WEATHER LECTURE

Annual Bio-Dynamic meeting lecture.
Alex de Podolinsky (May 1983) Copyright

People watch weather, farmers of intelligence perhaps more than others, they just have to. They look at what influences the weather around them generally as a more total picture. Their viewing, besides what meteorology also does, is inclined to thin of what I could call nature factors. All that one can evaluate around one. Today satelite photos are taken. You can see them on T.V. every night. They are taken from outside of earth, they depict excatly what is going on at one moment. You may have noticed that, in regard to the cool fronts that come across, maybe first South Australia, then across Victoria, they can pick the cool fronts and tell whether there is cold air and so on. But they are never sure, whether that cool front will follow a winter pattern or summer pattern. They say this front is going to slip off to the South, and it suddenly comes and brings a lot of rain or vise versa. They cannot pick that, because they can only see the weather as it is at the moment on that chart. They cannot say what is brewing in it. They cannot say in which direction the cool front is going to move.

I had a friend, long dead now, a Russian Professor of Meteorology and Physics who became the top researches in Meteorology in Australia. He had a different way of approaching that. He was the originator of the 4 day forecast, and his 4 day forecast was mor accurate than the daily forecast had been. He also made a monthly forecast. Well, if we have time I will speak of him again. An aspect of his methodicity will be the starting point of our theme today.

Now you know, it should be in your thinking as soon as you see a plant, that that tree out there, due to photosynthesis is an orginating factory of new substance on earth. Everywhere else we only have recycling. Light power is taken in and accommodated in the water, and warmth plays a role beforehand. Warmth and light come from the sun. The cosmos has an influence. First of all the sun and other bodies up there.

Now with the weather it is quite similar. If you in your mind, now venture to a polar region. You don't have to go right to the pole. In the Northern Hemisphere you can go to Northern Norway or Siberia. When you are in the Polar region you are in a region that for a part of the year doesn't see the sun at all. And for that part of the year in which the sun is there all the time, the sun has little power and on account of that there is no involvement of earth with that sun. That sun is like our weakest winter sun here and it does nothing to the plants and nothing to us. We just see the light of it. That's all the actual involvement. What I mean by involvement will immediately become clear when we contrast the polar region with the equatorial region. In the latter region a very hot sun rays directly down on to earth and water and a tremendous boiling effect occurs. If you fly to Hong Kong the plane may have to change direction, because it has to bypass typhoon or other cloud development. Those clouds can rise to much higher than the planes fly and you can see an immense steaming cloud turmoil. You have involvement of the sun's power heat with earthyness, all that is earthy. The bulk of the rain that falls all over earth is created by that exchange. It has been worked out that the total rain fall activated in this way per annum is 10,000 cubic kilometers.

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Now those two extremes, the polar non involvement and the dynamic upheavels of the equatorial region provide considerably to the foundation of our weather. Mountains and other aspects, play a role. Overall one must imagine the whole as a hive of dynamic activity and not just static as a satelite picture. There are the streams, for instance, the gulf stream. The heat of the water from the gulf stream warms Iceland. In Cornwall, where I went to school for a while, bananas can be grown. The gulf stream comes past there, with exception of about once in 40-50 years when the Gulf Stream is directed elsewhere and suddenly there is deep winter snow in Cornwall whereas normally it is not there. The coast line of Norway is sub-tropical on the west side. The climates of Ireland and of course of Iceland and other places are likewise affected by the Gulf stream. All that heat which flows as Gulf stream, with a flow volume several times that of the Mississippi River, is generated in the Gulf of Mexico.

You all know how warm water gets in our farm dams in summer. But you can not see what turbulations there are inside that dam. There are some. In the Gulf of Mexico region is enormous heat. There is the heat generation place of that enormous Gulf stream. That has effect over a large part of the Northern Hemisphere. We here are in a totally different position. We have the roaring 40s down South. That is quite a deep band of almost 10 degrees latitude of a very very cold stream. There are just as many cold streams as there are warm streams. The Northern Hemisphere has no equivalent to that. There is land cutting through the equivalent region. Russia, Canada and so on that makes such stream impossible. Down South there is no land. That is what makes our weather so difficult to predict especially in the winter rain fall areas. There is that enormous cold belt and there is the big continent of Australia which can heat up during the day and can be very cold during the night. That is what Professor Karelsky based his prediction on and from that basis he could tell at what time of the year the cold fronts come up or slip off South. That was still an art and science of Meteorology, not just these satelite photos, from which one can't tell what is developing. Satelite data pictures can be put together and one may think that developments are going to continue in the same line but such approach can be very misleading, as it does not take into account the overall dynamics.

Between the polar regions and the tropical region lie the temperate zones of North and South. This region is more in evidence in the North than in the South. The temperate region is typified by Central Europe. In the temperate zone sun warmth and sun light work in a much more placid way, a more even way. And the moon forces, which are a foundation of our sowing chart, have a much greater influence. The sowing chart would do nothing in the polar region and very little in the tropical region. It requires the moon rhythm influence typical for the temperate zone.

In Australia we have no real temperate zone. In the true temperate zones you have 4 seasons, not in one day, but in sequence. At a certain time of the year Spring has gone into Summer and all woolies go into mothballs. To the three regions a fourth has to be added. Especially here in Australia the arid heat zone is manifest. The sun power is so strong there and there is no moisture. In the inland away from the coast, there is no real exchange, like in the metabolic region, between the sun and water with the growth pattern of a tropical rain forest. There is no moisture and earth is baked hard. The Sahara Desert is like that and part of Australia is equivalent.

From a soil chart of Earth can be seen readily that the best "Brown Earths" developed in the true temperate zones. Europe and the certral West prairie wheat lands of the U.S. are typical. The balanced metabolism between sun-power, water and Earth could bring this about.

Australia's richest volcanic soils, rich as such relatively recent soils are in minerals, are quite imature soils - biologically - by comparison.

Tropical and subtropical soils - once the abundant vegitation has been cleared - look dry, washed out and are biologically dead. Over much rain, in short bursts, leaches soil. Water heat, stimulates vast surface plant growth. Lack of temperate Sun/Earth dynamics is equal to lack of permanent humus development.

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In the inland heat zone minerals are not leached out. Saltation occurs. The sun is overpowering. Again permanent humus can not develop.

From the overall background of such viewing we can detail bio-dynamic and general farm practise to better suit the relevant zone conditions.

Due to the CO_2 influences, mentioned in an earlier lecture, the extremes of especially the tropical Sun/Water metabolism and the coldness of the polar regions become over emphasized.