



EMBRAPA

CENTRO NACIONAL DE PESQUISA DE SOJA

E M B R A P A

BRAZILIAN ENTERPRISE OF AGRICULTURE RESEARCH

BRASÍLIA - DF

BRAZIL

C N P S O J A

NATIONAL SOYBEAN RESEARCH CENTER

RODOVIA CELSO GARCIA CID KM 375

P.O.BOX 1061

86 100 - LONDRINA - PARANÁ

BRAZIL - S.A.

A BRIEF DESCRIPTION



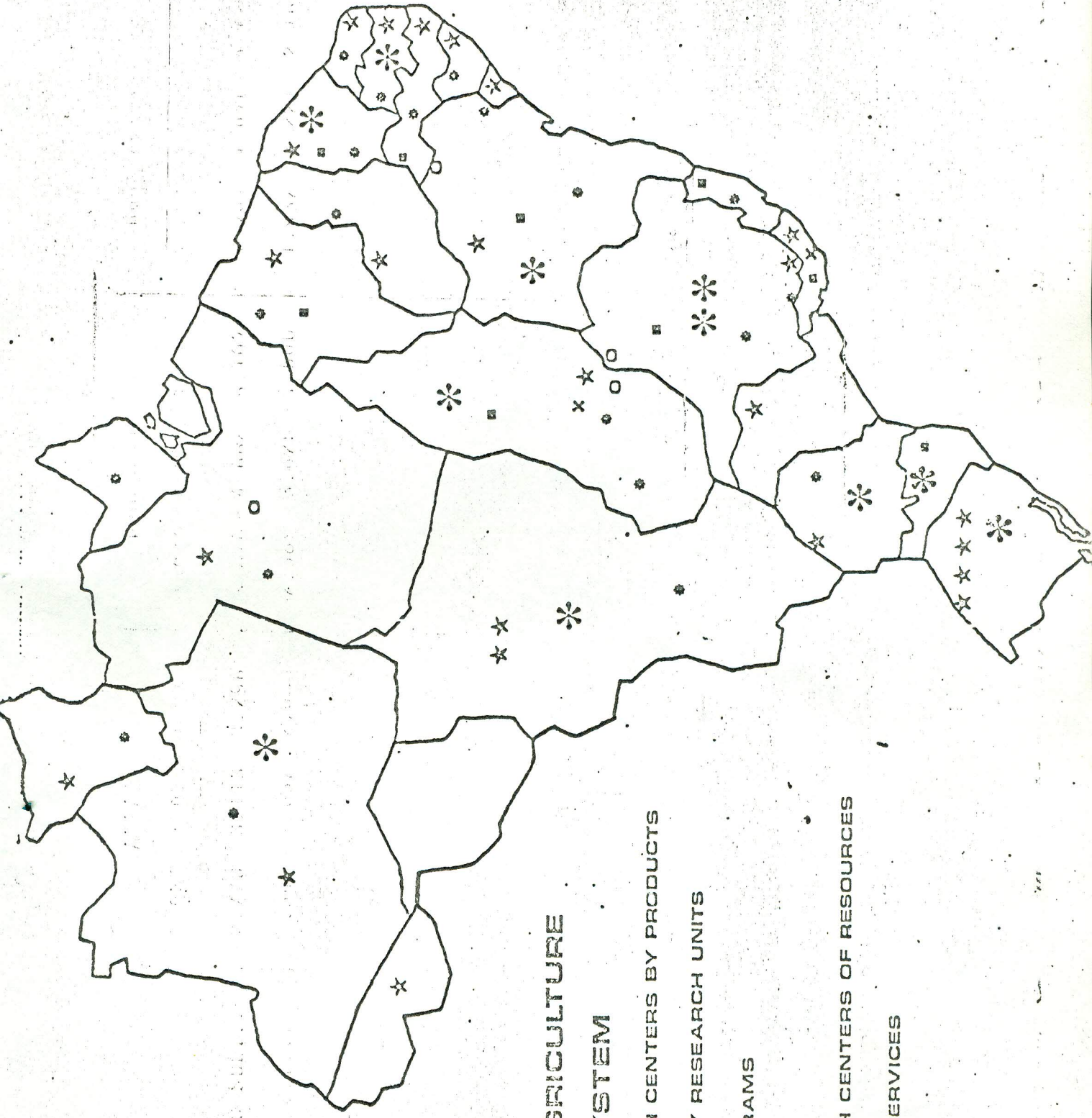
BRAZILIAN SOYBEAN PRODUCTION

S T A T E	AREA*		PRODUCTION**		PRODUCTIVITY***	
	1.974	1.975 1.976	1.974	1.975 1.976	1.974	1.975 1.976
RIO GRANDE DO SUL....	2.770	3.113 3.296	3.870	4.668 5.107	1.397	1.975 1.549
PARANÁ.....	1.340	1.632 2.083	2.589	3.625 4.500	1.932	2.221 2.160
SÃO PAULO.....	335	391 394	522	678 765	1.558	1.733 1.942
SANTA CATARINA.....	365	362 340	432	467 410	1.182	1.292 1.208
MINAS GERAIS.....	48	76 80	58	87 106	1.200	1.153 1.325
GOIÁS.....	110	56 33	99	73 49	900	1.320 1.480
T O T A L.....	5.143	5.824 6.417	7.877	9.891 11.227		

