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BASELINE AND MARKET DYNAMICS FOR THE COMING SEASON

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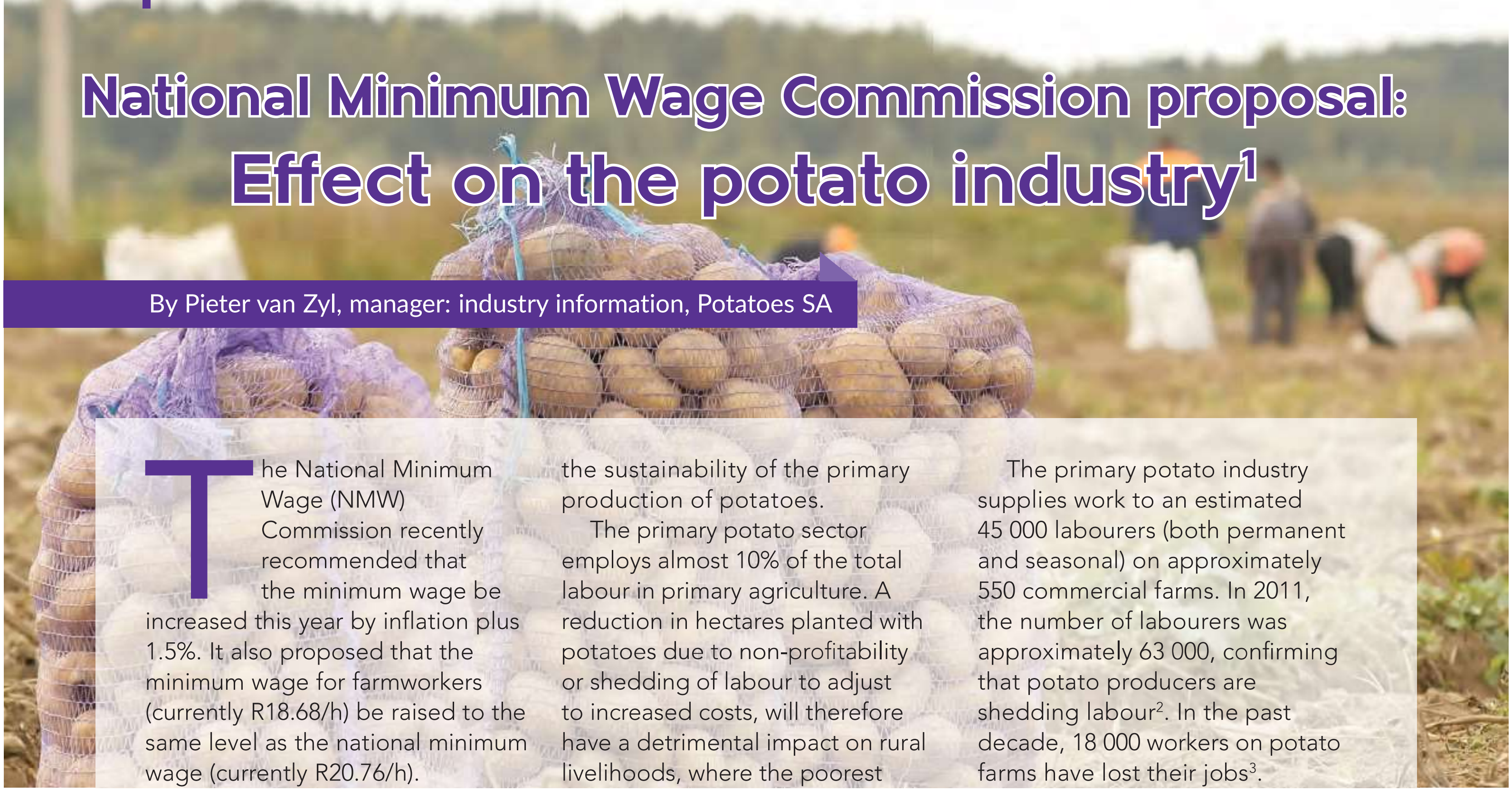


National Minimum Wage Commission proposal: Effect on the potato industry[1]

By Pieter van Zyl, manager: industry information, Potatoes SA

The National Minimum Wage (NMW) Commission recently recommended that the minimum wage be increased this year by inflation plus 1.5%. It also proposed that the minimum wage for farmworkers (currently R18.68/h) be raised to the same level as the national minimum wage (currently R20.76/h).

In effect, the minimum wage for farmworkers may go up to R21.76/h, an increase of more than 16%. Can the potato industry absorb such an increase, coupled with other expected sharp increases in input costs for 2021?

