

# Laudatory Speech for Dr Giuliano Grassi 1994 Prize Winner of the Johannes Linneborn Prize Awarded by the European Association Eurosolar, for Outstanding Merits in the Field of Biomass Development

For the first time, Eurosolar will this year award the Johannes Linneborn Prize. Johannes Linneborn, who lived from 1899 to 1991, was one of the leading European pioneers for biomass. As early as the 1920's, he started to work on biomass gasification. He was successful in promoting the applications of wood gasifiers for transport in all kind of vehicles and in many countries and continents throughout the world. His commitment to the development of biomass for bioenergy, which guided him through his entire active life of almost 70 years, was all the more impressive as J. Linneborn lived and worked through the hard times of the first half of this century. As a matter of fact, people during that time had to face physical and moral danger in various ways in contrast to our own generation, who grew up in the second half of this century, and had clearly better chances in life. J. Linneborn had a very broad culture and worked not only in energy, but in transport, in agriculture and was very much interested in health. He created the first hospital in Germany for the treatment of multiple sclerosis, applying the principles of healthy nutrition. Natural nutrition, food and agriculture were important subjects for his studies. Fascinating aspects of J. Linneborn's activities were his perseverance, his flexibility and openness to new developments. He always remained professionally active until his death when he was over 90 years old. J. Linneborn attended up to the end of his life the biomass conferences organised by the European Commission and of which the present one here in Vienna is the 8th.

I have the privilege, on behalf of Eurosolar, to announce and to honour the first Johannes Linneborn Prize Winner. It is Dr Giuliano Grassi. There will be hardly anybody in Europe working in biomass who does not know Giuliano Grassi, the dynamic leader of the European Commission's Biomass Energy R&D Programme since 1978, G. Grassi was born in Florence in 1929 and after obtaining his degrees at the University of Pisa, he followed post-graduate courses and was first employed in England. For many years, he worked in the nuclear energy field in Italy and France. There he participated in particular in the development of the French fast breeder Superphenix.

In 1978, he abandoned nuclear energy and instead became a convinced promoter of renewable energy. At that time, he joined the European Commission's Directorate-General for Science, Research and Development where he became involved in renewable energy R&D. For a period of several years, he was, in addition to biomass, also responsible for solar energy and wind.

Giuliano Grassi has a very deep knowledge of advanced technologies and physics and has a strong interest in the latest developments in these fields. With his broad culture, he has seen many opportunities to enrich the field of biomass technology by applying new developments from other fields.

The role of Giuliano Grassi in biomass development throughout the world is particularly important due to the fact that this field is currently in a phase of deep transition. The classical uses of biomass like firewood are stagnating or regressing. New types of technologies and applications of liquid biofuels and bioelectricity are emerging and could play a vital role in the next few decades. They could transform the classical energy patterns worldwide into a much more sustainable system in which biomass can play a key role to displace the depleting and CO<sub>2</sub>-emitting fossil fuels.

Giuliano Grassi recognised at a very early stage that the combustion technology for biomass needs to be complemented by more sophisticated and cleaner technologies such as gasification and pyrolysis. Hence, new initiatives of the European Commission to promote gasification for combined heat and power production were organised by him. His particular interest in recent years has been directed towards the pyrolysis of cellulosic material for the production of bio crude oil. Thanks to his initiative, important progress has been made for the efficient conversion of solid biomass into these kinds of liquids and their

upgrading into biofuels suitable for various types of combustion engines. In this framework, Giuliano Grassi has seen the importance of regional integration and launched from the middle of the 1980's onwards, the so called LEBEN projects (Large European Biomass ENergy projects).

Giuliano Grassi has well understood the enormous potential for biomass production within the Common Agricultural Policy, where increasing land areas are being set-aside. Hence, in his programme he actively promoted the production of non-food crops such as sweet sorghum, miscanthus, cyanara and others.

While working at the Commission, he always took a special interest in Italy, his home country. Given that Italy is deficient in domestic energy resources and production, biomass as a renewable source has a great potential there and it was G. Grassi who devoted much of his efforts and energy to promote modern bioelectricity concepts for the benefit of the regions of his country.

It is no secret that we have scheduled the current 8th European Biomass Conference here in Vienna exactly in October this year to honour Giuliano Grassi, who is going to retire at the end of this month. But this will only be a formal change. Everybody can be convinced that he will never give up his faith in the brilliant future of biomass, nor all his energy and dynamism to promote it in Italy, Europe, China, Brazil or other parts of the world, the same way he did in the past. His father will have his 104th birthday next year and there is great hope that Giuliano will follow his father's footsteps and be with us in this noble task of biomass development for many years to come.

Giuliano Grassi's work is well documented in numerous publications, journals, conference proceedings and books. His work as a Commission official and as a programme manager has resulted in the very high status of the European biomass programme and the highly successful work of the networks sponsored by him.

Cordial congratulations, my dear friend Giuliano.

Wolfgang Palz