* 1000 ha

** 1000 ton

*** Kg/ha (average)



**BRASILIAN AGRICULTURE
RESEARCH SYSTEM**

NATIONAL RESEARCH CENTERS BY PRODUCTS

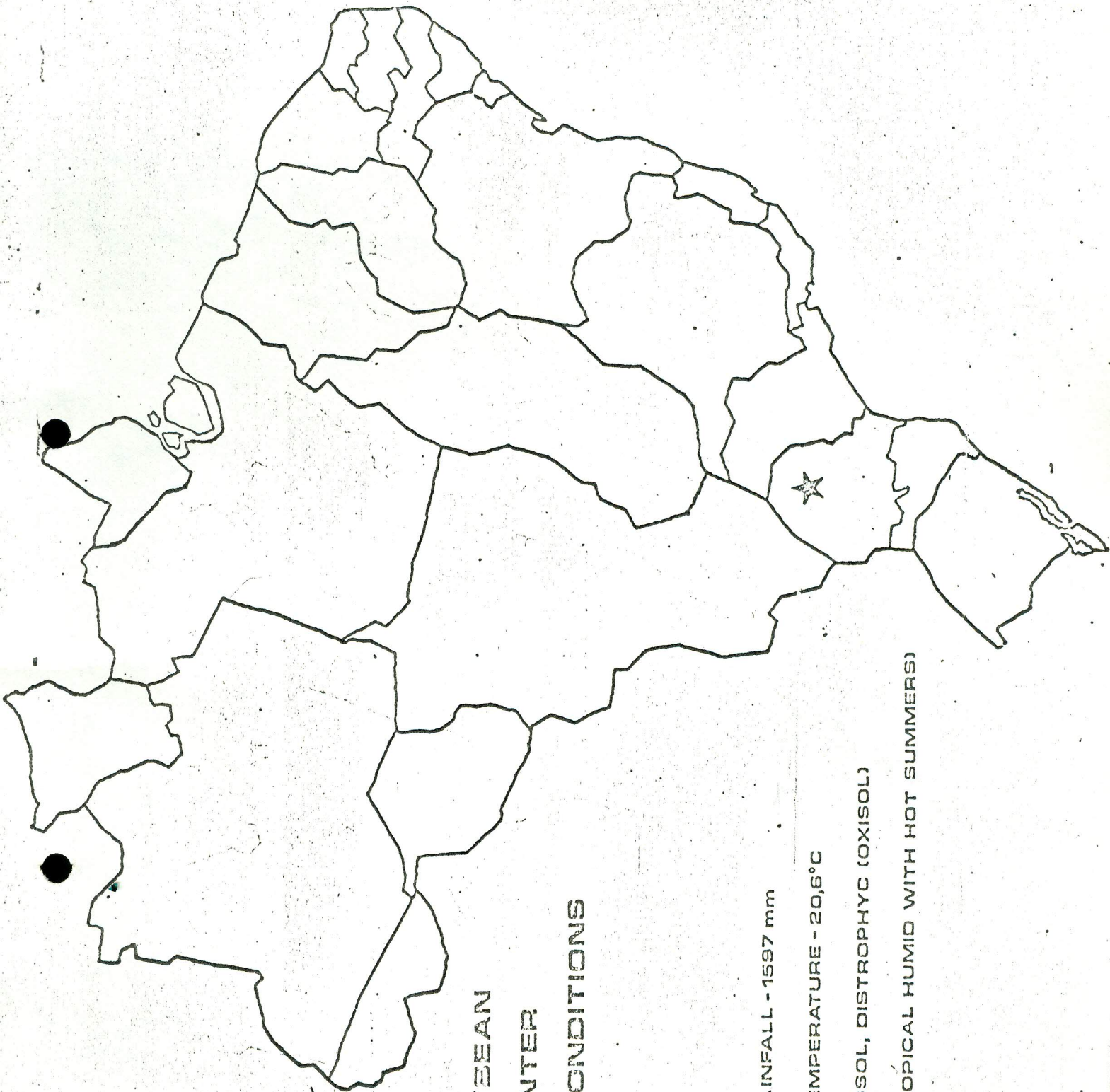
STATE OR TERRITORY RESEARCH UNITS

OPERATIVE PROGRAMS

STATE ENTERPRISES

NATIONAL RESEARCH CENTERS OF RESOURCES

NATIONAL SPECIAL SERVICES



**NATIONAL SOYBEAN
RESEARCH CENTER**

ECOLOGICAL CONDITIONS

LATITUDE - 23° 22'

LONGITUDE - 51° 10'

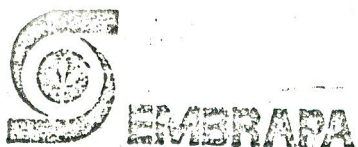
ALTITUDE - 585 m

AVERAGE ANNUAL RAINFALL - 1597 mm

AVERAGE ANNUAL TEMPERATURE - 20,6°C

SOIL TYPE - RED LATOSOL, DISTROPHIC (OXISOL)

CLIMATE - Cfa (SUBTROPICAL HUMID WITH HOT SUMMERS)



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THE NATIONAL SOYBEAN RESEARCH CENTER, WAS CRIATED BY DELIBERATION N° 020 OF EMBRAPA IN 16.04.75. ITS PRINCIPAL OBJECTIVES MAY BE SUMARIZED AS FOLLOWS:

1. DEVELOPMENT OF ADEQUATE TECHNOLOGY TO ESTABILISH EFFICIENT SYSTEMS OF PRODUCTION FOR THE DIFFERENT REGIONS AND CONDITIONS OF THE COUNTRY, SINCE THE INCREASE OF PRODUCTIVITY AND THE REDUCTION OF COSTS ARE TWO IMPORTANT ASPECTS THAT OUGHT TO BE FOCALIZED BY RESEARCH.
2. COORDINATION OF RESEARCH AT A NATIONAL LEVEL, THROUGH CLOSE COOPERATION WITH OTHER STATE OR REGIONAL RESEARCH INSTITUTIONS.