The impact of higher input costs

Recently, there has been significant upward pressure in input costs on the potato industry. Some of these are considered administered costs, such as electricity and labour. The annual increase in input costs for potato farming is higher than inflation. At the same time, real market prices are moving sideways, hence a significant price-cost squeeze effect impacting on the sustainability of potato production.

The number of potato producers has declined from 2 000 in the early 1990s, to 550 in 2019. This smaller group has been able to sustain the average total production through economies of scale, but the increase in input costs is severely threatening the sustainability of the primary production of potatoes.

The primary potato sector employs almost 10% of the total labour in primary agriculture. A reduction in hectares planted with potatoes due to non-profitability or shedding of labour to adjust to increased costs, will therefore have a detrimental impact on rural livelihoods, where the poorest among society reside.

Potatoes SA (PSA) acknowledges the vital role that farmworkers play in the industry. The agricultural sector is unique in the sense that a farm is where owners, managers, workers, and their families live and work together on the same property. In many instances, close relationships have been formed between farmers and labourers over generations.

Sound relationships ensure a harmonious and productive workforce. At the same time, PSA acknowledges government's goal of creating one million additional jobs in the sector by 2030, as set out in the National Development Plan (NDP).

An overview of the industry

Between 50 000 and 54 000 ha are planted annually in South Africa, with a total production of about 2.5 million tons during the past three years. Potatoes are grown twelve months of the year and approximately 80% of all land is irrigated.

The primary potato industry supplies work to an estimated 45 000 labourers (both permanent and seasonal) on approximately 550 commercial farms. In 2011, the number of labourers was approximately 63 000, confirming that potato producers are shedding labour[2]. In the past decade, 18 000 workers on potato farms have lost their jobs[3].

It is estimated that between 2 000 and 3 000 smallholder farmers cultivate potatoes for own consumption. They are likely self-sufficient in terms of food security, since they can easily realise between five to 30 t/ha, meaning they can also sell surplus products to generate income.

The industry contributes 3% to the total gross agricultural product and 58% of the total vegetable production. Total consumer spending on potatoes and related products is estimated at between R26 and R30 billion. The per capita consumption is almost 40 kg and growing.

Contributing to food security

A hectare of potatoes under irrigation can easily produce 50 to 70 tons of fresh food – a significant contribution to food security. The average potato producer in South Africa grows 47 t/ha compared to the average of 4 t/ha of maize produced. The direct cost to produce one hectare

[1] PSA recently submitted a document to the Department of Employment and Labour regarding the National Minimum Wage recommendations for 2021.

[2] The number of labourers is derived from two nationwide surveys done by PSA - one in 2011, and another in 2014.

[3] The main reasons for shedding of jobs: Nearly 200 potato farmers left the industry during this time, and the sharp increase in, for instance, labour costs.

of potatoes is, however, four to six times higher than that of maize.

Recent studies showed that of the total consumer expenditure on staples (potatoes, maize meal, bread, rice, and pasta), 10% is spent on potatoes, making them part of consumers' daily diet. When comparing food retail prices, it becomes clear that potatoes are highly affordable compared to other starches. Consequently, they comply with all three tiers of the food security equation – availability, affordability, and nutrition.

Informal traders not only purchase 60% of all potatoes from fresh produce markets; they also buy directly from producers. In total, they purchase between 65 and 75 million 10 kg bags of potatoes (approximately 700 000 kg), which is 25 to 30% of the total harvest. In 2019, the estimated worth of potatoes bought for reselling by informal traders was between R2.5 and R3.5 billion.

All of these were marketed through the various marketing structures in local communities, which emphasises the fact that the industry has an enormous social footprint, as well as an informal labour multiplier in local communities. Informal traders also contribute to job creation as they, too, depend on employees.

Impact of seasonality

Of the estimated 45 000 labourers employed on potato farms, 40 000 qualify as seasonal workers, most of whom are women. Seasonal labourers are mainly employed for several weeks during the production and harvesting season, which can last between one (small producer) to ten months (large producer) per annum. In many production regions, this is the only income for many of these seasonal labourers.

During 2019, an estimated R518 million (40 000 seasonal labourers x R162 minimum wage per day x 80 workdays) was paid to seasonal workers alone, which was predominantly redirected to their local communities. If, for example, 10% lose their jobs because of mechanisation – an unintended consequence of an increase in minimum wages – less money (R51.8 million in wages) flows back to mostly poor communities.

