yields. Liam Philp (Selby) suggested that farmers should pay upfront for inputs, so that they will be more committed. However, farming is a high risk business and farmers may lose their crop through no fault of their own and be unable to repay any inputs received on credit. The UP/CA is investigating ways of helping farmers to get some form of insurance for input repayment.

For the 2010-2011 cropping season, UP/CA would have liked the farmers to organize their own inputs for the maize crop. This would have saved UP/CA staff a lot of time and effort in organizing the distribution



One of the programme's most successful sites is the Mupangwa Irrigation Scheme in Honde Valley, where farmers grow bananas for Matanuska.

of inputs and eventually the collection of produce or cash for the repayment of the inputs. However this was communicated to the farmers too late, and inputs were provided to the farmers through the programme as in previous years. For the current cropping season the programme has provided farmers with 200 kg of lime (free), 100 kg of NPK, 100 kg of CAN, 10 kg of seed, and 1 kg of Dipterex, to enable them to grow 1/3 of a hectare of maize.

Capacity Building

Besides the technical crop husbandry training which farmers receive from the Field Officers (FEOs), the programme provides a number of other trainings to the farmers. This includes training on contract farming and marketing, farm business management, including record keeping, and training on group dynamics and leadership skills. These specific trainings are conducted by 20 technical staff seconded from the three farmers' unions, thus embodying the spirit of the Union Project.

With the increase of the number of farmers in the programme, more of these specific training activities will now be conducted by experienced

FEOs. Arguably the follow up of a training is more important than the training itself. This is an important role for consultants, FEOs, and lead farmers.

The objective of the UP/CA programme is the development towards commercial small scale farmers. The short history of the programme has already proven that farmers can make a living from 1 hectare of land. Farmers need not only be trained on record keeping and simple book keeping, but they have to be motivated to do so diligently and continuously, and see the benefits of such activities. Many farmers seem to be reluctant to keep records on their farming activities, but it is essential for them to do so. It is therefore an important task for staff from the programme, and from the Unions, to follow up on these issues and support farmers on this. Ideally farmers should develop a "track record" over a number of years showing their management skills and entrepreneurial attitude. This will greatly help them in negotiations with private sector companies.

Private Sector Partners

The UP/CA programme aims at commercializing smallholder

farmers through private sector linkages. The emphasis of the workshop was on experiences within the programme on working with private sector companies through contract farming. The exit strategy of the programme is that farmers are able and confident to deal with private sector companies and obtain a decent income from contract farming.

Over the past 2 years the UP/CA programme had mixed experiences with private sector companies. Several companies sincerely believe in the programme's approach and are great supporters of it. Others had less genuine motives, or folded due to the current difficult economic climate in Zimbabwe. A complaint from farmers was that companies are not seen on the ground, and leave all extension work to the UP/CA staff. With the involvement of stronger companies this season this issue should be taken care of. By the end of the programme, private sector companies will need to take over extension tasks.

The following table is a summary from the presentation by Graham Bowker, and gives an overview of the changes from last year to the present season.

PRIVATE SECTOR COMPANY	CROP(S) GROWN	NUMBER OF FARMERS		AREA (Ha)
		2009/2010	2010/2011	2010/2011
PROGENE SEEDS	GROUNDNUT SEED, COWPEA SEED	484	500	335
ROB FISHER P/L	FLOWER SEED	200	200	65
CAPSICUM LTD	PAPRIKA	300	900	225
MTC	TOBACCO	277	350	350
MATANUSKA	BANANA	23	40	10
SELBY P/L	GOOSEBERRY, CHERRY PEPPER	47	0	0
EXHORT	FINE BEANS	47	0	0
PRISTINE SEEDS	SORGHUM SEE, COWPEA SEED	150	0	0
NORTHERN FARMING	MAIZE	0	250	250
AGRISEEDS	SUGAR BEANS, SORGHUM SEED	0	168	256
BETTER AGRICULTURE	TOBASCO CHILLIES	0	80	20
TOTALS		1528	3088	1511

During the workshop two of the programme's area consultants (Rob Fisher, Bruce Cowley), and two of the private sector partners (Selby, Matanuska) presented their experiences from the past season. A multitude of challenges with respect to contract farming was mentioned. Side marketing, quality and grading issues, communication problems, and late or non-payment by companies were some of the problems experienced during the 2009-2010 cropping season. On the positive side it was stated that the UP/CA model for contract farming, in combination with the food security and crop rotation components, is well thought out, and a leader amongst NGO programmes.