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R E S E A R C H P R O G R A M

1. GENETICS AND BREEDING (12 PROJECTS)
 - ACTIVE GERMOPLASM BANK
 - INTRODUCTION, COMPETITION AND FORMATION OF GENETIC SEEDS OF SOYBEAN CULTIVARS AND LINES.
 - DEVELOPMENT OF CULTIVARS WITH RESISTANCE TO INSECTS AND MITES; DISEASES AND ROOT-KNOT NEMATODES.
 - DEVELOPMENT OF CULTIVARS WITH ADAPTATION TO LOW LATITUDE, TOLERANT TO ALUMINUM TOXICITY, AND FOR FOOD USES.



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2. ECOLOGY AND CULTURAL PRACTICES (9 PROJECTS)

- CROP MANAGEMENT.
- WEEDS SURVEY.
- DETERMINATION OF THE COMPETITION PERIOD AND LOSSES DUE TO WEEDS.
- WEED CONTROL - CHEMICAL AND CROPPING SYSTEMS.
- REACTION OF SOYBEANS TO DIFFERENT ECOLOGICAL CONDITIONS.

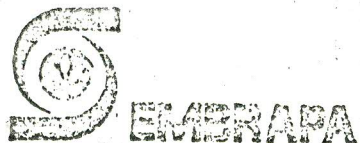


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3. SOIL FERTILITY (6 PROJECTS).

- SOURCES OF PHOSPHORUS.
- EFFICIENCY OF FOLIAR FERTILIZATION.
- CALIBRATION METHODS OF CHEMICAL ANALISES.
- TOLERANCE OF SOYBEANS TO ACID SOILS.
- SOIL MANAGEMENT.
- SOIL PHYSIOLOGY; CHEMISTRY; MICROBIOLOGY
AND BIOCHEMISTRY.



