臺灣糖業試驗所概況

An Introduction To

Taiwan Sugar Experiment Station



中華民國六十年 1971



本所新建研究大樓 New Research Building

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(一) 前 言

臺灣轉業之試發研究,當自 1901 年(民前 11 年) 11 月日人在臺南 設立甘漁試發苗圃及在麻豆設立甘漉試作場始,1903 年(民前 9 年),甘 漉試作場移設於臺南新化之大目降,1903 年(民前 6 年),更名為糠業試 發揚。於 1932 年(民國 21 年),方改稱爲臺灣轉業試驗所,移設於臺南 市郊之現址,設育種、耕種、病理、昆蟲、漁藝化學、製糖化學、無水酒精 及繳維化學等八科,育種科之下,又設置萬丹交配圃,從事甘漉農業、製糖 转被及面添利用等研究。

民國 34 年臺灣光復,本所由臺灣省行政長官公需接收,改稱爲臺灣省 縣業試錄所。民國 37 年3月,臺灣省政府將本所交由臺灣縣業公司接辦, 又改稱為臺灣鄉業試驗所,改原有之八科獨育種、種諺、土壤肥料、病蟲皆、 製糖化學、應液利用及體館化學等七系。並將廣臺糖公司設立於屏東之「 計准研究所」改為本所之分所。民國 41 年設置高雄公禮處,辦理輸出砂糖 檢驗工作。民國 44 年,取消屏東分所改稱為屏東齊種場。民國 45 年設置 露萬賴抗性測定圖於新竹市 (初號齊種系,嗣改雜於植物保護系,現遷至南 投番子貸) 民國 46 年,公司發展臺東與梨事業,本所設置東臺試驗場於臺 東,主事屬梨農業之試驗研究、經熱於民國 55 年因鳳梨工廠轉移民營而旅 消)。民國47年滯設自動儀署管制中心。

民國 50 年,公司為統一研究機構,將原設於臺中、虎尾、新營、麻住 及屏東總原五區之應作改良場改隸本所,同時又增設應板利用研究室於臺北 ,及山地育種站於臺中后里。民國 51 年設立石礦地育種站於屏東昌隆(兩 站隸育種系),民國 54 年,增設推廣講習中心及科學資料中心。

民國 57 年7月,爲配合公司精節政策,本所奉令結減組織於迄以今(見組織系統圖)。

爲配合蔗糖生產需要,適應全省農業建設,本所研究目標爲:

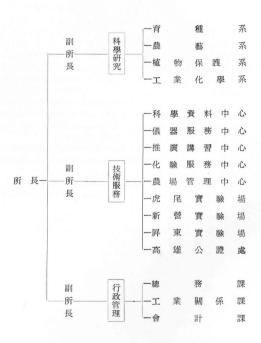
- ① "配合公司及農民需要改進甘蔗品種,提高單位面積產量,縮短甘蔗 生育時期,並改善蔗園間作經營。
- ② 提高糖廠自營農場土地生產能力。
- ③ 提高糖廠製糖效率,改進砂糖品質,研究副產利用。
- ④ 利用糖廠農工設備,發展多角經營。

FOREWORD

The Taiwan Sugar Experiment Station has a comparatively long history. It was established in 1901, during the Japanese occupation, under the jurisdiction of the Japanese Governor's Office in Taiwan. After the restoration of Taiwan to the Republic of China in 1945, the Station was operated by the Taiwan Provincial Government. It has been incorporated into the Taiwan Sugar Corporation (TSC) since 1948.

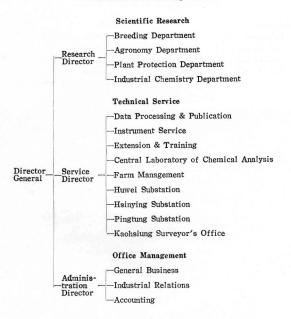
Prompted by the need of increasing sngar production as required by Taiwan's agricultural reconstruction, the Station is striving to attain the following goals:

- To help farmers increase the cane yield per unit area, shorten the growing period of the crop and improve its intercropping systems.
- 2. To boost the productivity of the TSC plantations.
- 3. To raise the manufacturing efficiency of sugar mills.
- To develop diversification of the sugar industry by utilizing available resources, estates and equipment of the sugar mills.