The potato industry therefore has a significant influence on the economy of these areas. This will also indirectly impact on other employment opportunities within these local communities, which stem from the loss of income suffered by seasonal and potentially permanent workers.

Current realities

Potato growers are currently facing numerous challenges related to production costs and the market. Real production costs show an increasing trend over time, increasing faster than inflation.

Potato farming is also highly capital intensive. The input cost of seed, chemicals, and fertilisers can easily surpass R50 000/ha, while the value invested in machinery and implements alone is worth between R50 000 and R150 000/ha of potatoes, depending on the region and size of operations.

The increase in real production costs and the sideways trend in real market prices have resulted in a much tighter cost-price squeeze over the last number of years, and consequently the sustainability of potato production is progressively being threatened in many regions. Some potato growers are already struggling to survive and will be forced to leave the industry, with more than 20% having already done so since 2011.

To remain sustainable, producers must either increase output and/or cut back on expenses. Depending on the production region, labour costs vary between R9 000 and R24 000/ha on irrigated land, which makes cutting back on labour costs a major consideration in managing the effect of the cost-price squeeze on farms.

The effect of mechanisation

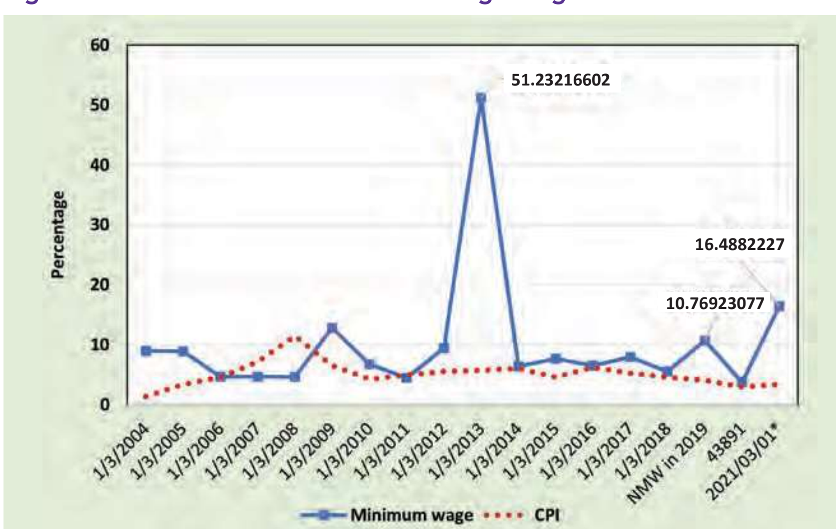
In 2013, the minimum wage increased by more than 51%, starting a 'wave of mechanisation' in the industry and leaving thousands of labourers jobless. A double-digit increase in labour costs in 2021 will see even more workers replaced by machinery (*Figure 1*).

While potato farming is extremely labour intensive and has the potential to absorb numerous workers, growers have accelerated mechanisation after the introduction of the 51% minimum wage increase, finding it more challenging to cut back on seed, chemicals, and fertilisers.

The following numbers indicate the ease of replacing labourers in the potato industry, especially seasonal workers, by mechanisation:

- Under normal conditions, a producer will employ 20 to 50 seasonal labourers during planting time (in addition to permanent workers). Should

Figure 1: Annual increase in minimum wages: Agricultural sector vs CPI.



the producer decide to fully mechanise the planting operation, only permanent labourers will be required. An average sized planter (R200 000 to R250 000) can easily replace 20 to 30 seasonal workers. The payback period is two seasons, meaning the savings in labour costs will by then be more than the initial outlay.

- A fully mechanical potato harvester costs anything between R2.2 million and R3.2 million, but can easily replace 40 to 80 seasonal labourers. The payback period is two to five seasons.
- Expanding the level of mechanisation in a potato packhouse can result in 30 to 40 seasonal workers losing employment, as opposed to the typical 80 to 140 usually required. There are many examples of producers that have already completely mechanised their packhouses and now employ fewer than 20 seasonal workers for this purpose. Through such extreme mechanisation, between 50 and 70 packhouse labourers can be replaced. The payback period is two to five seasons.

PSA understands that producers can never completely mechanise and that they remain dependent on labour, although the number of labourers needed varies significantly. The initial costs of mechanisation are extremely expensive and since 50% of all potato producers plant fewer than 50 ha, they will find it difficult to commit to large-scale mechanisation.

Other factors

Potato producers are increasingly being contracted by processing companies, which negates the need for packhouses, since processing companies transport the products directly from the field to their facilities. Producing potatoes for processing also means that less labour is required on farms.

