

## HONORARY SPEECH BY THE LINNEBORN PRIZE WINNER

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Mr. Chairman, ladies and gentlemen, dear friends,

Doctor Wolfgang Palz, my friend, I knew that you are always severe and objective in your judgment, yet, with what you have mentioned concerning myself, you have transgressed of these rules. Therefore, I thank you very much.

I would like to express my profound gratitude to the Prize Committee of the 2<sup>nd</sup> World Biomass Conference and to the scientists who have had the same honor before me, for their decision to grant me the Johannes Linneborn Award.

I have had the pleasure of getting to know these distinguished scientists and ... **I feel very proud.** But, my mind goes also to those members of the International biomass scientific Society who have worked very hard and have contributed in a more efficient way than myself to the progress of biomass technology and.... **I feel guilty.**

It is also worth mentioning, on this occasion, that I have been very lucky in my scientific effort to cooperate in my laboratory and around the world, especially around Europe, with very competent scientists, very close friends, with whom we have dwelled upon a variety of subjects, and a variety of views on the same subject. So, I thank them all here with all my heart, and, **I share this honor with them.**

By trying to speak about the importance of Biomass in front of you, I am afraid that I am going to do the classical mistake, of bringing owls to Athens, but I am going to do it anyway, because the subject is a temptation for me.

- Concerning biomass production or in other words, the seasonal storage of a small % of the total Solar energy coming in contact with the plants, I believe that we are at the beginning of a forthcoming progress that is expected to give biomass yields equal to what the food sector gave during the recent green revolution and even more, with the assistance of the Biotechnol\_gy. I expect the big progress to come in practice in parallel with **the large expansion** of the use of biomass energy, as has happened with all technological progress in the past. The Market will guide the

ameliorations and will attract more research.

But while we are working and expecting better achievements in the production sector, my opinion is that there are many reasons obliging us to extend the use of the existing biomass. I mean the wastes and residues, an enormous source of energy, present in every corner of our planet. That source of biomass has been evaluated by several occasions. According the Altener program is up to 40% of all Renewables expected to be development up to the year 2020 or 90 MT OE/year for the EU<sub>15</sub> Green pages of E.C. speak about 177 MT OE/year for Europe 30. I have heard these days that the world potential is in the range of some Exagoules, BUT as you know that potential represents, for the time being, huge amounts of pollutants, in local level [Dioxines, PCBs. Heavy metals etc.] and globally [especially methane and CO<sub>2</sub>]. The strange thing is that the only effort necessary in order to extend the use of that source of biomass is a general political decision to stop the pollution that is produced as we try, stupidly, to eliminate that source of biomass, dumping it or burning it without any use. I am excepting, of course, a small number of countries, mostly European Countries, leading the technology for the safe and efficient use of that source of energy. So, the appropriate technology and the economic conditions, are ready and proven in real scale and market conditions today, for the general use of that source of Biomass.

- The Technological progress of transforming, in general, biomass to energy has already achieved many good results and we are expecting to make more progress towards : higher Efficiency, to become more Economic, to be better Reliability and to become more Clean. The technological interest to produce energy from biomass is closely and in parallel connected with other factors of the same importance, such as the Environmental and Social factors

People, especially the Renewable Energy people, always try to compare the cost of the

R.E.S. with the fossil fuels cost, because energy is an International commodity that adds cost to all products and services. So, energy impacts the competitiveness of the products in the today global market..

For a company, the choice between fossil fuels or RES is strictly depending on the cost of energy, adjusted maybe, with the cost for the environmental impacts from the energy used, if the states will ever impose it.

With conventional energy sources, companies in general, which are willing to invest in energy production, consider that capital intensive activity, implicates to low employment numbers, but also to demand for highly qualified employees, which is more or less true, and so energy processing **is concentrated**. The result, as you know, is an important economic revenue for them and social problems for the societies.

With biomass this rule is not valid, because Biomass production is a dispersed activity, transportation distances should be limited for economic reasons and finally, by its nature, biomass processing is also dispersed. Even more in many cases, except liquid biofuels and electricity given to a general grid, biomass energy use is also dispersed.

Even if we will see the expectations of Prof. Jose Roberto Moreira to be applied in the world liquid biofuel market, **“the liquid biofuels to be produced and exported by several, limited in number, countries in the world”**, the “Kuwaits” in biofuels, biomass energy creates employment for the rural population, engaging them in the economic market and automatically solves several of today’s social problems, both in rural and urban areas, problems that are coming from the energy concentration.

We can say that biomass energy is a Social, a democratic source of energy.

I am not going to spend more of your precious time, because I am sure, my friends, that each one of you can mention a hundred of other reasons, why biomass is important.

This importance gives to you the enthusiasm to achieve excellent results, part of which you have presented in this 2<sup>nd</sup> International Biomass Conference. This progress was very obvious during these days in Rome.

I thank all of you very much and I express my Congratulations to the Organizers of the Conference.