ORGANIZATION

The present organization of the Station is shown in the following chart



(三) 人員及設備

人 員:

研究人員: 140 技術人員: 205

管理人員: 65 合 計: 410 設 備:

建 築: 34,125 平方公尺

土 地: 500 公頃

圖 書: 30,000 餘冊,雜誌 342 種

儀器: 2,330件

PERSONNEL & EQUIPMENT

Personnel:

Scientists: 140
Technicians: 205
Management staffs: 65

Total: 410

Equipment:

Architecture: 34,125 M²

Land: 500 Ha.

Books: 30,000 Vol., Magazine: 342

kinds

Instrument: 2,330 Pcs.



本所鳥瞰圖 Bird's-eye View of TSES

(四) 刊 物

① 研究彙報:

凡研究試験已有完整結果之正式報告,均發表於本所研究彙報,每年出版三 至四期,以供生產單位參考應用,並與國內各學術機構交換,自民國三十五年至 五十九年,已出版至 52 號。

② 英文年報:

將育特殊成果之研究論文,研究設計已獲得之部份成果,及當年研究彙報各 篇論文之摘要等,以英文刊行,每年出版一期,供國際學術交換之用。已出版至 第2號。

③ 研究試驗年期報告:

每年六月將一年來研究工作之進度, 彙編爲研究試驗報告,提出糖業研究評 雖會案本。

④ 研究快報:

每年將前一年期之研究成果以通俗文字分農務工務二冊摘要刊出,並將當年 期之研究設計列入,發送現場人員參考應用,已出版至第六號。

⑤ 海外糖業文摘選譯:

將國外發表之有關糖業研究文獻摘要譯成中文,每月出版一期,單月工務, 双月農務,以供各生產單位參考,自民國 59 年1月開始印行。

⑥ 専 刊:

有關甘蔗農業及製糖工業之研究與調查結果,具有推廣價值之技術方法,以 及國外蔗糖區域考察心得,依其性質分刊於下述四種專刊:

技術專刊---巴出版至第 31 號

推廣專刊---巴出版至第 24 號

特 刊——已出版至第 26 號

土壤調查報告——已出版至第5號

⑦ 叢 書:

爲發展臺灣糖業,特約請專人編寫有關糖業農工及副產方面之叢書,俾供公 司內外有關人員之參考。

PUBLICATION

1. Report of the Taiwan Sugar Experiment Station (TSES)

A research report in Chinese, four quarterly issues are published each year. All the completed research projects of this Station are presented in an adapted style in this journal. It is largely for references among research institutes of this country and for technical advices to the local sugar mills. Fifty two issues of the Report have been published.

2. Annual Report of the TSES

An English edition of the research report is published annually. The summaries of the most papers in the Chinese Quarterly and a few articles of special value in full length are edited in this annuals for international interchange.

3. Annual Brief Report of the Sugar Research

After one year's practice, each research project should be examined and reported to the Sugar Research Evaluation Committee in June for determination of next year's programs.

4. Summary Report of the Sugar Research

For the technicians of sugar mills and plantations, useful findings of last year and new projects are outlined and compiled in a serial pamphlet to be distributed. Six issues have been published.

5. Selected Translations of Overseas Sugar Research Papers

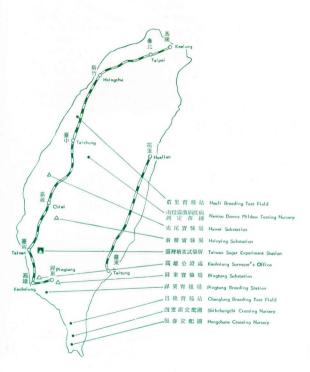
The sugar research papers (in abstract or full length) published overseas are selected for translation into Chinese. Monthly edition of such materials in serial numbers is also distributed to plantations and sugar mills.

