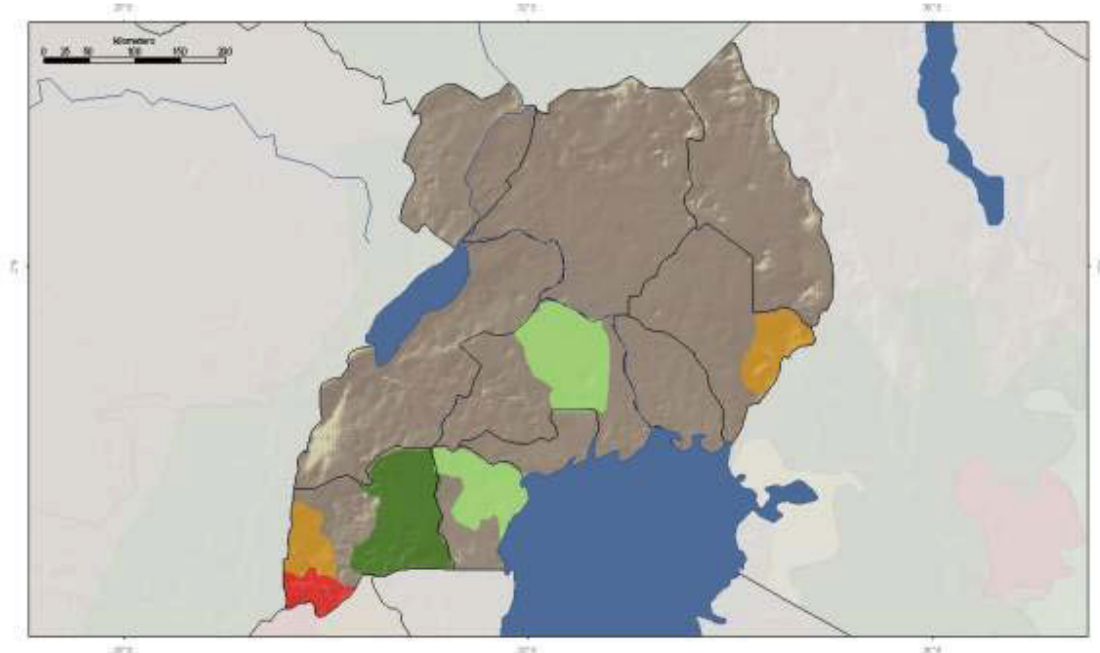


UGANDA LATE BLIGHT PROFILE

October 2005



Describe the overall disease situation

LB is a countrywide problem in the potato growing regions. It can rank the number disease problem followed by bacterial wilt.

Estimate crop losses

Late blight can cause up to 90% loss as evidenced from control plots in experimental fields. However, it may be stated that at farm level, farmers realize yield losses of up to 60%. This estimate takes into account the fact that in Uganda, a larger % of potato produced is by a few farmers who are able to manage LB albeit at different capacities. And that majority of the small-scale farmers who may not afford the recommended LB control measures contribute the smaller % potato produced.

Describe farmer practice in disease management

- The well to do farmers – those with resources to access and utilize technological innovations – are able to manage LB using both systemic and contact fungicides like Ridomil and Dithane M45 respectively.
- Others use the disease escape strategy – planting when they expect climatic conditions to not be favorable for LB development. Thus quite often, they grow potatoes in drier periods, which results in low yields despite their having avoided spraying.
- Others use varieties thought to be resistant to LB. In Kapchorwa district in Eastern Uganda, over 60% of potato farmers grow the variety “ Cruza” on which they don’ t apply fungicides. However, personal

observation is that it is not as resistant as they rank it. In 2005A season, I visited a field of Cruza that had been devastated by LB – *weather conditions were very favorable for LB development.*

Fungicides currently being used against late blight in order of priority

Contact fungicides	Active ingredient (s)
Agro-zeb 80 WP	Mancozeb
<i>Emthane 80 WP</i>	Mancozeb
Uthane 80 WP	Mancozeb
Green-zeb 80 WP	Mancozeb
Indofil	Mancozeb
Famcozeb	Mancozeb
Sancozeb 80 WP	Mancozeb
Antracol	Propineb
Captan	Carbendazim
Milthane Super	Mancozeb
Dithane M45	Mancozeb
Shell Copper	Copper oxy-chloride
Systemic fungicides	
Agro-laxyl MZ 63.5 WP	75 g matalaxyl and 560 g mancozeb
Ridomil (Gold) Mz 68 WP	40 g metalaxyl-M and 640 g mancozeb
Tata Master Mz 72 WP	80 g metalaxyl and 640 g mancozeb
Milraz	Cymoxanil and propineb
Acrobat	Dimethomorph and mancozeb

Metalaxyl resistance

- Not established but plans are under way to do the investigation.

Varieties / land races used in the country. Give for each variety if available additional information in the spreadsheet (CPupdate.xls) on:

- No new varieties since the release of NAKPOT 3, 4 and 5

- **Population B3 genotypes** 393382.44 and 389385.39 are due for submission for release during the 2005B season.
 - They both have good levels of LB resistance that are higher than the Victoria which is the most commonly grown improve variety
 - 393382.44 has been found good for mainly “ crisps” but can also be used for French fries, mashing and as boiled potatoes

Molecular markers being employed for pathogen population characterization:

- None

Studies on comparative aggressiveness of new Vs. old population done?

- **Not done**

Relative importance of tuber blight

- Increasing especially among the farmers that don’ t practice LB control

Describe on-going potato late blight research

- Optimizing fungicide spray regimes to complement potato variety resistance for integrated management of late blight (*Phytophthora infestans*) in Uganda – *Part of a regional trial for Rwanda, DR Congo, Burundi, Ethiopia, Uganda and Kenya*
- Development of Varieties with Durable Resistance to LB in PRAPACE Countries – *Evaluation of Population B3 provided by CIP-Lima*
- Development of decision support tools for the management of late blight of potato – *PhD Study for Rogers Kakuhenzire*

Publications on late blight in the country:

Kakuhenzire, R., Hakiza, J.J., Adipala, E., Wagoire, W. and Lemaga, B., 2004. Yield stability and acceptability of two new *Solanum* potato varieties in Uganda. Uganda Journal of Agricultural Sciences 9: 718-722.

Namanda, S., Olanya, O.M., Adipala, E., Hakiza, J.J., El-Bedewy R, Baghsari, A.S. and Ewell, P. 2004. Fungicide application and host-resistance for potato late blight management: benefits assessment from on-farm studies in S.W. Uganda. Crop Protection, 23: 1075-1083.

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