It is harvest time in Uasin Gishu County, in Kenya’s North Rift breadbasket region, but Emman ChECHCHELCHIRICH is less impressed with her harvest.

The 42-year-old mother of six had expected at least 60 tonnes of maize from her six-acre plot, but she got a measur 25 tonnes – a disappointing yield.

Chepchichir is the beneficiary of the government’s fertiliser and seed subsidy programme, which seeks to provide cheap farm inputs to farmers to boost maize production. This is why the poor harvest is particularly disappointing to her.

“I had hoped the subsidised fertiliser which comes at nearly half the cost at retail shops would help boost my harvest,” she says, gazing at the small pile of bags before her.

But the fertiliser came late, – three weeks into the start of the rains, meaning I planted late and hence the poor harvest. It is particularly disappointing because now I will not recoup my investment, leave alone have enough surplus to feed my family,” she adds, tears welling in her eyes.

The delays were caused by an apparent dispute between the National Cereals and Produce Board (NCPB) and its suppliers.

The cereals commodity management and trading organisation is facing difficulties after some of its assets were frozen. In August, a court ordered NCPB’s bank accounts in an effort to recover a Sh522 million bill for breach of contract in involving a supplier.

Bounty harvest
But 200km away from Eldoret in Kakamega County, Western Kenya, the atmosphere is quite the opposite, as an ecstatic Kennedy Wafula goes about harvesting his crop.

With a smile on his face, a saddle in his hand and a possible bounty harvest in the offing, Wafula savours the success of his hard work.

Helped by his wife and two children, he whistles as he gathers sack after sack of healthy looking corn. From a meager 0.5 tonnes previously, Wafula now rakes in an incredible seven tonnes per acre.

Yet a few years back, Wafula was a distraught man, watching his two-acre plot in Kabras East return poor harvest year after year.

“I suspected someone from my clan had cast an evil spell on my harvest,” he says, a sheepish smile spread across his face.

“Little did I know that my problems lay elsewhere, until a research project came along and identified soil acidity as the cause of the poor harvests,” he adds.

In Western Kenya, food insecurity and poverty have been identified as major constraints to development. The arable land is about 6.5 million hectares. Maize and beans yields rarely exceed 0.5 tonnes per acre in smallholder farms.

The poor yields are mainly caused by soil acidity due to high rainfall and overuse of fertiliser, striga weed invasion and high cost of farm inputs.

Other studies have shown that soils in the area are severely depleted of phosphorus and nitrogen.

Lime project
But a joint project between Kenya Agricultural Research Institute (KARI) Kakamega and Moi University, Eldoret, to address the poor soil quality is transforming lives in the area.

The project seeks to create awareness on the use of agricultural lime, increase its application on acidic soils and make farmers have easy access to and other fertilisers.

I had hoped the subsidised fertiliser would improve the yields. I did not know I was only adding to the problem. The lime project has increased my harvest two-fold and I did not even use fertilizer,” she says.

Economic fortunes
Crop yields in the area jumped from 0.5 tonnes per acre to between 5-7 tonnes in just two years, turning around economic fortunes of many rural households.

Crop areas over 30,000 smallholder farmers in Kakamega, Busia and Siaya and plans to expand that to 50,000 farmers by 2015.

The project is also study in how agricultural research and the use of simple tools can contribute to increased food production and alleviate poverty in rural households,” Mbakaya says.

Back in Uasin Gishu, the late arrival of subsidised fertiliser is not the only problem Chepchichirich has to worry about.

Getting the meager harvest to the market is a big headache for her due to poor rural roads.

“Often we are stuck with our produce for months on end after it has rained and transporters cannot reach our far-flung farms,” she says.

The government had set aside $3 billion for a fertiliser and seed fund in the last planting season. The amount will be increased progressively to $15 billion in the next five years. This is equivalent to 60 per cent of the agricultural budget which stands at Sh38.7 billion.

But some experts say fertiliser subsidies marginally raise crop production, citing the example of Zambia, where an additional kilogramme of subsidised fertiliser only raises maize output by 1.9kg per acre on average.

According to Dr Milu Muyanga, Assistant Professor International Development at the Department of Agriculture, Food and Resources Economics at Michigan State University, this is a very expensive way of increasing agricultural production.

Politically popular
“It usually leads to huge fiscal burden that amounts to use of public resources for private goods,” – Dr Milu Muyanga, Food and Resource Economics expert

A farmer in Ugenya, Siaya County, displays his healthy maize crop. He benefited from a soil improvement project by Kari and Moi University.

In Zambia, studies show that households in constituencies won by the ruling party get more subsidies,” he observes.

“Besides, the input subsidy benefits enjoyed by the farmers are usually not transmitted to the end consumers,” he adds.

Subsidised fertiliser depresses purchase of the commodity from commercial retailers thus crowding in rewarding their voters and political elites in farming or input distribution.

“Of course it has been shown that input subsidies cannot win new votes. In Zambia, studies show that households in constituencies won by the ruling party get more subsidised fertilisers,” he observes.

“Besides, the input subsidy benefits enjoyed by the farmers are usually not transmitted to the end consumers,” he adds.

Subsidised fertiliser depresses purchase of the commodity from commercial retailers thus crowding in rewarding their voters and political elites in farming or input distribution.

“Of course it has been shown that input subsidies cannot win new votes. In Zambia, studies show that households in constituencies won by the ruling party get more subsidised fertilisers,” he observes.
Subsidised fertiliser: Cheaper alternative or expensive way of rearing crops?

It has also been shown in Zambia and Malawi that fertiliser subsidies are subject to elite capture and leakage – the largest proportion of the beneficiaries are the medium and large-scale farmers who can afford unsubsidised fertiliser anyway.

Also poorly designed subsidy programmes encourage fertiliser overuse resulting in low response rates and environmental damage, including soil acidity.

"In all the countries where fertiliser subsidies have been introduced, the programmes lack exit strategies – farm input subsidies are very ‘addictive’ to farmers and once introduced they’ve proven notoriously impossible to discontinue, of course without adverse political consequences," he observes.

Dr Muyanga, who was one of the three main authors of reviews of input subsidy programmes in their countries, to be appearing in a forthcoming special issue of Agricultural Economics, says his past experience teaches him that subsidy is not the best policy instrument for poor agricultural production.

"It has been shown that investment in roads, education and irrigation provide more return. These investments help lower input costs and improve crop-input response rates," he says.

Exit strategies

"There is need to focus on soil health and cultural practices. For a package of fertiliser to be profitable and to achieve fertiliser use efficiency, it requires renewed attention to soil health and fertility, organic matter and related cultural practices. If the governments cannot resist the temptation of input subsidies, he says, then they should adopt market-smart programmes and support market development/private sector investment – use approaches that crowd-in private sector like vouchers targeted for the poor.

"The government also needs to promote competition and pay attention to farmer demand. For example some farmers may be in need of lime to lower soil acidity and not fertiliser, some farmers live in areas where fertiliser use is not profitable. Improvement of research and development and extension services is paramount, insist on economic efficiency and farmers must be in the driver’s seat and have clear exit strategy to ensure sustainability,” Dr Muyanga tells Standard On saturday.

“In a nutshell, there are better and less market-distorting strategies to increase agricultural productivity than use of input subsidies. While input subsidies are politically popular, empirical studies show that they do not win new votes. Input subsidies are as addictive as smoking – once started, extremely difficult to discontinue,” he says.

Food security: Agricultural experts say seed and fertiliser subsidies marginally raise crop production, citing Zambia where subsidised fertiliser only raises maize output by 1.9kg per acre on average.