6. Monographs

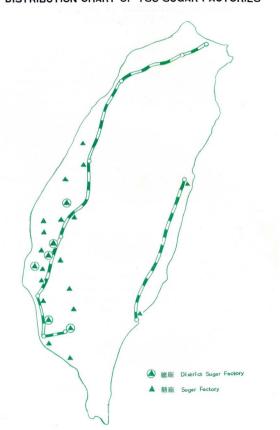
Monographs dealing with subjects in agriculture or technology of the sugar industry are published, when necessary, for purposes of either extension or reference.

(五) 本所及附屬機構分佈圖

DISTRIBUTION CHART OF MAIN STATION AND SUBSTATIONS



(六) 台糖公司糖廠分佈圖 DISTRIBUTION CHART OF TSC SUGAR FACTORIES



(七) 研究部門工作概況

1. 品 種 改 良

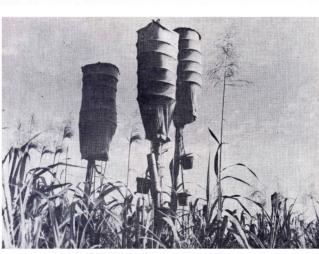
研究成果:

- 光復以來已育成新品種 30 個 (F. 135 —F. 164)
- 民國42年推廣由南非引進之新品種 N: co 310 ,在 45 年至 51 年6 年間, 種植而藉均達 90% 以上。
- 3. 自 F. 146 F. 152 F. 156 F. 161 及 F. 164 等新品權准出後,在各選應地 區逐漸取代 N:co 310, 58/59 年期 「F」品種種植面積已達 84.69%,而 N:co 310 之栽培已降至 15.31%。
- 4. 利用科學技術,促使甘蔗於夏季開花,

一年可得兩次雜交,縮短新品種育成年 限。

淮展方向:

- 選育具備糖分高、產量豐、早熟、抗風 、抗病蟲害等基本特性之品種。
- 2. 選育適於水稻地區之高產量品種。
- 3. 選育耐旱、耐瘠、耐鹽、耐寒之品種。
- 4. 選育宿根力强之品種。
- 選育易脫葉而直立之品種,以配合機耕 作業及機械收穫。
- 6. 加强國際合作從事甘蔗品種改良。



甘蔗套籠交配 Sugar cane crossing within a cage

RESEARCH ACTIVITIES

A. improvement of Sugar Cane Varieties

Research Achievements:

- Since V. J. Day, 30 new cane varieties from F135 to F164 have been developed by this Station.
- In 1953, the variety N:co 310 from South Africa was officially released. During the six-year period 1956-1962, this variety was commercially planted up to 90 % of the total planting acreages.
- 3. After 1962/1963, new varieties F146, F152, F156, F161 and F164 of high-yielding were successfully bred and gradually extended for commercial planting. By 1969 /1970, these five new varieties had taken up 84,69% of the total planting area, while only 15,31% remained for the old variety N:co310.
- 4. The plant breeders of this Station had worked out a technic of shortening the daylength to induce flowering of cane varieties. In Pingtung Breeding Station, flowering has been successfully induced with this technic for such major Hawaiian varieties H37-1933, H39-7023 and H44-3098 which never arrowed under natural conditions even in Southern Taiwan.

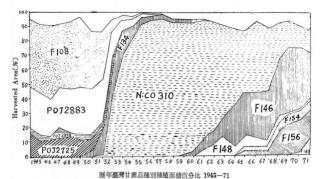
Future Developments:

1. Breeding canes for high sugar

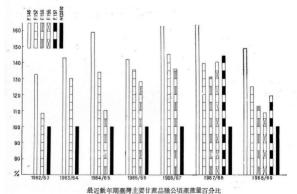
- content.
- Breeding canes for high yield.
 Breeding canes for drought resis-
- tance.
 4. Breeding canes for good ratoon-
- ing ability.
 5. Breeding canes to be suitable
- for mechanical harvest.
 6. Cooperative variety exchange
 - with Australia, Phillppines,
 South Africa and U.S.A.



