



**IFAR 2006 Professional Development Program
Completion Report
[800 words]**

Instructions:

Please submit the completion report by email, using this form, through the sponsoring CGIAR Center to ifar@ifar4dev.org within three months after the completion of the fellowship.

Please check if Thalwitz Scholarship *Yes*

Name of Applicant -----KOUASSI Koffi II Nazaire-----

Sponsoring CGIAR Center -----WARDA-----

I. Work program goals achieved (maximum length: 200 words)

Four program goals were planned in this present project and two goals related to epidemiology aspect of RYMV disease were tackled. RYMV prevalence was assessed on 70 rice fields in 24 rice cultivation areas. RYMV incidence was estimated at different stages of the rice plant development. Furthermore, the presence of insect vectors and the host plants were recorded. We identified four hot spots of RYMV during this study. Yield losses caused by RYMV on Bouaké189 variety ranged from 75 to 100%. The impact of RYMV on WITA12 variety (representing 95% of total rice cultivation area) at Diégonéfla locality was 80%. When considering individual rice field, five levels of incidence have been recorded and ranged from 0% for the absence of the disease to 80% for the highest incidence. The second goal which concerns the characterization of RYMV isolates and especially the serotype of RYMV, is still under investigation. Rice leaves showing RYMV symptoms have been collected and 28 RYMV Positive leaves samples were used in a TAS-ELISA test. All the tested isolates have the S2 or S1 profiles when using specific monoclonal antibodies, meaning that so far all the collected isolates were RYMV S2 and S1 serotypes.

II. Plans for follow-up (maximum length: 200 words)

Two mobile 4 x 6 m insect-proof cages have been constructed for the screening of rice varieties. A differential set of 4 varieties including susceptible, moderately resistant and highly resistant varieties will be used to classify isolates according to their pathogenicity. Disease severity will be recorded using IRRI's 1-9 scoring system and the virus content will be assessed by DAS-ELISA. Resistance-breaking isolates will be therefore identified and sequenced to determine the virulence-specific consensus sequence. Trials for the screening of rice varieties under natural conditions will be also performed at the same time. Assessment of introduced varieties and some varieties from WARDA will be performed in RYMV hot spots in several localities of Gagnoa zone and in controlled conditions. Some rice lines carrying RYMV resistance gene from IRD Montpellier, will be also assessed in the same conditions. A specific Mabs will be used in TAS-ELISA test to determine the serotype of more isolates since one S3 serotype has been already found in the country. The prevalence of RYMV serotypes and their host or cropping system specificities will be studied in this zone and then in rice cultivation zones in Côte d'Ivoire.

III. Report budget utilization including whether budget was spent as planned (maximum length:100 words)

The project activities were scheduled from June 2006 to February 2007 but funds were available for expenses only in September 2006. Expenses related to supplies, construction of insect-proof cages, office expenses administrative costs and local travels for sampling were performed as planned. However contrary, the travel to WARDA in Cotonou planned for harmonization of rice plant screening protocol has not been achieved. The actual total expenses are \$ 7, 700 and the differential amount (transferred to CNRA financial services only on 15 February 2007) will be used for the travel to Cotonou, the monitoring and supervision and for the screening of rice varieties.

IV. Assessment of the fellowship experience and general comments. (maximum length: 300 words)

IFAR small grant is an accurate and very useful fellowship for short term research activities. However, due to delays observed for all the administrations (WARDA, CNRA), this fellowship should be instituted for one civil year to enable the complete achievement of the project. As a matter of fact, when we experience a delay in the project activities, we are not able to make up for the lost time and implement the project as planned. Most of the biological research activities have to be performed at a specific period of the year corresponding to the cultivation period or a season. In this project, at the time we received the funds, the activities concerning the screening of new varieties for the resistance of RYMV under natural conditions and the monitoring of a disease in the fields could not be achieved because the appropriate period for this specific experiment was already over. Moreover, the delay in the outward payments was so long that it was a great handicap for the execution of this project as planned. There are many levels of the funds administration ie. WARDA – CNRA - Biotechnology lab. I think that the funds have to be sent to WARDA in Abidjan so that expenses can be directly ordered by the principal investigator who will provide all invoices for expenses justification. This will shorten the delay in implementation of the project.

Mid term financial report

Item	Total project	Mid term expenses
Stipend and subsistence	-	-
supplies (ELISA kits, plates, sequencing, chemical)	4,000	2,500
Rice varieties (differential set of rice varieties)	-	-
Technical assistance (greenhouse construction)	1000	2,000
Travel including per diem		
International (to WARDA, Benin)	1,000	-
Local (Gagnoa, sampling)	1,500	1,200
Books, journals and equipment (up to \$1,000)	1,000	1000
Monitoring and supervision (staff costs)	1,000	-
Dissemination of information	500	-
Office expenses, communications	560	560
Administrative costs	440	440
Total (one year program)	11,000	7,700

Director of the CNRA
financial services

Director of the
Biotechnology lab

IFAR Fellow

M. K. Kouadjo

Prof. A. Sangaré

Dr N. Kouassi