Three issues were discussed at some length by the workshop participants;

- **Contracts.** Is a contract just a piece of paper that can be ignored by farmer and private sector alike as soon as it is signed? It was argued that contracts are too intimidating and lopsided towards farmers ("fire and brimstone approach"). Rob Fisher suggested the use of a Memorandum of Understanding based on trust and relationship, rather than a contract. However such a building of trust in a market linkage relationship may take several years. Prof. Rukuni later added that traditionally an informal (verbal) agreement was much stronger than an informal (written) one. Michael Dawes and Graham Bowker argued that a contract will help parties to remember what was agreed in the first place and what the responsibilities of the parties are. A "hard" contract will discourage farmers who are not all that serious and who just want to get inputs. Michael Jenrich reminded

the participants that the UP/CA programme is funded as a humanitarian programme, and that the development of fair and balanced contracts should be seen as a learning curve.

- **Horticulture.** Production of horticultural crops is often linked to irrigation. Although the availability of an irrigation system is essential for horticulture, as it enables farmers to grow crops all year round, it also poses a whole set of additional organizational and technical challenges. Liam Philp of Selby gave an account of the problems encountered at Negomo Irrigation Scheme, which led to the company's decision not to continue at that site. The intervention was "rushed" as it started late. The company signed a Memorandum of Understanding with the Scheme Committee, not contracts with individual farmers. Communication was not optimal as different actors (ZFU, UP/CA, Selby) came with different messages, and the farmers could play the actors against each other. Farmers were not aware of the labour cost for harvesting, and had no money at that time. However farmers who worked hard, did well, but were let down by the Committee. On the other hand, one of the programme's most successful sites is the Mupangwa Irrigation Scheme in Honde Valley, where farmers grow bananas for Matanuska.

- **Group formation.** At the beginning of the current cropping season farmers were required to form groups of not more than ten. The reason for this was to make extension more efficient, while also farmers have to guarantee for each other in case of input repayments. The CFU Representative in the UP/CA board, Kudakwashe Ndoro,

supported this as farmers could easily form groups out of their extended families. On the other hand it was remarked that farmers are individualists and forming of groups would be difficult. Prof. Rukuni added to this that farmers are difficult to organize at production level (individual farms), but farmers should be organized at marketing level (sell as a group). After several negative experiences with private sector companies in the first two seasons of the programme, the selection procedure has been sharpened to weed out unreliable players. UP/CA is somehow in a weaker position as it has to look for private sector partners that are willing to participate in the programme. Bruce Cowley pointed out that the farmers have little or no say in the selection of private sector partners. Recently, UP/CA has actually taken one person who had not paid farmers for their produce to court. Hopefully this will send out a clear signal to would-be fraudsters.

Staff members from the farmers' unions at all levels have played a crucial role in solving disputes and problems, and need to continue to do so. Bruce Cowley observed in his presentation that the unions are seen by the farmers as working on the side of the programme and the companies, while they should first and foremost represent and defend the interest of their members, the farmers. This was also reflected in the remark that farmers have no recourse when the private sector company negates on its contractual obligations. Farmers have traditional ways for arbitration, but can private sector companies be made to adhere to this.

A crucial element in marketing is access to reliable and independent market and other information. Communal farmers most often lack this access and depend on informal and often unreliable sources of information.

One participant wanted to know how the programme dealt with Government dictated produce prices that do not reflect realistic market prices. In the past season this has been the case for maize, and the programme adjusted its contract prices to the prices of the GMB.

Michael Dawes, the programme's Private Sector Liaison Consultant, presented a cost/benefit analysis of the crops grown under the programme. In this he looked at return to investment (farming as a business), and return to family labour. On labour inputs estimates were used. Record keeping by farmers should build a more accurate picture of labour requirements and costs. The returns for some crops, notably small grains like sunnhemp and cowpea, were low. This could well be the reason behind farmers' reluctance to enter into contracts for these crops. The return on banana was remarkably high. This may have motivated farmers in the Honde Valley to manage their crops so well.