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.4. ENTOMOLOGY (7 PROJECTS)

- GEOGRAPHICAL AND SEASONAL ABUNDANCE AND DISTRIBUTION OF INSECT PESTS AND NATURAL ENEMIES.
- EFFECTS OF BROAD-SPECTRUM INSECTICIDES ON PEST POPULATIONS AND NATURAL ENEMIES.
- ECONOMIC INJURY LEVELS OF MAJOR PESTS.
- COMPETITION STUDY BETWEEN MAJOR STINK BUG AND CATERPILLARS PESTS.
- EFFECTIVE CHEMICAL CONTROL AND MANAGEMENT FOR THE PRINCIPAL PESTS.



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5. PLANT PATHOLOGY (14 PROJECTS)

- DISEASED SURVEY (FOLIAR, ROOTS AND SEED PATHOGENS).
- AVALUATION OF LOSSES DUE TO THE MAIN DISEASES.
- DISEASES CONTROL (FOLIAR, ROOTS AND SEED PATHOGENS) CHEMICAL AND CULTURAL PRACTICES.
- RESEARCH ON SOURCES OF RESISTANCE TO DISEASES.
- CONTROL OF NEMATODES - CHEMICAL AND CULTURAL PRACTICES.
- SEED PATHOLOGY.



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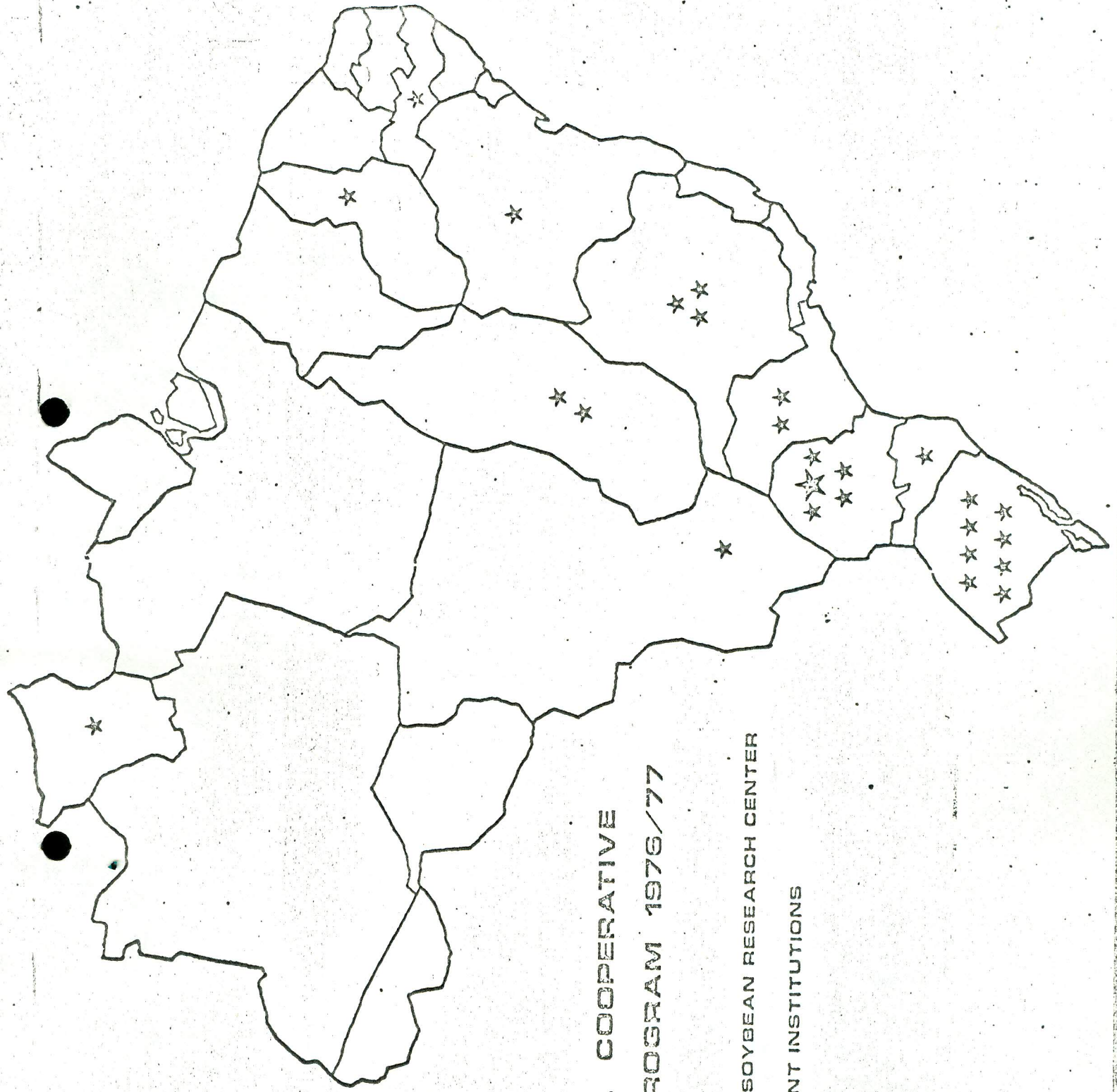
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6. SEED TECHNOLOGY (4 PROJECTS)