甘蔗新品種 F164 New cane variety F164



歷年臺灣日熙品種別種植面積白分比 1945—71 Varietal Evolution of Sugarcane in Taiwan 1945—71



The percentage of tonnage per hectare of five new varieties of sugarcane as compared with N:co. 310 during a period from 1962 to 1969

(2.) 農藝改進

研究成果:

- 推荐改良式虹吸管灌溉,可使灌溉水量 分佈均匀及提高灌溉效率。
- 2. 厘訂蘆田肥料推荐量,供各廠參考應用
- 完成公司自蔗農場之土壤調查總計面積 44,500 公頃,歸納成 101 個土壤管理 組。
- 測定各類應田土壤水分常數,研究土壤 水分與硬度之關係以及與甘蔗生長之關 係,訂定最適耕作之水分範圍。
- 長期磷鉀肥試驗結果,證明庶田土壤之 磷鉀肥效。
- 6. 不同深度含鹽地下水與土壤鹽化關係之研究,發現中質土壤之鹽分地,其地下水應降至120公分以下。
- 應用已知最佳甘蔗栽培技術,推行綜合 示範,使甘蔗產量大幅提高。
- 盆面蒸發量與日射量之關係, 有壓著相關、每蒸發一公厘約 需 100 卡熱能。

進展方向:

- 春植甘蔗單位面積增產~從應 苗預措及成熟控制着手,謀求 提高單位面積糖量。
- 2. 合理施肥量之推荐。
- 3. 農業多角經營之發展。
- 4. 水源之開發與經濟利用。
- 5. 蔗園生產潛力之研究。
- 6. 產量預估。
- 7. 發展機耕。



改良式虹吸管灌溉一流量直接觀測 Modified siphon-discharge read directly



甘蔗與甘藷間作 Sweet potato is interplanted with sugarcane

B. Improvement of sugarcane Agronomy

Research Achievements:

 Recommendation of the modified siphon for sugarcane furrow irrigation as it can increase both the evenness of water application and irrigation efficiency.

Fertilizer recommendation for sugarcane growth based upon soil tests and yield goals.

3. Mapping and classifying TSC's

45,500 hectares of sugarcane lands, grouping into 101 soil management groups,

 Determination of soil moisture characteristics in relation to soil compactness and optimum moisture ranges for tillage on various soils.

 Proving the effect of P and K on sugarcane growth based upon a long-term field experiment.

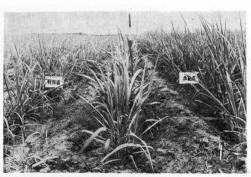
- 6. By study on evaporation and salinization of soil with different depths of saline water table, below 120 cm depth of the saline water table should be maintained for satisfactory cane growing.
- 7. The combined application of all

the improved techniques now available for sugarcane cultivation was recommended for farm practices to increase the yield of cane per unit area.

 The high correlation was found between Pan evaporation and solar radiation, about 100 cal. being needed for 1 mm Pan evaporation.

Future Developments:

- To increase the yield per hectare of spring-planted cane by pretreatment of cuttings with chemicals and ripening control.
- 2. Recommendation of optimum fertilizer application.
- Development of diversified agriculture.
- 4. Exploration and utilization of irrigation water.
- Determination of production potential of sugarcane land in Taiwan.
- 6. Yield forecasting.
- Development of farm mechanization.



薦 園 綜 合 增 產 示 範 區 The demonstration of sugarcane cultivation with the combination of improved methods



A new introduced crop—Sweet sorghum used for sugar manufacture.



臺灣蕉田土壤剖面型態 Monolith of Taiwan sugarcane soils



光焰比色計測定土壤中鉀納含量 Determination of soil Na and K by flame photometer



Pot experiments are conducting in air-conditioned green house (phytotron)

3. 植 物 保 護

研究成果:

- 發現甘蔗白葉病菌質 (Mycoplasma) 係由臺灣斑紋浮塵子所傳播。
- 甘蔗葉枯病於發病初期噴施0.1% 夏油 能仰制本病之繼續蔓延。病原菌於培養 基上能產生大量子囊胞子,對品種抗性 測定殊有助益。
- 採用 D-D, EDB 或 DBCP 等殺線 蟲劑處理土壤,並配合增肥、灌溉,可 使增產 20~30 %。
- 以 Endrin 或 Gsuathion 等殺蟲劑 防治蔗螟,可使幼蔗螟害率顯著減低, 蔗莖產量亦見增加。
- 5. 釋放白蜧卵寄生蜂,紫蜧蛹寄生蜂,印 度紫螟蛹寄生蜂,均可獲得高度之寄生 率,對白螟、紫螟之生物防除,極具希 望。
- 6. 草蟬若蟲爲害蔗根後,因其唾液腺分泌 物具有阻止植物生長素之作用,影響宿 极甘蔗萌芽。土中幼蟬寄生菌及黑彊菌 ,足以抑制本蟲之發生。
- Karmex、Atrazine 及 Gramoxone 等殺草劑之應用,已能代替人工除草,