Way forward

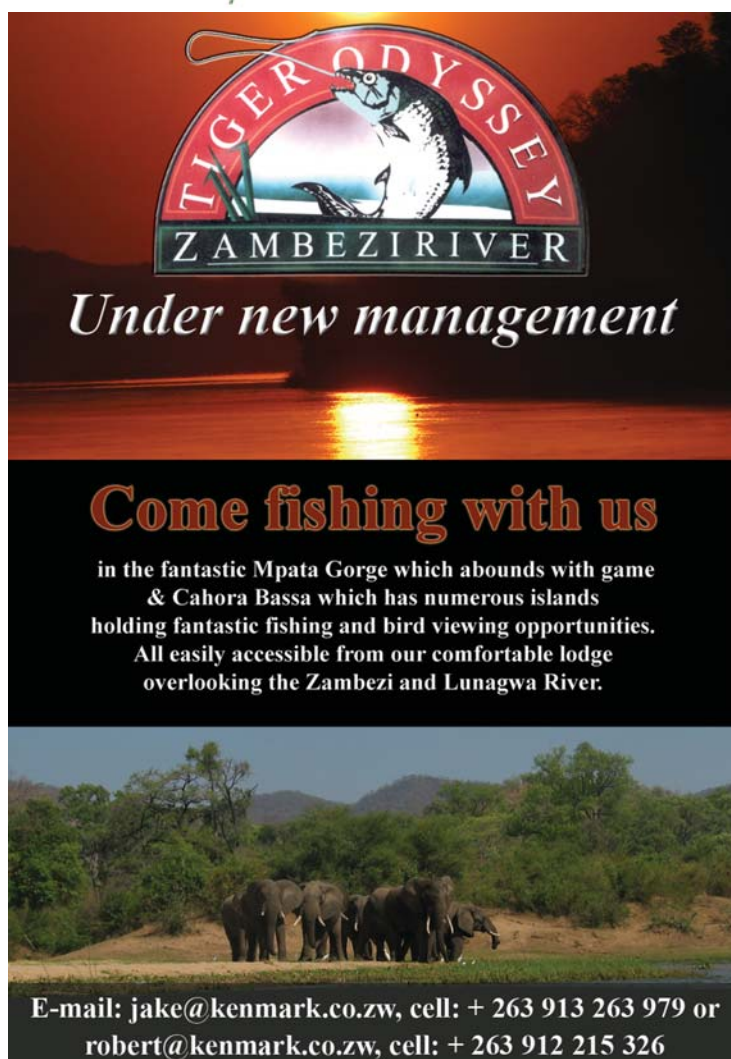
Michael Jenrich of the FAO presented an outline of the Concept Note that was prepared by the UP/CA management for a planned second phase of the programme. Positive results from the first two years of the programme, and the promising start of the current season, are indications that the set up of the programme is sound and that a continuation for another three to four years is justified. In the Concept Note for UP/CA II, the main elements of extension, training (capacity building), and market linkages remain very much the same. Already in the present season animal or tractor drawn implements will be tested to assist farmers to expand their area under CA. As the purchase cost of such implements may be prohibitive for smallholder farmers, alternative ways of purchase and hire should be looked into. In this context the involvement of larger commercial farmers, or the private sector, could be explored.

The exit strategy of the programme should eventually be that smallholder farmers make money through stable and trusted links with private sector companies. In the coming years UP/CA will continue working towards the creation of an enabling environment for contract production by smallholder farmers. Farmers' capacities need to be built to learn,

access information, innovate, and co-create knowledge as part of this process.

Prof. Rukuni gave an interesting example of the present urban bias of the rural community. When he asked a young farmer what he was going to do with the profits of his farm, the young man answered that he wanted to continue schooling to get a job in Harare. This is also reflected in the observations from the UP/CA consultants that at some sites they work with an ageing farmer population. Prof. Rukuni argued that there is an urgent need for Zimbabwe, and other African countries, to change this trend towards building a rural middle class based on sustainable, commercial farming. There is potential for this among the new, young farmers at A1 level. Among other things this would require public investment in rural infrastructure, transparent legislation on land rights and land ownership, access to credit, and incentives for agribusinesses and regional trade.

UP/CA was urged by several presenters to be creative to maintain its leading role, and leave a lasting, positive legacy with smallholder farmers in Zimbabwe.



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Insurance Advice

By Obert Kwacha

Insurance is one Unique Service, commonly misunderstood by many. Unlike any other service insurance, is bought today but the gain will only be realized in the future-that is in the event of a loss. It is important for farmers, for example, to be enlightened before they can buy adequate insurance cover.

What is Insurance?

Insurance is a risk transfer mechanism by which those exposed to risks pass it on to another part (insurer) in return of a consideration, commonly called premium. It is a means of indemnity against a future occurrence of an uncertain event. Insurance is a pool of funds from which the unfortunate get compensated, each member contributes to the pool by way of premiums and the premium should be commensurate with risks brought to the pool.

Insurance is a legal agreement between the 2 concerned parties, the insurer and the insured hence the need for each party to understand terms and conditions of the contract. Sometimes insurance is misunderstood as a form gambling. It is different from gambling because it is a legally binding contract based on material factors that should be disclosed before commencement of the contract. Unlike gambling, insurance should be based on loss suffered and the levels of consumption are known beforehand.

Some view insurance as an investment hence the need to get back their premium should they incur no loss. It is important to note that insurance is like a pool from which the unfortunate get compensation; when one does not claim, someone else will be claiming. The idea is to compensate those who incur a loss. One may not claim for years but the day tragedy comes to him/her, the claim will be much more than the premium contributions. However, there are “no claim bonuses” and/or “no claims premium discounts” given to reward those who rarely claim.



Delivery of insurance service will only take place after the occurrence of a loss.

It is important to note that insurance is generally made to cover risks that are accidental and unforeseen. For a risk to be insurable it must meet the following criteria:

1. It should be Fortuitous

– This means there should be a possibility of non-occurrence. For example - wear and tear, natural rotting cannot be insured.

2. Determination and measurable

- It should be possible to determine when a loss has occurred and the magnitude of the loss usually in financial terms.

