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WORK THAT THE INDOCHINESE RICE OFFICE
HAS ACCOMPLISHED

by
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**WORK THAT THE INDOCHINESE RICE OFFICE
HAS ACCOMPLISHED**

After having organized THE INSTITUTE OF AGRONOMICAL AND FORESTER RESEARCHES OF INDO CHINA, the Inspector General of Agriculture, of Rearing and Forests, Yves Henry proposed in 1930 to the Governor General Alexander Varenne the creation by decree of an INDOCHINESE RICE OFFICE.

The Minister presented to the President of the Republic the project by decree by the expose of the following motives:

"The Governor General of Indo China, preoccupied with bringing to the traditional culture of rice and to the production of the commercial types exported on the Extreme-Orient markets the indispensable ameliorations to raising the yield of the rice factories and to the production, standards of good and constant quality, proposes to institute in the colony, following the example of the great producers of cereals, an Indochinese Rice Office endowed by the civil personality".

The decree was signed the 10th of April by President Gaston Doumergue. He stipulated that there was constituted in Indo China, under the name of "Indochinese Rice Office", a public establishment endowed by the civil personality having for an object the ameliorations of the culture, of the factory and of the commerce of rice, this Office having its seat at Saigon.

The activity of the Rice Office thus comprised essentially a domain of researches and a domain of organization, the results of the first being in proportion as applied and verified in the second.

The Indochinese Rice Office (O. I. R.) under the impetus of an energetic Director, Mr. Maurice de Visme, agronomical engineer, licensed in the sciences, rapidly experienced a great development and imposed itself to the general attention in Indo China and in the foreign countries of Asia by the breadth of its program of scientific researches and of practical and constructive organization, and of their applications.

Mr. de Visme knew how to surround himself with remarkably competent and active men, animated with an exceptional "team spirit", working according to the industrial conceptions, that took the direction of different services of the O. I. R. (we will find the names of the principle ones among them, French and Indochinese, in the enumerations that we will give further on of published works). The Director and his personnel were placed under the high direction of an Administration Council and of a technical

director Committee, group the provinces interested in rice-growing and in the industry and in the commerce of rice in Indochina. In each of the countries then constituting the Indochinese Union a Consultative Committee existed.

The central organisms of the O. I. R. were installed at Saigon: Direction; Documentation services, of statistics, archives and library; Genetical Division; Division of Chemistry and Technology, with a Laboratory of Agrolgy; Divisions of Phytopathology and of Entomology (and animal parasites other than the insects); etc.

Let us bring to attention that these last divisions worked in strict collaboration with that of Phytopethology and of Agricultural Entomology of the Institute of Agrolomical and Forestrial Researches.

For a few years the O. I. R. had a Bureau of agricultural Hydraulics, to which some engineers of rural disposition were provided. Then, a Service of Rural Disposition was created and organized in the setup of the Inspector General of Agriculture, of Rearing and of Forests and it grouped all of the specialized engineers and their teams. This service, whose attributes were as diverse as they were important for the development of the agricultural production of the Indochinese Union and the indigenous colonization of the unburned regions, evidently carried its concourse to the work pursued by the O. I. R.

The divisions had very well managed laboratories and provided with all the necessary material; that of the Chemistry and Technology even had at their disposal a rice factory on an extremely reduced model permitting an industrial control of interesting factory experiments.

The O. I. R. comprised:

— a South-Indochinese Section having its seat in the Central Services of Saigon and two sub-sections, one for Cochin China and one for Cambodia;

— a North-Indochinese Section with seat at Hanoi;

— an Annam Section, with seat at Hue;

— the work undertaken at Laos depended on the South Section.

Each section possessed experimental stations and trial places judiciously scattered in the provinces and Indochinese agents charged with its popularization, of propaganda and of the distribution of selected seeds.

The problems to solve concerned the milieu (climate and soil), the plant, the culture and the products; all of the aspects of the rice-growing

production were thus envisaged.

