



## DOWNSCALING TO INCREASE OUTPUT: SPECIALISING IN LOW-INPUT/HIGH-OUTPUT INTENSIVE FARMING SYSTEMS.

SMALL SCALE DOES NOT MEAN UNPRODUCTIVE NOR DOES IT MEAN UNPROFITABLE: ITS POSSIBLE AND DONE CORRECTLY COULD BE EXTREMELY BENEFICIAL TO ALL WHO LIVE IN SOUTH AFRICA.

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Agriculture is under pressure, its up-scaling and shedding jobs at a time when employment is desperately needed. This is no secret.

National policy has cut subsidies and privatised support services on the one hand while pushing transformation on the other. Production costs are rising and increasing retail dominance combined with low trade barriers are placing heavy downward pressure on local farm gate prices in a number of our key commodities. The increased economic efficiency which this has driven over the last 15 years has been a mixed blessing.

Furthermore, the land reform process is also in a tough phase and has failed to deliver productive farms under new black ownership. This failure has more than likely resulted in negative employment and reduced national food security. It has also reduced our prospects for long-term peace and prosperity. For various reasons the former homelands, which have managed to maintain a reasonable level of traditional agricultural capacity and know-how, are failing to deliver the sorts

of livelihoods needed to retain rural youth and build vibrant rural economies. Challenges are abundant.

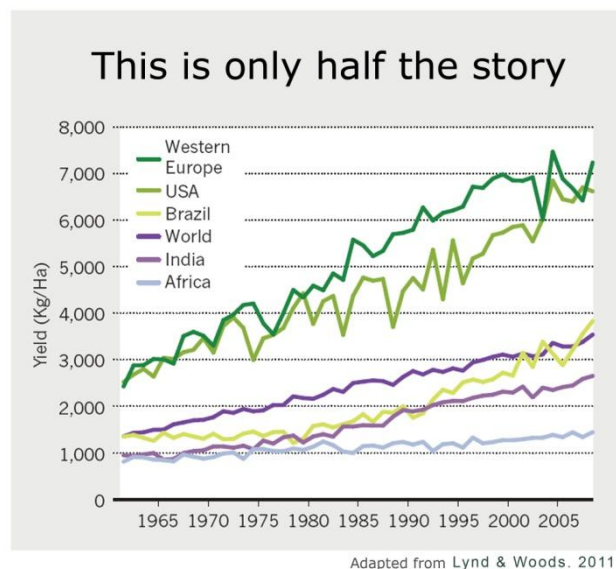
In the face of this a number of positive trends are also emerging. Many commercial farmers have begun to seriously reassess the long term profitability of their traditional practices which is resulting in many opting out of chemically intensive high-external-input systems in favour of lower-external-input systems which favour symbiotic partnerships with soils and other natural systems. ZZ2's pioneering attitude towards the benefits of *Natuur Boerdery* is one example of this. The wide spread shift to minimum tillage, rotational cropping systems among winter cereals producers is another.

What's more, despite land reform's failures and the incidents of political drum banging, the state has managed to charter a remarkably measured course through one of South Africa's most treacherous socio-political minefields. No reasonable person could argue that the grossly unequal distribution of wealth, land and opportunity which are present in our society do not need to be addressed before we as South Africans can enjoy a safe and prosperous future. The question is simply *how*: how can the deep knowledge and understanding of the land which has been accumulated by South Africans over generations be utilised to enhance equality, employment and prosperity?

One answer may be through downscaling farm sizes in order to expand access and improve productivity: To become a nation which specialises in smaller scale low-input/high-output farming.

Reducing farm sizes and inputs in order to increase output may sound like an oxymoron to many, however remarkable examples of highly productive small-scale farming systems are not hard to find.

India, which is home to almost one fifth of Earth's population is more or less food self sufficient despite occupying only one two hundredth of the world's land. Yet the typical notion of Indian agriculture is that it is backward and somewhat inefficient. This discrepancy between fact and perception results from applying a large-scale mono-crop mindset to diversified poly-crop systems. A South African farmer or policy maker looks at the typical yields for dry land wheat in India and concludes that, because yields are far below the global average, small Indian farms are inefficient and more than likely less profitable too. This conclusion is both understandable and prolific. Yet it rests on fundamental misunderstandings about the multifunctionality of land, the strengths of localised food systems and the underlying relationships between ecological capital and farmer profitability. In short, Indian yields appear low on a crop by crop basis because they are. However, when the wide range of products which each hectare of land delivers are considered cumulatively, poly-crop production far outstrips that of large-scale monoculture systems time and time again. India's skill in poly-crop farming allows it to maintain food sovereignty under seemingly impossible conditions.