3. Accidental and Unintentional Loss

- The Insured should only be paid when a loss has occurred due to a random event over which the insured has little or no control.

4. Calculable Expected Frequency and Magnitude of Loss

- Insurers must be able to determine and estimate accurately both the expected frequency and expected severity of a loss

5. Large Number of Exposure Units

- This allows the loss of large numbers to be applicable, the expected loss becomes calculable.

Risks that meet the above criteria can be insured while those that do not meet the criteria should be managed by other means.

Before we discuss types of insurance policies that a farmer can take, we need to explain some of the terms commonly used in insurance.

Excess/ Deductible

- This is the amount to be met by the insured in the event of a loss. Excesses are designed to make sure the insured participate in the risk. This works to encourage good risk management practices by the insured

Peril-this is a loss causing event.

Exclusion

Exclusion is a provision within an insurance policy that eliminates coverage for certain acts, property, types of damage or locations. Exclusion gives a condition for which an insurance policy does not cover. You may have homeowners insurance. It may exclude damage to vehicles. You would need to have a separate insurance policy on your car.

If a hurricane came and the roof was blown off your house and your car was blown away. Your homeowners would pay for your roof but not your car. If you have collision insurance, it would pay for your car. Your homeowners would have an exclusion clause excluding your car.

Indemnity – this means to put back in position before a loss occurs. This is one principle that ensures one does not benefit from insurance.

Insurance Underwriting

Insurance underwriting is the process of choosing who and what the insurance company decides to insure. This is based on a risk assessment. It is pretty much the “behind the scenes” work in an insurance company where they determine who is insured and how much in insurance premiums they will charge the insured person. Insurance underwriting also involves choosing who the insurance company will not insure.

In our next article we will discuss some of the insurance policies that attract farmers.



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Obert Kwacha

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The Care of Ducks

By Dr. Ross Cooper

Searches for articles in the literature pertinent to the care of ducks revealed 49 papers and two manuals specialising in duck husbandry. Relevant details thereof are alliterated below.

Recent cloning experiments in ducks has utilised experiments investigating immunologically-mediated enzymatic reactions to determine activities of certain interleukins, clearly with the view of duck disease monitoring. Studies of the like are essential in complexes with numerous ducks, and potential contamination from wild birds. Other interesting experiments include the use of AFLP fingerprinting technologies for paternity testing in ducks. Selective breeding in ducks shows that there is increased fertility and hatchability at day 2 and 8 after artificial insemination, with the highest increase of fertility between days 5 and 11. In this regard it is also important to determine the egg production per duck-day, feed efficiency and egg weight in crosses. The use of herding robots that are smaller in stature than humans result in less aversion amongst flocks, but the practicality of such is questionable.

The management of duck concerns depends on their size. The small home flock kept in a yard would include a simple, partially-enclosed shed, cheap wire fencing, a feed hopper or trough made of wood and a simple watering devise such as an inverted steel funnel of water on a metal tray. If trough systems are used then the drinking area should be wide enough, ca. 4cm, for the duck to submerge its bill. For starting and growing ducks a minimum of about 2.5cm, of linear watering space should be allowed per duck, increasing to 5cm per duck for developing and laying breeders. Sandy soils are useful as it drains away after the rains. The brooder house should be sprinkled with straw or shavings to catch the excreta. In the larger concern ventilation systems are needed in the enclosed areas to remove the excess moisture and maintain



optimum temperatures. The building must prevent wild birds roosting therein. At hatching, ducklings need a high temperature of 30°C with supplemental heat provided by the brooder. At 35 days of age starter ducks and grower-finisher ducks can adequately thrive at temperatures of 12.7 and 10.6°C, respectively. The floor space for ducks increases with age from 289 to 2809 cm²/duck aged 1 day and laying breeders, respectively. The texture of flooring is critical to prevent injury to feet and hock joints of ducks and therefore stones should be avoided and any wire should only occupy one-third of the floor surface. The length of the laying period of ducks can be greatly increased if supplemental lighting is provided. Ducks will lay continuously for 7-12 months if artificial light is provided constantly for 14 hours. Supplemental lighting for the first three weeks of life will assist ducklings to find food.

