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About the Institute
The Hunt Institute for Botanical Documentation, a research division of Carnegie Mellon University, specializes in the history of botany and all aspects of plant science and serves the international scientific community through research and documentation. To this end, the Institute acquires and maintains authoritative collections of books, plant images, manuscripts, portraits and data files, and provides publications and other modes of information service. The Institute meets the reference needs of botanists, biologists, historians, conservationists, librarians, bibliographers and the public at large, especially those concerned with any aspect of the North American flora.

Hunt Institute was dedicated in 1961 as the Rachel McMasters Miller Hunt Botanical Library, an international center for bibliographical research and service in the interests of botany and horticulture, as well as a center for the study of all aspects of the history of the plant sciences. By 1971 the Library's activities had so diversified that the name was changed to Hunt Institute for Botanical Documentation. Growth in collections and research projects led to the establishment of four programmatic departments: Archives, Art, Bibliography and the Library.

For Dave —

I prepared some ideas on questions which could be asked to see eventual agroclimate data bank could we discuss

Cathi

Drafted: M. Frere/vmc
typed: 3.6.74

PROBLEMS PERTINENT TO THE ESTABLISHMENT OF A SYSTEM FOR THE STORAGE AND RETRIEVAL OF AGRO-METEOROLOGICAL DATA

1 - Given some climatic parameters of 1 station (where a given crop is grown), find other stations with similar climates (same sequence in climatic factors but not necessarily during same period of year).

2 - Given characteristics of the growing season for a given crop or crop variety, find places with suitable climatic characteristics for growing that variety and hence give areal distribution of the crop.

3 - From the analysis of the influence of limiting climate conditions on one given crop, define points which could delineate crop boundary.

4 - Knowing ranges of yield for a given crop in various climatic conditions, define within area of distribution of the crop sub-areas of better and less good yields.

5 - From elementary climatic factors calculate derived data like potential evapotranspiration and water balances.

6 - From stored raw or derived data prepare maps of given elements.

7 - Based on agroclimatic conditions of 1 or a set of locations, define according to ecological characteristics, crops which could be grown there successfully.

2+3+4 Also for more than 1 crop in order to arrive at possible alternative land use and optimal cropping

8 - Based on data on rainfall and temperature and derived data on evapotranspiration, define for given locations length of vegetative cycle for given crops.

ELEMENTS FOR A SYSTEM OF DATA PROCESSING

Element	Raw data existing in ybks.	Alternative data existing in ybks.	Derived data to be calcul. from other data
Temp, of air	Average month Temp. exp. in °C av. min. month T°C av. max. month T°C Extreme min.(?) extreme max.(?)	Temps. in °F to be converted	
Air humidity	mbs vapour pressure % RH humidity	Same data in mm to be converted in mbs	Saturation deficit
Rainfall	expressed in mm n days per month	expressed in inches	σ(?) provided long term data available
Radiation & sunshine	Total rad. in calories.. Hours of sunshine conditions	Rad. in Joules to convert	To convert to R. Radiation To convert to T. Radiation
Wind	Expressed in knots at 2 m/h	Other units to convert together as elevation - m/sec km/h, km/day	
Evapotranspiration			To be calculated from T, e, $\frac{n}{N}$ and wind
Water balance			To be calculated from rainfall, evapotranspiration and soil-water storage

AGROCLIMATOLOGICAL INFORMATION / INFORMATIONS AGROCLIMATOLOGIQUES

STATION ..... NO ..... LAT ..... LONG ..... ALT. .....

COUNTRY ..... PAYS	METHOD OR INSTRUMENT METHODE OU INSTRUMENT	NO. OF YEARS NO. D'ANNEES	J	F	M	A	M	J	J	A	S	O	N	D	YEAR ANNEE
1. ABSOLUTE MAX TEMPERATURE °C TEMPERATURE MAXIMUM ABSOLUE °C															
2. MEAN MAX TEMPERATURE °C TEMPERATURE MAXIMUM MOYENNE °C															
3. MEAN TEMPERATURE °C TEMPERATURE MOYENNE °C															
4. MEAN MINIMUM TEMPERATURE °C TEMPERATURE MINIMUM MOYENNE °C															
5. ABSOLUTE MINIMUM TEMPERATURE °C TEMPERATURE MINIMUM ABSOLUE °C															
6. AVERAGE VAPOUR PRESSURE e TENSION DE VAPEUR MOYENNE e															
7. AVERAGE RELATIVE HUMIDITY % HUMIDITE RELATIVE MOYENNE DE L'AIR %															
8. SUNSHINE DURATION (HOURS) DUREE D'INSOLATION (HEURES)															
9. TOTAL RADIATION CAL/DAY RAYONNEMENT GLOBAL CAL/JOUR															
10. AVERAGE WIND SPEED VITESSE MOYENNE DU VENT															
11. POTENTIAL EVAPOTRANSPIRATION mm EVAPOTRANSPIRATION POTENTIELLE mm															
12. SOIL TEMPERATURE 10 cm TEMPERATURE DU SOL 10 cm															
13. SOIL TEMPERATURE 20 cm TEMPERATURE DU SOL 20 cm															
14. SOIL TEMPERATURE 50 cm TEMPERATURE DU SOL 50 cm															
15. AVERAGE PRECIPITATION mm PRECIPITATION MOYENNE mm															
16. NUMBER OF DAYS EXCEEDING 1mm OF PRECIPITATION NOMBRE DE JOURS A PRECIPITATIONS DEPASSANT 1mm															
17. MINIMUM PRECIPITATION PERIOD PRECIPITATION MINIMUM OBSERVEE															
18. PRECIPITATION EXCEEDED 4 YEARS OUT OF 5 PRECIPITATION DEPASSEE 4 ANS SUR 5															
19. PRECIPITATION EXCEEDED 3 YEARS OUT OF 5 PRECIPITATION DEPASSEE 3 ANS SUR 5															
20. PRECIPITATION EXCEEDED 2 YEARS OUT OF 5 PRECIPITATION DEPASSEE 2 ANS SUR 5															
21. PRECIPITATION EXCEEDED 1 YEAR OUT OF 5 PRECIPITATION DEPASSEE 1 ANNEE SUR 5															
22. MAXIMUM PRECIPITATION PERIOD PRECIPITATION MAXIMUM OBSERVEE															