Other factors that permanent labourers benefit from should also be considered, such as the cost of housing. Many households also have access to running water and electricity. Apart from a loss of income, these benefits will be lost should a labourer be dismissed.

Measuring the impact of higher costs

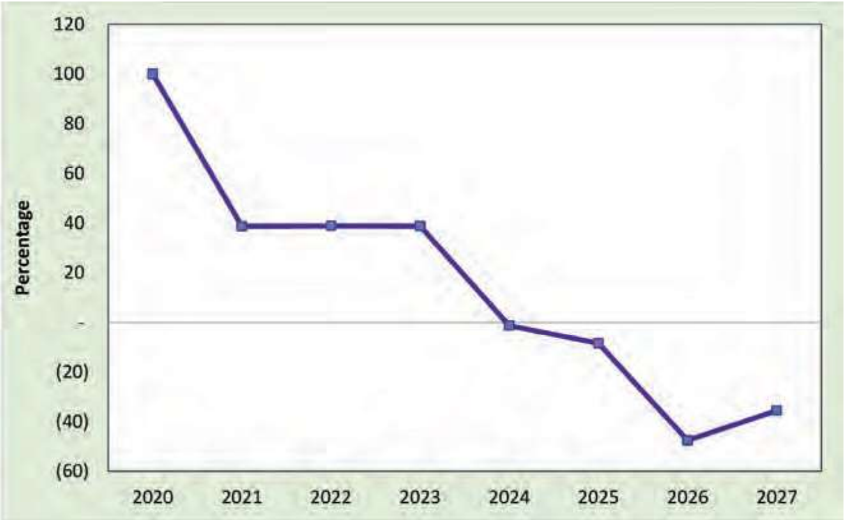
There are numerous ways in which the impact of increasing costs on the profitability of agriculture can be measured. This includes measures such as gross and net farm income (NFI[4]). In the absence of an enabling environment and a negative or low NFI, farmers will not invest adequately in potatoes.

To begin to understand the impact of increased labour costs on the sustainability of potato production, the discussion that follows evaluates the effect of a scenario of high labour costs for 2021 on the NFI of a typical potato farm in the Eastern Free State – one of the largest producing regions in South Africa.

Not only is potato farming costly in terms of production expenses; it is also highly capital intensive. For example, the cost structure for a typical potato farm in the Eastern Free State is as follows: total cash expenses amount to R15.4 million, while total investment in land, infrastructure, machinery, and packhouse facilities amounts to R14.5 million. This is only for the potato division of the diversified farm. Annually, 178 ha of potatoes are planted on the farm under dryland conditions.

The above gives an indication of the amount of money required to produce potatoes, which are generally considered a risky crop due to their proneness to disease attacks, among others. Still, more than 2.5 million tons are produced annually in South Africa.

Figure 2: Baseline net farm income of an Eastern Free State prototype potato farm.



Net farm income

As is indicated in *Figure 2*, the baseline scenario that represents the status quo without any major external shocks, indicates the yearly change in NFI from 2020 (base year) to 2027.

The NFI was relatively high in 2020 due to record market prices since Lockdown Level 3. This was mostly driven by an extremely cold winter resulting in low yields in certain regions. Another reason for the high prices during the uncertain times is because consumers returned to the basic food types – in this case, potatoes. Note the decreasing trend

[4] Net farm income (NFI) = All cash receipts minus all cash expenses, excluding family living costs, principal debt payments, as well as income and land taxes.
[5] Return on investment (ROI) = NFI divided by investment in land and machinery.
[6] Assumption: Permanent labour will increase by 9% in 2021, followed by consumer price index (CPI) + 1.5% from 2022 to 2027.

in NFI from 2020, indicating, for example, potential cashflow problems.

Factors putting the NFI and return on investment (ROI)[5] under pressure include the demand for higher wages, the sharp increase in the expected prices for plant protection chemicals, and the expected hike in electricity rates.