According to the Duck Laboratory associated with Cornell University, USA, eggs from common ducks like Pekins require 28 days to hatch. Eggs from

Muscovy ducks hatch in about 35 days after setting. When larger numbers of duck eggs are to be hatched, large commercial incubators (setters) and hatchers are normally used. Pekin duck eggs are kept in a setter for 25 days and then transferred on the 25th day to a hatcher where they remain until they hatch on the 28th day. Eggs are automatically turned while in the setter (usually hourly), but not in the hatcher. Basic procedures and conditions for hatching duck eggs are as follows. Set the temperature at 37.5°C and relative humidity at 55%. Set ventilation as recommended by the incubator manufacturer. Eggs must be turned, either automatically or by hand, a minimum of 4 times a day. Most automatic turning devices are set to change the position of the eggs hourly. Select eggs to be set by carefully inspecting and candling them at the time they are put in setting trays. Do not set eggs that are cracked, double yolked, misshapen, oversized, undersized or dirty. For best results, set eggs within 1-3 days from the time they were laid. On the day of setting, put eggs in incubator, close the doors and allow the incubator to reach operating temperature. At about seven days after setting, candle the eggs and remove any eggs that are infertile (clear) or have dead germ (cloudy). At 25 days after setting (Pekin eggs), the eggs are transferred to hatching trays, and if eggs are hatched in a separate machine, moved to the hatcher. Candle and remove eggs with dead embryos. At the time of transfer, the temperature of the hatcher should be set at 37.2°C and the humidity set at 65%. As the duckling develops inside the egg there is a loss of water from the egg and an increase in the size of the air cell. If the duckling is developing normally, the air cell should occupy about one-third of the space inside the egg at 25 days of incubation (common ducks). Weight loss can also be used as a guide. Common duck eggs should lose about 14% of their weight at time of setting by 25 days. Duck eggs may be hatched naturally by placing them under a broody duck or even a broody chicken hen. Muscovy ducks are very good setters, capable of hatching 12-15 duck eggs. The nest box should be located in a clean dry shelter, bedded with suitable litter. Feed and water should be available for the broody duck and for the ducklings when they hatch. If eggs are stored for a while before they are set, they should be stored at a temperature and humidity level that will minimize deterioration of the egg. For a small number of eggs, storage in a cellar may suffice. Whenever possible, store eggs at about 13°C and 75% relative humidity. Store eggs small end down.

When a duck is stressed, it may engage in more frequent feather pecking. Stress may also



Duck housing biosecurity needs to include aspects of fresh litter usage, cleaning of sheds between batches of birds, and efficient maintenance of single age flocks.

be associated with reduced lighting, high stocking density, forced separation of sexes, feeding of a single high calorie diet, etc. The practice of beak-trimming in Pekin ducks to reduce feather pecking and cannibalism has been criticised due to induction of pain. The trimming of beaks and toes should always remain strictly to the horny parts. A study has shown that tip-searing as apposed to trimming with cautery, may be a preferably method as it is associated with less adverse effects on weight gain and has fewer bill morphological changes.

The feeding behaviour of ducks, particularly individual feeding, is very important to study



The feeding behaviour of ducks, particularly individual feeding, is very important to study especially considering the pattern of meal type and interrelations among meal type, body weight, feed intake, and frequency of consumption are important.

especially considering the pattern of meal type and interrelations among meal type, body weight, feed intake, and frequency of consumption are important. It has been found that the frequency of short duration meals declines with age of the duck, whereas the frequency of consumption of larger meals increases. An experiment of domestic drakes showed that the yielded estimates of maintenance requirements of 583 and 523 kJ/kg b.wt./day at 10 and 26°C, respectively. It is interesting to note that brewery waste can replace traditional diets for crossbred common ducks, especially if there is replacement of half of the feed concentrate which results in improved growth performance. The effect of cecetomy on nutrient digestibility in ducks is dependent on the



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feedstuff assayed. Intact ducks have a greater ability to utilise energy in wheat middlings. Phytase may be used in finisher diets of ducks from 3-6 weeks of age to improve growth performance and leg bone development.

The feed regime of ducks is important for optimal productivity. Ducks grown for meat are more likely to attain optimal performance when their diet contains a high proportion of cereal grains that are high in available energy like maize, wheat and sorghum grain. Pekin ducks can grow well on rations containing as little as 2,204 kcal/kg of metabolisable energy. The metabolisable energy in high and low energy starter feed is 3,086 and 2,646 kcal/kg, respectively, and the

grower-finisher 3,086 and 2,646 kcal/kg, respectively. Amino acids requirements are derived from a protein inclusion of 22.0 and 19.1% for high and low energy starter, and 16.1 and 14.0% for high and low energy grower-finisher rations. In duck rations, close attention must be paid to calcium, phosphorus and sodium. Calcium inclusion should be 0.70 (high energy starter) and 0.57% (low energy starter), respectively. In the grower-finisher, calcium inclusion is 0.65 (high energy) and 0.57% (low energy), respectively. The percentage available phosphorus in starter [0.40 high energy and 0.35 low energy] and grower-finisher [0.35 high energy and 0.33 low energy] is critical. Sodium inclusion in duck starters is 0.15% (high energy) and 0.13% (low energy), and in grower-finisher 0.14% (high energy) and 0.12% (low energy). Feed restriction is usually commenced at ca. 2 wk but often, practically at ca. 7 wk. When the breeders are sufficiently mature at ca. 28 wk. their daily feed intake should be limited to 60-70% of total consumed. Some duck farms provide oyster shells for feeding breeders.