The nature of the lands and that of the waters, their qualities and their faults were systematically studied by the Laboratory of Agrology directed by Mr. Roger F. Auriol. The management of these lands and of these waters was done by the brigades of the rural disposition, notably by the engineers Gaury, Gauchou, Kellermann, Henry and Pottier. These men kept themselves in relationship with the Bureau of Climatology and Agricultural Meteorology of Indochina, for the study of these local climates; the determination of the speed of the wind was taken particularly in consideration in certain sectors in view of the utilization of windmill motors to elevate water for the irrigations.

Profound researches were undertaken by the Divisions of Phytopathology and of Entomology. Let us cite concerning this point those of MM. Comm. entomologist, and Roger, phytopathologist. It is convenient to underline the application of a phytosanitary police basing its action on the syndical associations of defense of the cultures, as the Committee of Epiphyti had recommended; the results obtained were remarkable.

From the complex mixtures of traditionally cultivated rice, furnishing an uncertain production of mediocre grains, the Genetics Division succeeded in extracting well defined varieties, whose aptitudes were precise and the qualities compared from the cultural, industrial and commercial points of view; then, the best among them, giving abundant harvests of quality grain, were put in prominent position. These works, of capital importance, were the principle work of Mr. Nuet in the South, of Mr. Coyaud in the North and of Mr. Philippe then of Mr. Bertrand in Cambodia.

One of the most striking results obtained by the Genetics Division was the reduction of the number of cultivated varieties. For example, the inventories and the purifications of the varieties of rice from Cochinchina (South Vietnam) had furnished 1,120 varieties and types, of which 249 were identified to others, and 460, of poor cultural quality, industrial or commercial, eliminated.

In 1941, 411 varieties remained, of which 184 in observations and 227 patronized and multiplied on 1,563 hectares. These patronized varieties were gathered under eight standards and Indo China possessed from this epoch on all of the types demanded in all of the world markets, from the roundest rices to the longest rices.

Another very important result acquired by the Genetics Division was the classification of the varieties, permitting to approach in complete security the standardization of production, up until then an inaccessible ideal.

Indo China was thus then ready to fight against that which concerns the quality with no matter which of its competitors; and, if the exported rices were not always sufficiently homogeneous, this was fault of a rational professional organization, that one attached himself little by little to edify, as, from 1943, 75 % of the area of rice fields of Cochin China were cultivated in patronized varieties.

The rice grain and its derivatives were the object of profound studies pursued by the Division of Chemistry and of Technology directed by Mr. Auriol. They permitted to define the chemical composition of the paddies and of the rices, to bring to light their industrial utilization and to precise their standards and the elements of their conditioning. These researches and focuses on drying, on the malted meal, on the low flours of rice, the extraction of the phytin, the preparation of the dextrans, etc., would result in a great number of very remarkable results.

The application of these statistical methods to generalized control of yield allows to ameliorate very noticeably, and in a consistent manner, the knowledge of the production.

Finally, the organization of the application of results had been conceived on the provincial plan and on the village plan.

Provincial agencies, multiplication farms for seeds, store distributors of fabricated selected seeds for all terrains and all seasons, fields of semi-industrial demonstration to individuals were developed in the largest measure possible, the provincial agents assuring a function simultaneously of information and propaganda.

Unfortunately, the tragic events that were experienced and are still so cruelly experienced in the countries of Indo China came to interrupt and to ruin in major part the admirable work that we have just painted in capital letters a schematic table.

During the Japanese occupation, although its means of action were greatly reduced, the O. I. R. followed in a large measure the execution of its programs thanks to the tenacity and the zeal above all praise of its French and Indochinese personnel.

But then came the Nipponese's military coup de force of March 1945, that suspended practically all of the functionings of the services.

The central services, even at Saigon, once more undertook, in the measure of their means, in 1947, a certain activity bearing essentially on laboratory researches and on the publication of studies based on the accumulated data collected in the course of years of intensive work;

in the provinces, all work had become impossible because of the civil war. Mr. Coyard and Mr. Moreau alternately assured the direction as a result of the return to France of Mr. de Visme, who had retired.

