



**CPSBB is part of the COST Action CA19116 PLANTMETALS:**

**Trace metal metabolism in plants**

On 03 July 2020, CPSBB became part of the COST Action PLANTMETALS: Trace metal metabolism in plants.

Many trace metals (TMs) (e.g. Cu, Fe, Mn, Mo, Ni, Zn) are essential for organisms as active centres of enzymes, as about one third of all proteins are metalloproteins. Therefore, TM homeostasis in plants is at the core of many challenges currently facing agriculture and human societies. Low TM bioavailability in many soil types of large world areas causes a reduction in crop production and diminishes nutritional value of food. Some essential TMs (e.g. Cu) have narrow beneficial concentration ranges, while others (e.g. Cd, Hg) are usually only toxic, and in many areas of the world metal toxicity is a severe agricultural and environmental problem. For environmental risk assessment and remediation, as well as improved agriculture (targeted fertilisation and breeding), the mechanisms of TM uptake, distribution, speciation, physiological use, deficiency, toxicity and detoxification need to be better understood. PLANTMETALS aims at elucidating them by the combined expertise of researchers (physiologists, (bio)physicists, (bio)(geo)chemists, molecular geneticists, ecologists, agronomists and soil scientists). It furthermore aims at making this knowledge applicable to the needs of farmers and consumers, with input from companies for translating laboratory results into applied products. This shall be done by integrated scientific, communication and dissemination activities, pooling together our research efforts. Regular meetings within and between the workgroups of the PLANTMETALS Action, training workshops for young scientists, as well as by technology transfer meetings will be organised in cooperation with the partner companies within the Action, as well as producers and merchants of micronutrient fertilisers.