Duck housing biosecurity needs to include aspects of fresh litter usage, cleaning of sheds between batches of birds, and efficient maintenance of single age flocks. The removal of odour from duck confinement building has met with much interest and the biofilter system was approximately 95% efficient at removing the smells. However, fabric fibres used for pre-treatment to protect the biofilter from clogging up from duct and feather particles, would result in a considerably increased operating cost, hence necessitating alternative methods. Possibly the use of fan-spray technologies would assist. Hazard analysis critical control points should be established for bacteria like *Campylobacter* and *Salmonella*.

Water supply for ducks to assist in plumage condition has been investigated using a variety of water supply systems. In free-choice pens the use of open water systems were preferred and stimulates duck activity. Limiting access to open water systems leads to increased use within the time period. Ducks with access to nipple drinkers showed a larger percentage of plugged up nostrils than birds from pens with open water drinkers. The latter had a positive impact on plumage condition. The provision of fresh, shallow daily water bathing is useful, although one should be always conscious of the effects of dirt water in duck health.

Mating activity in ducks is influenced by the quality of duck houses, genetic factors, and the size of foot pads. Indeed, the higher the body weight, the higher the size of foot pads and the lower the mating

frequency. Mating in ducks is also diminished at the end of the laying period. In ducks in captivity periods of maximum female fertility do not coincide with the periods of greatest sexual activity, suggesting that natural mating is not consistent with optimal female reproductive performance under artificial conditions.

The possible transmission of Avian Influenza to man from ducks is real, particularly from free-range ducks such as the mule duck (cross between Muscovy and Pekin ducks). Swabs in studies have determined the presence of AI subtypes (H5N1, H5N2, H5N3, H6N2, H6N8 & H11N9). In a study of domestic ducks in Thailand, no AIV was detected in ducks raised in closed houses with high biosecurity, although it was prevalent amongst ducks in open houses, free-ranging (grazing) ducks and back-yard ducks. Human, duck and swine influenza A viruses may spread among human duck and pig communities interchangeably. The risk of spread from wild ducks and poultry emphasises the need to assess immunity status afforded by available vaccines. Workers on duck farms have to be appropriately attired and exert extreme caution to prevent infection. Other possible diseases from rural duck abattoirs include ornithosis from exposure to *Chlamydia psittaci* resulting in pneumonia amongst workers. High exposure to blood and feathers from recently-killed ducks is likely to increase infection rates, necessitating stringent respiratory protection for abattoir workers and highly efficient airflow and eliminated environmental contamination. One study cautioned on the use of antimicrobials in birds due to the potential emergence and spread of multi-drug resistant vancomycin-resistant enterococci, with adverse implications on human health. If this is compounded with weakened cellular and immunological defences due to inadequate management and husbandry practices and severe genetic manipulation for fast growth and high productivity, then the duck industry is threatened. In this regard, embryological studies of duck embryos are called for.

Many influenza A virus strains in waterfowl and wild ducks are capable of infecting poultry, although good husbandry and control measures prevented this. This suggests the need to adequately manage wood ducks on private lands and waters. Habitat can be created by diverting water from streams into impoundments or by catching runoff and spring water behind dams. Ponds built for ducks should be shallow and contain one or more islands. Gentle slopes on the islands will enable the ducks to walk up slowly. An efficient drainage system will lower water levels and expose the pond bottom. Natural vegetation including



At hatching, ducklings need a high temperature of 30°C with supplemental heat provided by the brooder.

reeds will attract and hold ducks. Ducks hatched in nest boxes will likely choose the like for their own nests. It goes without saying that all ducks should be vaccinated against AIV.

Vaccination of ducks includes the following products:

- Riemerella anatipestifer vaccine.
- Duck virus hepatitis vaccine.
- Duck virus enteritis vaccine.
- E.coli and R. anatipestifer bacterin.
- Autogenous bacterin.

Avian cholera and colibacillosis can be prevented through good sanitation techniques and the use of sulphurdimethoxine-ormetroprim (0.02-0.04%) and chlortetracycline (0.044%) in feed are effective treatments. Aspergillosis can be avoided by using dry straw and preventing moist feed. Contaminated feed is always a concern to the duck farmer and ducks fed diets containing soybean meal or peanut meal were more affected by aflatoxins than those fed diets with fish meal.

Ducks are often kept conveniently as a source of eggs, meat and feathers, including Pekin, Aylesbury and Maya ducks. The farmer selects a duck that has a moderate body size and good egg production. Duck meat has a unique flavour and is a very good source of amino acids, iron, phosphorus, zinc, copper, selenium, thiamine, riboflavin, niacin, pantothenic acid, vitamin B6 & B12, and smaller amounts of potassium, magnesium, vitamins, E, A & C and folic acid.