Finally, the O. I. R. completely ceased to function and it was suppressed in 1952.

Not only is it deeply regrettable for the economy of interested countries that the work pursued by the O. I. R. had been stopped when was in full swing, but what is particularly deplorable is that the abandon of experimental rice-growing stations led to the quasi-total lost of a vegetal material representing a capital of an inestimable value, patiently constituted in the course of long years of enlightened and methodical work.

The preponderant place which rice occupies in the alimentation of the populations of the Associated Countries of Indo China and in the general economy of these will necessarily determine the resumption of the programs of researches and of practical realizations momentarily interrupted. Just the same, the fact that, contrarily to the time of the Indochinese Union, Vietnam, Cambodia and Laos are now completely separated from a political point of view, will certainly not permit at all the re-establishment of the former Office that was organized and functioned on the federal plan.

A new formula of organization and of collaboration between the countries remains to be found. From now on, the Government of Vietnam preoccupies itself with the reconstitution of its services and establishments of Agriculture and it is evident that, in their attributions, the rice-growing and the rice industries will occupy a preponderant place. The declarations repeated by the Government gives us faith of it. We will cite, among others, this one of a Minister of Agriculture two years ago already: "the effort will bring first of all a rapid growth of rice-growing on which all of our national economy will rest. The day, in fact, where our exportations of rice will equal again the figures before the war, that is to say will pass from 350,000 tons to 1,500,000 tons, the day where, with the enhancing of the Jones plain, they will attain 2,500,000 tons, that day we will be quite certain of seeing our gravest financial problems resolved.

The O. I. R. published:

— a Manual Bulletin addressed to the rice growers as well as to the industrials and merchants in rice: this periodical presented an expose of the situation of the culture (in function with meteorological statements), statistical data and technical articles of practical nature;

_____ a non-periodical publication, the Archives of the Indochinese Rice Office, presenting the report of the works of the establishment and of memoirs of a scientific and technical nature.

Nothing could better give the idea of the work realized by the O. I. R. than the list of principle memoirs, distributed in 36 instalments from 1937 to 1953. This is why we are giving it here below.

A number of these studies remained unknown in the countries where rice-growing has an important extension and are now impossible to find, the stocks having been exhausted (sometimes, even, alas, destroyed, as is the case for the great majority of publications of the Institute of Agronomical and Forester Researches and of the Meteorological Service of Indo China). Also, the Committee of lecture of Rice and Rice-Growing proposes to publish certain ones among them presenting not only an Indochinese interest, but a generalized one.

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PRINCIPLE MEMOIRS PUBLISHED IN THE ARCHIVES OF THE INDOCHINESE RICE OFFICE

Dried rice: its industrial preparation and its by-products.
by Roger F. AURIOL. - No. 2, 1937.

Works carried out by the Genetics Service from 1933 to 1937. by Gerard HUET and LE KHAT-LAI, no. 3, 1937, volume of 100 pages, numerous tables, maps and plates h. t.

1st part: programs and methods;

2nd part: results obtained in the course of three periods from 1933 to 1936.

Varieties of Cochinchinese rice patronized by the Indochinese Rice Office. by HUET, volume of 100 pages, numerous tables and photos h. t., no. 4, 1937.

Single elevation machines. by Rene HENRY, no. 5, 1937.

Six years of work, 1931-1937. by DE VIS-É, no. 6, 1937.

The level road and merchant. by Roger F. AURIOL, no. 7, 1937, 93 pages, photo h. t.

Notes on the conditions of the production and of the commerce of rice in the United-States. by HUET, no. 8, 1938, 87 pages, tables and photos h. t.

Caterpillars on the stem and malady of rice sclerotium in Cochinchina. by Robert COMAN, no. 10, 1939.

Six notes of technology, by AURIOL and HUET, no. 11, 1939.

I. _ On the influence of the amount of farina extraction on the richness of fertilizer material of rice and its derivatives.