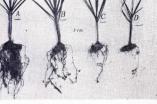
- 效果極佳,此外蘸園間作大豆花生及繳 路旁雜草,亦能應用殺草劑作有效之控 制。
- 自民國 58 年開始,與夏威夷、非濟及 昆士蘭等地合作進行甘蔗品種抗病性之 測定。

進展方向

- 配合品種改良之需要,加强甘蔗新品種 抗病性及抗螟性試驗研究。
- 各種重要病害人工接種方法之加强研究
- 甘蔗白葉病病原菌之分離與培養,並採 明本病與媒介昆蟲之相互關係,及其有 效防除方法。
- 蓝螟猖獗因子之究明,並確定其有效防 除方法。
- 5. 甘蔗品種對殺草劑耐性之探究,新殺草 劑除草效果之比較,寬能尋求效優、價 應而少殘毒之藥劑,以供應用。
- 6. 野鼠生態及有效防治方法之研究。
- 7. 草蟬生態及有效防除方法之研究。
- 8. 農藥殘效之研究。

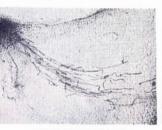


養 虫 室 Insectary



根瘤線蟲對甘蔗 F146 生育之影響 A 示健株 B-D 示接種植株被害程度

The effect of root-knot nematodes on the growth of sugarcane variety F146. A. Healthy plant; B-D. Damage on the inoculated plants.



根瘤線蟲幼蟲侵入蔗根組織內情形
Larvae of Meloidogyne incognita invading
the tissues of sugarcane root.



線 蟲 引 起 之 甘 蔗 根 瘤 Root-knots of sugarcane incited by Meloidogyne spp.



庶根組織內之根瘤線蟲・示成熟雌蟲及**其**卵塊 Adult females and their egg masses of Meloidogyne incognita in sugarcane root tissues.

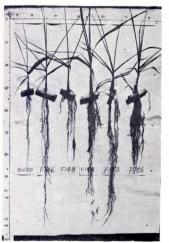
C. Plant Protection

Research Achievements:

- The mycoplasma was determined to be the causal agent of the white leaf disease of sugarcane and a leafhopper, Epitettix hiroglyphicus Mats., was found as the principal insect vector of the disease.
- Spread of leaf blight can be restrained with spray of 0.1%

- summer oil during the initial stage of the disease.
- Soil fumigation with D-D, EDB, and particularly with DBCP gave a 20-30% yield increase of sugarcane when heavy rate of fertilizers and frequent irrigation were applied following the treatment.
- 4. Endrin or Gusathion spray on

- young plants of sugarcane resulted in a considerable degree of sugarcane borer control and also an increase of millable cane stalks.
- Biological control of sugarcane borers has been found to be effective by releasing wasps.
- Salivary secretions of the nymphs of Mogannia hebes Walker was found to retard bud germination of ratoon cane. Control of the insect by releasing fungal

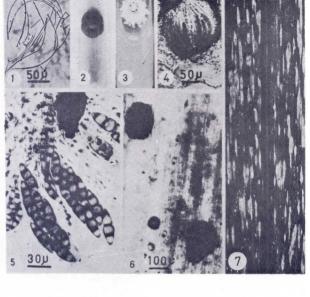


除草制 Diuron 對不同品種初期發生陸時根之感 受度、示根系旺旛者其感受度亦大。 The size of sett-roots of 6 varieties is highly correlated with their susceptibility to diuron

- parasites, Isaria sp. has been attempted.
- 7. Extensive use of herbicides, such as Karmex, Atrazine, and Gramoxone, has taken the place of costly and inefficient manual weeding. The use of herbicides is also extended to the cane crops interplanted with soybean and peanuts and railroad weed control.
- Cooperated with Hawaii, Fiji and Australia, a program to test the resistance of sugarcane varieties to disease from these regions has been conducted at this Station since 1969.