Some of this success has been as a result of the widespread promotion of 20<sup>th</sup> century high-external-input production systems. However, the limitations of Green Revolution systems are extremely apparent to most Indian farmers and many of the most productive and profitable small farmers in India are now those who have selected what works best from the Green Revolution packages while inventing ways to ditch the rest. Typically this means keeping irrigation technologies and certain varieties of improved seed and ditching the fertilisers, pesticides and herbicides. They are achieving this by applying remarkable innovation to their crop rotations and crop combinations as well as to organic soil improvement practices. This shows that national specialisation in small scale, labour intensive farm systems under appropriate and innovative management can be both highly productive and profitable.

However, it is vital to not to be overly idealistic about the resilience of the small farm. India's population distribution and agricultural marketing structure are fundamentally different from our own. Very few Indian farms are more than a day's bicycle journey from a significant regional hub where it is relatively easy for them to sell their produce into the local market system on an ad hoc basis. This is not the case in South Africa, where markets tend to be distant and dominated by international retail chains. This difference underscores the need to develop a wider network of localised food marketing systems alongside smaller more intensive systems.

With a population distribution and market structure more similar to our own, Costa Rica provides another lesson for us in South Africa.

Unlike all of its Central American counterparts Costa Rica has kept its land ownership relatively fragmented, favouring a system of smaller scale farmers feeding into national marketing cooperatives. This is contrary to the Central American norm of large estates owned by a few and worked by many. In addition to the support of agricultural cooperatives, Costa Rica also operates a network of weekly producer markets through which regional farmers and fresh produce traders gain direct market access and the opportunity to operate in parallel with international retail chains.

While there are many other contributing factors, this broad based land ownership and agricultural marketing model has contributed to make Costa Rica the safest, best educated and most prosperous country in an otherwise troubled region.

Following policies that have sought to maintain land fragmentation as opposed to driving consolidation feel contrary to the free market concept of competitive efficiency driven by increased economies of scale. However, in the context of a developing economy where agriculture is both a source of national identity and a primary employer, efficiency driven by increasing economies of scale is economically inefficient because it is socially unsustainable. Encouraging proud farmers to stay on their land might require some level of direct or indirect subsidisation but doing so also saves the state many other expenses it would otherwise incur. People retain pride in their ability to provide for themselves, while the state saves vast amounts of money on costs associated with unemployment, despondency and dependency - costs which we as South Africans should be all too familiar with. Curbing the trend in land consolidation by supporting smaller intensive farms and food systems is a productive means by which to resist the international trade pressure which implies that it is OK for African governments to subsidise their economies through the provision of emergency social welfare to the economically deprived but not to allocate agricultural subsidisation to reverse the root causes of this deprivation.

India and Costa Rica are two among many successful examples which debunk the myth that in order to maximise productivity and national welfare we need big farms and big inputs. We don't. In fact South Africa is in desperate need of the exact opposite. Smaller farms supported by an

appropriate regulatory and retail environment which deliver higher yields and greater social welfare. They do this because they require increased cropping intensity, more labour and less land per land owner.

The catch is that this change requires a profound paradigm shift and a significant retooling of our agricultural knowledge base.

Regarding the re-tooling of our knowledge base, there is no easy road but it's important to bear in mind that we are also not starting from scratch. South Africa has close to 1.3 million households with a functional knowledge of small scale agriculture. We also have a highly experienced community of commercial farmers who have been looking for ways to shift towards low-external-input systems which restore soils and ecosystems for more than fifteen years. Furthermore South Africa has a wide range of world class research and training organisations which place us at a significant advantage over many other developing economies in similar positions. There is also a wealth of international experience from which we stand to benefit should we choose to seek it. India and Costa Rica are just two examples; Cuba is another, as are New Zealand and Switzerland.

In many ways our national psyche is also ripe for some form of reconsiliative paradigm shift in the way that the nation approaches land, opportunity and social reconciliation. There is no way that any transformation within agriculture and/or land access alone can bridge the gap between what is and what should be; however a concerted national effort to reverse the trend in land consolidation and support a shift to intensive smaller-scale agriculture would be a promising place to start.

We have enough land, the challenge is whether 49 million of us can come to agreement around how to use it. Supporting farming systems with a proven track record of producing more by using less seems like an agreeable place to start.