II. _ On the keeping of rice farinas in foreign mineral materials.

III. _ On the evaluation approached by foreign mineral materials in the farina bases of white rice.

IV. _ Summary definitions of the paddy and its products and by-products of its rice mill.

V. _ Contribution to the study of clauses to insert in the note-books of charges for furnishing of paddy, rice and farinas of rice destined to the administrations.

VI. _ Distribution, according to the format of their grain, conserved varieties from Cochin China and comparison with a few commercial French and foreign types.

Of the influence of regulation of the rice mill cones on the bleaching of the rice, by HUET and PHAM-HUY-DUNG, no. 14, 1940.

Rice Manual for pupils, in Vietnamese language, no. 15, 1940, 130 p., nomb. fig.

Documents on vitamin B1 of dried rice, by AURIOL, no. 18, 1941.

Agrological study of lands of the province of Binh-Dinh (Annam), by AURIOL and TRAN-THUC-KY, no. 19, 1941.

Amelioration of rice-growing in Tonkin, by Y. COYAUD, no. 20, 1941.

Chemical and technological studies of paddy, rices and derivatives, by AURIOL, no. 22, 1942.

Sclerotium maladies of rice in Cochin China, by L. ROGER, no. 24, 1943.

Agrological study of the lands of the provinces of Annam of:

- Emu-Yen.
- Binh-Thuan.
- Ha-Tinh.

by AURIOL, and TRAN-THUC-KY, respectively no. 16, 1941, nos. 21 and 22, 1942, no. 25, 1944.

Notes on the products utilized for the "trimming" of the millstone and cones of the rice mill, by G. FALETURE, no. 27, 1950.

Contribution to the study of starchy rices — Amyloid materials, by Mrs. VU-KIM-TY, no. 29, 1950.

Rice: Botanical, genetical, physiological, agrological and technological applied study in Indo China, by Y. COYAUD, magistral work of 312 pages, numerous tables, maps, pl. and photos h. 1.

This book constitutes, in some way, the synthesis of all of the work realized by the O. I. R.

Rice seeds, no. 31, 1951, 25 p., numerous tables, fig. graphical and photos h. 1.

I. _ Study on the germinative power — Influence of harvest conditions, of drying and of conservation — Action of the mode of soaking, by Y. COYAUD according to the works and reports of A. ANGLADETTE, VU-DUC-HIEU, PHILIPPE,

ROGER and DOAN-KHAC-VUONG.

II. — Control of the qualities of the seeds, after ANGLADETTE and ROGER.

Summary of the works at Cambodia in 1948, 1949, no. 31, 1951, 160 p. typewriting and stencils.

1. — Experimental station (of genetics) of Battambang, by COYAUD, COUEY and OUN-TA-Tim.

11. — Experimental pilot-form station of Veal-Trea-Battambang, by F. BERTHAUD.

Study of some quantitative characteristics in relation with the yield factor in rice, by COUEY and TRUC-G-VAN-HIEU, no. 34, 1951, 90 p. stenciled.

Reports on the trials of ventilation of paddy effectuated in December, 1950 and January and March 1951, by SAENZ LASCANO RUIZ, no. 35, 1951, 27 p. typewriting, and stencils.

The problem of fertilizer in the rice-growing of South Vietnam, by DOAN-KHAC-VUONG, no. 36, 1952.

Let us add that Mr. L. ROGER, who was one of our excellent collaborators and friend when we had the direction of the Institute of Agronomical and Forester Researches of Indochina and that he was charged with one of the two Divisions of Phytopathology of this establishment, all in working more particularly for the O. I. R., published in 1942, at Hanoi (in the collection of said Institute, at the Extreme-Orient Printing Office):

Mushrooms with sclerotium parasites of rice, work of more than 300 p. with numerous graphs, tables and microphotographs outside and in the text.

This book brought an extremely important contribution simultaneously to the general scientific knowledges on a group of plant parasites and on the phytopathologies of the rices; it treats in particular largely on the problem of "tiem" in South Indo China.

We had the pleasure of prefacing it and of presenting it at its issue from the presses, in the most praising terms, to the Council of Scientific Researches of Indo China, then, in 1949, at the Academy of Colonial Sciences (June 3rd seance).