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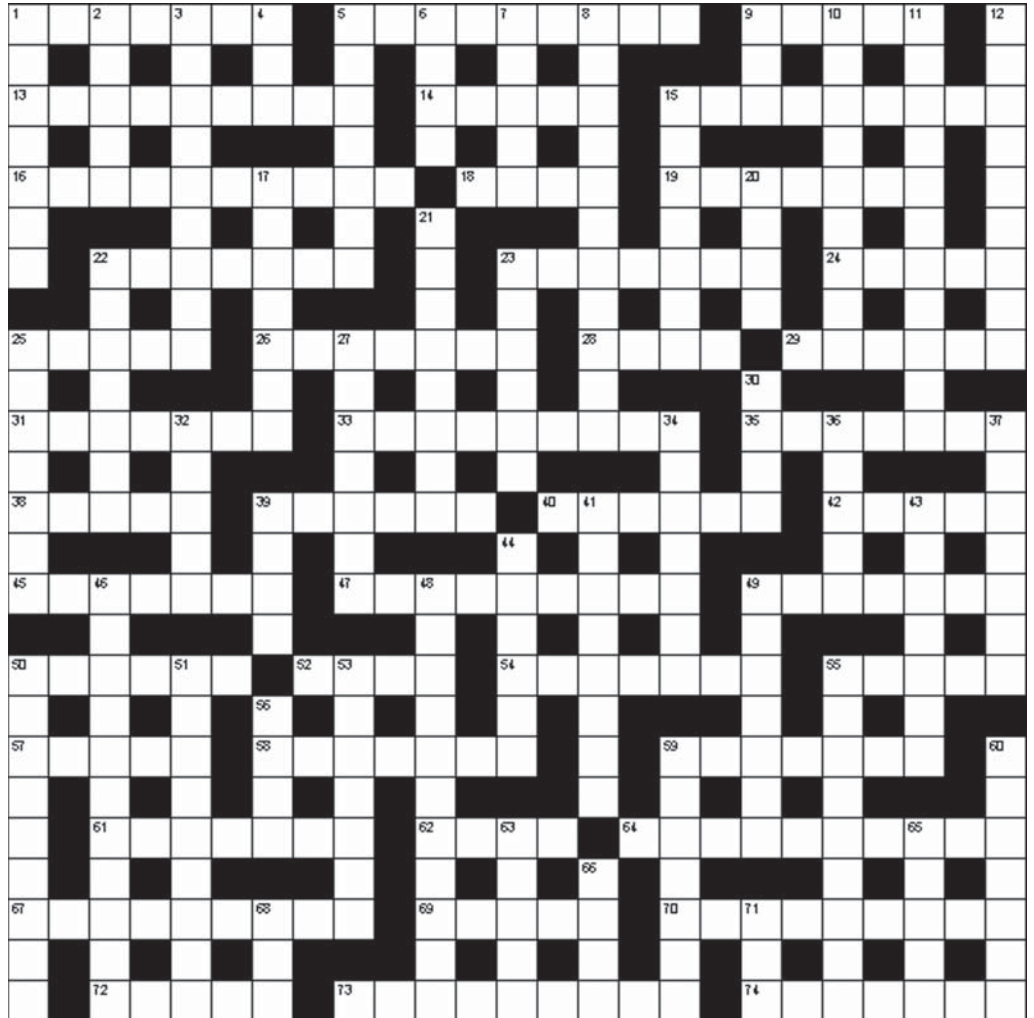
CFU GIANT CROSSWORD 01

Across

1. Vegetable (7)
5. Blandished (9)
9. Titled peer (5)
13. Remember (9)
14. Units of time (5)
15. Escapade (9)
16. The study of insects (10)
18. Ship's steering device (4)
19. Cautious (7)
22. Entourage (7)
23. Lands surrounded by water (7)
24. Piece of furniture (5)
25. Rescued (5)
26. Mythical beast (7)
28. Olfactory organ (4)
29. Lets in (6)
31. Nipped (7)
33. Wrong (9)
35. Lower limit (7)
38. Skilful (5)
39. Up-to-date (6)
40. Fraudulence (6)
42. Ringlets (5)
45. Not paid on time (7)
47. Inventions (9)
49. Memory loss (7)
50. Physically strong (6)
52. Grain store (4)
54. Candidate (7)
55. Cake topping (5)
57. Freight (5)
58. Reproduction (7)
59. Patron (7)
61. Irritated (7)
62. Tight (4)
64. Cut (10)
67. Held sacred (9)
69. Hoard (5)
70. Pragmatic (9)
72. Dig (5)
73. Accumulated (9)
74. Superimposed (7)