- HARVESTING PROBLEMS.
- SEED STORAGE.
- SEED QUALITY.

NATIONAL COOPERATIVE
RESEARCH PROGRAM 1976/77

★ NATIONAL SOYBEAN RESEARCH CENTER
★ PARTICIPANT INSTITUTIONS



DIRECT RESEARCH EXECUTION

FIELD PLOTS

GENETICS AND BREEDING ☆

PLANT PATOLOGY *

ENTOMOLOGY ✕

ECOLOGY AND CULTURAL PRACTICES ○

WEED CONTROL #

SEED TECNOLOGY x





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THE CENTER IS OPERATING IN THE SAME BUILDING FACILITIES OF THE AGRONOMIC INSTITUTE OF PARANÁ (IAPAR) WHICH IS A STATE RESEARCH INSTITUTION. BY AN AGREEMENT BETWEEN EMBRAPA AND IAPAR, THE CENTER HAS AVAILABLE FOR ITS OWN USE A TOTAL AREA OF 1620m² IN THE MAIN BUILDING WHICH IS BEING USED FOR:

- ADMINISTRATION.
- RESEARCHER'S OFFICES.
- LABORATORIES :
 - PLANT PATHOLOGY
 - ENTOMOLOGY
 - PLANT PHYSIOLOGY
 - SOILS
 - ECOLOGY AND CULTURAL PRACTICES .
 - SEED PATHOLOGY AND TECHNOLOGY.

THESE FACILITIES ARE COMPLEMENTED BY:

- 2 GREENHOUSES (10 ARE ANTECIPATED UNTIL 1980)
- STORAGE FACILITIES - 900 m²
- WORKSHOP AND GARAGE - 500 m²
- LOCAL EXPERIMENTAL FIELD PLOTS - 40 ha.
- MARAVILHA SUBSTATION - 144 ha.
- COOPERATIVE FIELD TRIALS - 25 LOCATIONS IN PARANÁ STATE.

IN ALL THESE LOCATIONS, THE EXPERIMENTS ARE EXECUTED DIRECTELLY BY THE CENTER.

PERSONNEL	N°
ADMINISTRATION	44
SCIENTISTS	39
RESEARCH SUPPORT	110
TOTAL	193

RESEARCH TEAM

Area	Degree/Number			Total
	Ph D	Ms C	BS	
Genetics and Breeding	2	2	4	8
Plant Pathology	1	5	2	8
Entomology	1	4	1	6
Ecology, Cultural Practices and Weed Control	1	3	3	7
Soils Fertility and Plant Physiology	2	4	1	7
Statistics	-	1	-	1
Seed Technology	-	2	-	2
Total	7	21	11	39



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B U D G E T

1 9 7 6 - 7 7

US\$ 1,00

<u>ITEMS</u>	<u>SPENT IN 1976</u>	<u>PROPOSED FOR 1977</u>
<u>CURRENT EXPENDITURES</u>	<u>1,028.551</u>	<u>2,406.305</u>
PERSONNEL	657,968	1,662.778
SERVICES	3,671	1,199
SUPPLIES	100,265	136,258
GENERAL EXPENSES	266,647	606,070
<u>CAPITAL EXPENDITURE</u>	<u>368,941</u>	<u>221,207</u>
LAND AND BUILDING	176,860	104,130
EQUIPMENT AND MATERIALS	192,081	117,077
<u>T O T A L</u>	<u>1,397.492</u>	<u>2,627.512</u>