Impact on seasonal labour

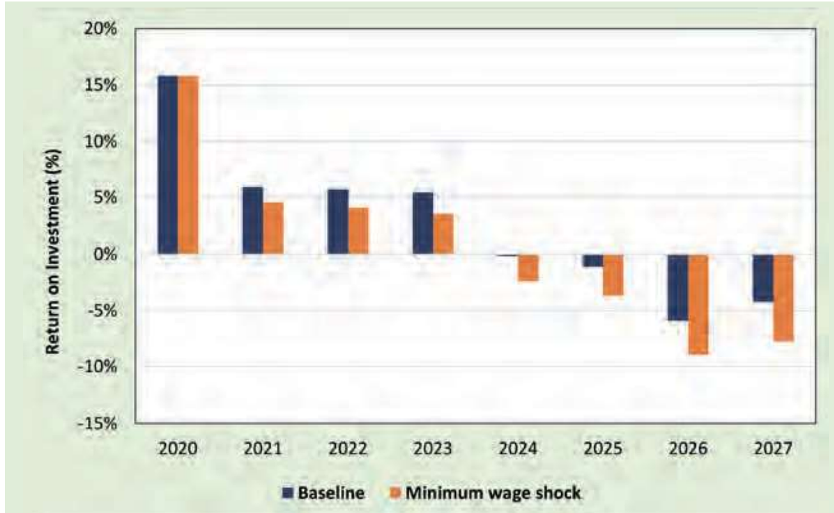
An external shock was used to test the impact of a 16%[6] increase in the minimum wage for seasonal labour for 2021. As shown in *Figure 3*, this will lead to an increase of R182 911 in the seasonal and permanent labour costs on the farm for 2021. This translates to an extra R1 028/ha due to the hike in wages. If the total region is utilised, the additional cost of labour will amount to nearly R10.5 million.

If the increase in the total wage bill is extrapolated to the total primary potato industry, the additional expenses for 2021 will be around R55 million. If the R1 028/ha is extrapolated to, for instance, a 400 ha farm, the extra labour cost will increase to R411 037, according to *Figure 3*.

The yearly average nominal ROI for 2021 for an Eastern Free State farm will decrease to 4.6% compared to the 5.9% of the baseline (see *Figure 4*).

In conclusion, the ROI in agriculture (which is already low compared to other investment opportunities such as the JSE) will be a vital variable that will determine future investment in agriculture.

Figure 4: Return on investment for an Eastern Free State prototype potato farm.



Demand growth for agricultural products over the coming decades will put tremendous pressure on the natural resource base.

Eradicating hunger and boosting rural development will require a significant increase in agricultural investment. Sub-optimal investment in the primary potato sub-sector will put the sector's ability to produce sufficient potatoes at risk, hence prices will increase to the detriment of consumers, who are already economically stressed.

Suggested way forward

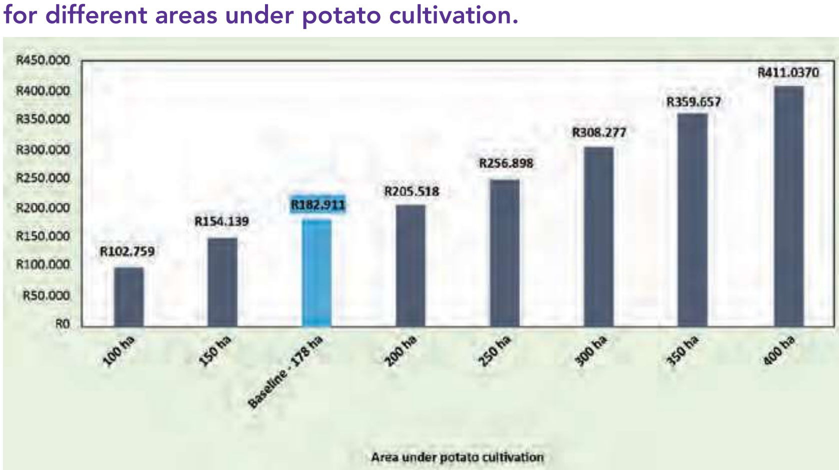
A recent study by PSA on the efficiency of potato packhouses concluded that some producers can easily cut back 10% on the number of labourers in packhouses, without having them replaced by machinery. Nevertheless, farmers claim they do not want to shed labour, as they consider it a social responsibility.

PSA's position is to engage with government to develop a policy environment that is supportive of job creation to achieve the goals of the NDP. Any opportunity to further engage with government on this issue will be welcomed.

PSA would like to see a value-chain approach as potato producers, labourers, and informal traders, as well as other role-players such as input suppliers, are dependent on one another. If a potato producer leaves the industry, not only will his seasonal labourers (and likely his permanent workers as well) lose their jobs, but related informal traders will probably not be able to source enough potatoes.

Should the producer cut back on seasonal labourers in favour of mechanisation, less money will be directed to mostly poor local communities. Unintended consequences when changes are made to labour legislation should always be considered extensively.

Figure 3: Additional farm wage bill: Difference from baseline in 2021 for different areas under potato cultivation.



The analysis was performed in collaboration with the Bureau for Food and Agricultural Policy (BFAP). For more information or a list of sources and references, send an email to pieter@potatoes.co.za.