Future Developments:

- More intensive varietal resistance test against important diseases
- Isolation and cultivation of Mycoplasma causing white leaf disease, investigation on its relation with the host insect vector and its effective control.
- Study on factors associating with prevalence of sugarcane borers and proper methods of control.
- Study on the interaction of herbicides and plant growth regulators for improvement of weed control and cane production.
- Bionomics of wild rats and control measures.
- Prevention of cicada damage to sugarcane.
- Residual effects of pesticiesd on soil productivity and nontarget organisms in sugarcane fields.



甘蔗葉枯病及其病原菌

- 1. 病原菌之分生胞子。
- 2. 病原菌分生胞子單胞培養之菌落。
- 3. 病原菌子囊胞子單胞培養之菌落。
- 4. 病原菌之子囊壳。
- 5. 病原菌之子囊胞子及側係。
- 6. 產生於枯葉組織上之子囊壳。
- 7. 葉枯病之病徵。

Leaf Blight of Sugar Cane

- Cercospora taiwanensis Mat. et Yam.
- 2. The colony from single conidium.
- The colony from single ascospore. Black small dots produced on the middle of colony are perithecia.
- 4. Crossing section of perithecium.
- Show asci, ascospores and paraphysis.
- Perithecia produced on the dead tissue of diseased leaf blades.
- 7. Symptom of leaf blight.

4. 工業化學

研究成果:

- (1) 利用陽離子交換樹脂處理本公司碳酸法 糖漿,可降低其成品砂糖之灰份。
- (2) 粗糖在精煉操作時,發生起泡問題,已 可用去泡劑解決,惟澈底改善粗砂起泡 性質,仍在研究中。
- (3) 在實驗室階段,已製成酚間苯二酚甲醛 樹脂 (Phenol-resorcinal-formaldehyde resin), 該樹脂可用作應渣 塑合板之膠合劑,其性能較酚樹脂及尿 麥樹脂酯体。
- (4) 在實驗室已完成葡萄糖氧化酵素之製造

進展方向:

- (1) 製糖研究方面:
 - (a) 發展精煉新方法。
 - (b)繼續從事研究石灰法廠之頑固汁問 題。
- (c) 研究影響粗糖精煉品質之因素。
- (2) 多角經營發展方面:
 - (a) 以糖蜜或砂糖為原料,利用微生物 醱酵方法,製造各類價值較高之有 機產品及醛素等。
 - (b) 酒精廢醪之利用問題。
 - (c) 蔗渣樹脂接枝之研究。
 - (d) 改善酚樹脂及尿素樹脂塑合板之品 質問題。
 - (e)發展新方法及新產品,以配合公司 多角經營政策。



氨基酸分析 Analysis of Amino acids



現代化中間工場 Madernize Pilot plant

D. Industrial Chemistry

Research Achievements:

- The use of cation exchange resin for treatment of the carbonated syrup to reduce the ash content of plantation white sugar.
- (2) Some defoaming agents were found to be capable of solving the problems of foaming and bad filterability in refining raw sugar. Further study with these agents in practical uses is being conducted.
- (3) The manufacture of phenol-resorcinol-formaldehyde resin in laboratory scale has been completed.
- (4) The manufacture of glucoseoxidase in laboratory scale has been established.

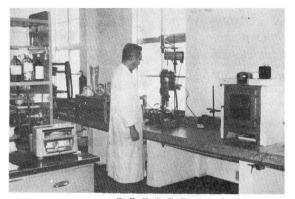
Future Developments:

- (1) Sugar technology
 - To develop new sugar refining processes.
 - To solve the problem of refractory juice in defecation mills.
 - To search for the factors that probably influence the sugar refining operations
 - d. To utilize sucrose as raw material to produce new chemical products.
- (2) Diversification Study
 - a. Use of molasses or sugar as raw material to be converted by microorganisms into valuable organic compounds, such as enzymes for food processing, pro-

