



**IFAR 2007 Professional Development Program  
Completion Report**

*Thalwitz Scholarship*

Yes

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**Name of Applicant: Moses Wabomba Nyongesa**  
**Sponsoring CGIAR Center: International Potato Center (CIP)**

### **I. Work program goals achieved**

A cultivar-specific fungicide regime was recommended after on-farm demonstrations with farmers' groups. Under this regime, local CIP-developed potato varieties (Asante and Tigoni) are complemented with one protectant fungicide spray at full crop emergence, followed by a systemic fungicide spray upon appearance of first foliar late blight symptoms.

Based on the results of the fungicide regime trials, a technical sheet titled '**Control of late blight of potato on varieties Asante and Tigoni**' was prepared for the local resistant cultivars. Similarly, a twenty-two minute video documentary on potato late blight in both DVD and VHS formats, entitled "**Fighting late blight of potatoes**" was completed and copies distributed to extension workers and potato farmers' groups.

The project output was presented at **Potato Science for the Poor, Challenges for the new Millennium. A working conference to celebrate the International Year of the Potato**, held in Cusco, Peru, 25–28 March 2008.

The applicant participated in development of a quantitative "interval" scale for measuring resistance in potato genotypes.

Information generated from the late blight survey was documented and formed the basis for evaluating fungicide use, based on the Environmental Impact Quotient, as well as for planning late blight research in the country. (196 words)

### **II. Plans for follow-up**

These are as follows:

- To build on the linkages established during the international exercise, to develop a scale for measuring late blight resistance, by planning collaborative research activities on integrated disease management, thereby benefiting from associated peer review mechanisms.
- To translate the technical sheet and the DVD/VHS documentary on late blight into Swahili, for direct use by resource-poor farmers.
- To deliver the leaflets and DVD/VHS, with some adjustments, for use by workers in similar potato farming conditions in member countries of the regional network Regional Program for the Improvement of Potato and Sweet Potato (PRAPACE). Copies of these will be given to CIP's sub-Saharan office, for transfer to other countries in sub-Saharan Africa.
- To continue cultivar-specific fungicide regime testing for genotypes still under development.
- To seek further funding by pursuing various grant opportunities in order to continue this line of research and disseminate project findings.

### III. Report budget utilization including whether budget was spent as planned

Evaluation of genotypes for LB resistance	(KSh 28400)
Potato late blight survey in 3 districts	(KSh 176540)
Trial sites identification	(KSh 31700)
Survey data entry services	(KSh 24540)
Video footage DVD training material	(KSh 30000)
Planting of trials	(KSh 60700)
Computer and accessories	(KSh 70000)
Monitoring of demonstration trials	(KSh 50341)
Harvesting of trials	(KSh 24560)
Workshops and technical sheets	(KSh 185000)
Stationery & correspondence	(KSh 16988)
<b>Total</b>	<b>(KSh 698769)</b>
Un-utilized funds	(KSh 12867)

Budget for each line item was spent as planned except in isolated cases occasioned by variations in fuel costs.

### IV. Assessment of the fellowship experience and general comments.

The IFAR Professional Development Program has been effective in shaping the course of my research career.

The project strengthened my capacity to coordinate a multi-faceted project. It also enabled me to gain vital hands-on experience with grass-roots organizations working in technology transfer. The established researcher-extension-farmer networks provided a framework for diffusion of improved potato varieties and other disease management technologies for the National Potato Program.

The supervision and general guidance provided by the International Potato Center (CIP) was very effective. During interaction with the staff of CIP (Dr Gregory Forbes and others) I became acquainted with new techniques, including the Environmental Impact Quotient, disease simulation, laboratory measurement of epidemiological components and development of a resistance scale. Additionally, I was able to access relevant publications. As an outcome of this interaction, we have already jointly presented a paper for publication in the proceedings of: *Potato Science for the Poor, Challenges for the new Millennium. A working conference to celebrate the International Year of the Potato. Cusco, Peru. 25–28 March 2008*. The results of the international exercise on development of a quantitative “interval” scale for measuring resistance in potato genotypes in the highland tropics are being prepared for inclusion in a journal paper.

The fellowship period is, however, short. One year would be more appropriate and would allow sufficient time for a repeat trial if weather-induced failure of initial trials occurred. Additionally, interactions between the applicant and scientists at the sponsoring CGIAR would be longer and thus more fruitful in terms of skills transfer.