Down

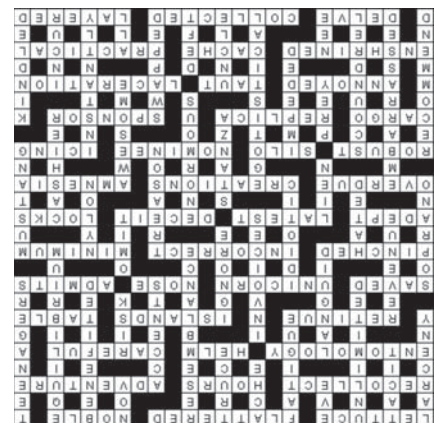
1. Theft (7)
2. Implied (5)
3. Without bounds (9)
4. The night before (3)
5. Weariness (7)
6. Dull pain (4)
7. Cease-fire (5)
8. Similarity in appearance (11)
9. Month, in short (3)
10. Gained (9)
11. Equipoise (11)
12. Adolescents (9)
15. Dialects (7)
17. Lackadaisical (7)
20. Hazard (4)
21. Bills (8)



22. Income (7)
23. Disregard (6)
25. Female singing voice (7)
27. Insanely irresponsible (7)
30. Leave out (4)
32. Detested (5)
34. Perfidy (7)
36. Synthetic fabric (5)
37. Type of horse (7)
39. Security interest (4)
41. Tremendous (8)
43. Teller (7)
44. Part of a poem (6)
46. Abashed (11)
48. Conceited (11)
49. Wondrous (7)
50. Advocate (9)
51. Villain (9)
53. Hindered (7)
55. Immediately (9)
56. Quarry (4)
59. Exchanged (7)
60. Ignited (7)

63. Male relative (5)
65. Become liable to (5)
66. Dexterous (4)
68. Indicating maiden name (3)
71. Whole (3)

Solution



Farming Humour

The Matabeleland Farmer

A Matabeleland farmer goes to Australia for a vacation. There he meets an Aussie farmer and they get chatting. The Aussie shows off his big wheat field.

The Matabele says, "Oh! We have wheat fields that are at least twice as large."

Then they walk around the ranch a little and the Aussie shows off his herd of cattle.

The Matabele immediately says, "we have cattle that are at least twice as large as your mombies."

The conversation has almost died when the Matabele sees a herd of kangaroos hopping through the field. He asks, "And what are those?"

With an incredulous look the Aussie asks, "don't you have any grasshoppers in Matabeleland?"

Watermelons

A farmer in the country has a watermelon patch and upon inspection he discovers that some of the local kids have been helping themselves to a feast.

The farmer thinks of ways to discourage this profit-eating situation. So he puts up a sign that reads:

"WARNING! ONE OF THESE WATERMELONS CONTAINS CYANIDE!"

He smiled smugly as he watched the kids run off the next night without eating any of his melons.

The farmer returns to the watermelon patch a week later to discover that none of the watermelons have been eaten, but finds another sign that reads:

"NOW THERE ARE TWO!"

The Angry Farmer

A farmer and his brand new bride are riding home from the church in an ox-drawn scotch cart when one of the oxen stumbles.

A little further along, the poor old ox stumbles again.

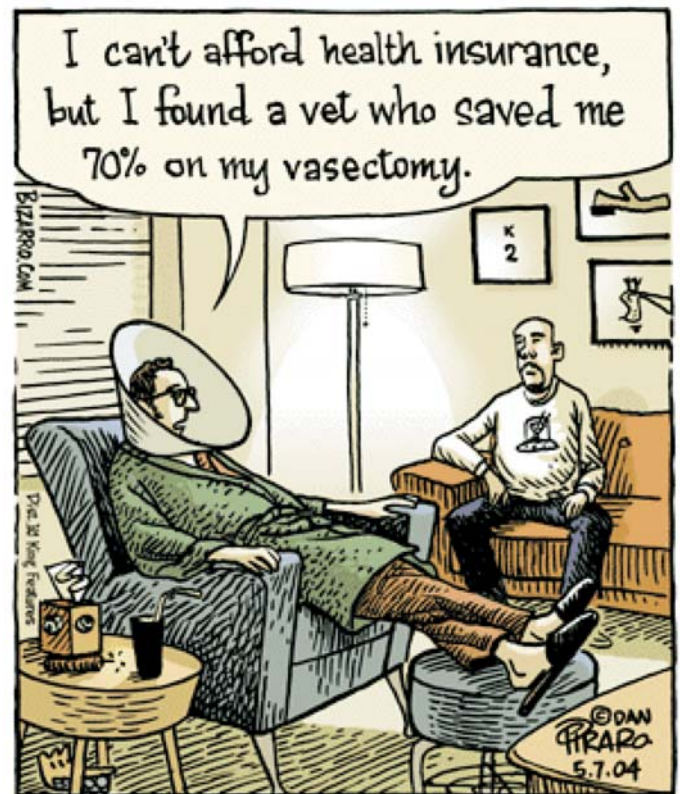
"That's twice," says the farmer.

After a little while the ox stumbles again.

This time the farmer doesn't say anything. He reaches under the seat, pulls out a shotgun and shoots the ox!

"That was an awful thing to do!" yells his new bride, screaming hysterically.

"That's once..."



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