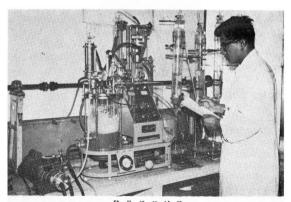
- tein for feeds, organic acids for food seasonings.
- To use alcohol slop liquor more economically for cattle feeds.
- c. To develop a new kind of board by grafting the polystyrene with bagasse so as to improve its water-proof properties.
- To study how to improve the properties of urea and phenol resin hard bagasse boards.
- e. To find other new ideas or methods for improving and developing the productions that are beneficial and profitable to Taiwan Sugar Corporation



蔗渣製板試驗 Experiment of bagasse board production



液糖製造研究 Experiment of liguid Sugar



酵 坩 培 養 試 驗

Experiment of food yeast fermentation

八、技術部門業務簡介

1. 科學資料中心



圖書館 Technical library

2. 儀器服務中心

本部門主要工作爲製糖操作系統與製 糖自動化之研究發展,各糖廠及本所各單 位儀器檢修服務等事項。

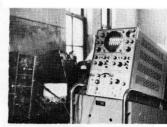
2. Instrument Service

This Center is responsible for (1) study on the mechanical operations and physical systems of sugar manufacturing and development of automatic control for such operations and systems; and (2) testing and repairment service for instrument sent by sugar mills and experiment stations.

Service Centers and

1. Data Processing and Publication

This Center is responsible for (1) planning agenda and convening meetings of the Sugar Research Evaluation Committee; (2) collection, classification, calculation, analysis, editing, distribution and safe keeping of all research data; (3)management of the technical library; (4) study on agricultural economics; and (5) judgement of the designs used for and the economical values to be resulted from the sugar research projects.



用示波儀檢修電子儀器 Electronic instrument checked by oscilloscope

3. 推廣講習中心

本部門主要工作為辦理甘蔗及其他有 關作物等研究成果之推廣與改進,舉辦各 項技術訓練與實習指導等。

3. Extension and Training

This Center concerns: (1) extension of agricultural and industrial technics resulted from research, and (2) organization of symposium or arrangement of training classes for sugar technology.



訓 練 Technical training

4. 化驗服務中心

本部門主要工作爲從事製糖原料、產 品、副產品、土壤、植體等之化驗與分析 ,並研究化驗分析之方法等。

4. Central Laboratory of Chemical Analysis

The Laboratory is in charge of chemical analysis for grinding materials, products and by-products of sugar-manufacturing, and the soils and plants used for experiments. The analytical methods employed are also studied by this laboratory.



糖 度 測 定 Determination of sucrose content

5. 農場管理中心

本部門主要工作為全所田間試驗區 之機場管理、機耕水利、作物裁培、養 猪堆肥、土地利用,以及田間示範推廣 之計劃與推行等事項。

5. Farm Management

This Center is in charge of the following: (1) management of the Station's experimental farm. arranging planting, irrigation, cultivation, harvesting, utilization of hog manures and other field works; and (2) The practical extension and field demonstration of the agricultural technics are also commissioned



6. 實 驗 場

 實驗場負責屏東、高雄兩總廠區及花蓮、臺 東兩糖廠。)之黨作品種、農藝、植物保護 等研究成果之示範、推廣、訓練及區域性試 驗鉅應苗繁殖、氣象觀測等。

6. Substations

There are three substations located in districts of Huwei, Hsingying and Pingttung to take care of multiplicati the extension, demonstration and ties and t training for practicable results of weather are research in agronomy, plant breeding substations.

Some experiments dealing with specific problems of each district, the multiplication of released cane varieties and the recording of local weather are also conducted by the substations.



虎尾寶驗場 Huwei substation



新營寶驗場 Hsingying substation



屏東寶驗場 Pingtung substation

7. 高雄公證處

本部門主要工作為辦理本公司外銷產副 品及進口大宗物料之公證業務。

7. Kaohsiung Surveyor's Office

This Office is charged with surveying the products and by-products to be exported and the imported materials ordered by the Taiwan Sugar Corporation.



外銷砂糖斤量公證 Ship surveyor checking weights

臺灣糖業試驗所

臺灣省臺南市生產路54號

TAIWAN SUGAR EXPERIMENT STATION

TAINAN, TAIWAN, CHINA