

### **13<sup>th</sup> FYP for National Natural Science Foundation 国家自然科学基金“十三五”发展规划**

The 13<sup>th</sup> FYP for National Natural Science Foundation was released on 14<sup>th</sup> June 2016. The Foundation identified 118 research areas as priority to be supported in the next five years. Of these, the following are relevant to agricultural development.

#### **Biodiversity and function**

Main research direction: mechanism of biodiversity formation; mechanism of biodiversity maintenance; mechanism of biodiversity loss; relationship between biodiversity and ecosystem function.

#### **The molecular basis for agricultural genetic improvement**

Main research direction: genetic basis of important traits of agricultural organisms; interaction mechanism between agricultural biological gene and the environment; the relationship between phenotype and genotype; new concepts and new models of agricultural biological breeding.

#### **Mechanism of pests and diseases resistance of agricultural organism**

Main research directions: molecular and physiological mechanism of resistance of agricultural organism to pests and diseases; molecular mechanism of immune response of agricultural organism; regularity of pests and diseases prevalence and the basis of control and prevention.

#### **Adaptation mechanism of agricultural and forestry plants to abiotic stress**

Main research directions: molecular and physiological basis of agricultural and forestry plant adaptation to abiotic stress; response mechanism of agricultural and forestry plants to multiple abiotic stress; regulation mechanism for agricultural and forestry plants adaptation to abiotic stress.

#### **Basis for health farming of agricultural animals**

Main research directions: biological and physiological basis for the formation of important traits of agricultural animals; adaptation and spared of pathogens in agricultural animals and environment; prevalence and control of major zoonotic diseases; changes in environmental factors and pollutants transfer in the animal farms; impact mechanism of feed nutrition and metabolites on animal immunity; forage varieties selection and breeding and maintenance of pasture productivity.

#### **Variation and sustainable utilization of soil and water resources**

Main research directions: soil process and variation; soil quality and resource impacts; catchment hydrological process and ecological impacts; ecological function and environmental impact of soil biota.

#### **Process and function of earth critical zones**

Main research directions: structure, formation and evolution of critical zones; critical zones' service function and sustainable development; modelling on the critical zone process.

(The full text (in Chinese) of the "13<sup>th</sup> FYP for National Natural Science Foundation" is available at: [http://www.nsf.gov.cn/nsfc/cen/bzgh\\_135/index.html](http://www.nsf.gov.cn/nsfc/cen/bzgh_135/index.html))

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