



Agronomists job don't reduce natural resources to meet today's needs without compromising the needs of future generation

Shaban Nidal, ISLE Association Dijon France, Erika Andenna & Dottore Forestale- WAA,CEDIA-Italy, Kadhum Eman Agricultural Academy Sofia Bulgaria, Luay Tailah Palestine

Correspondence email:shaban.nidal@gmail.com

Summary

The agronomist, as a food designer, optimizes the production process within the agri-food chain, inspired by principles of providing a healthy and nourishing food, meeting the needs at a global scale, reducing food waste, ensuring safety of production, health and wellbeing of final consumers. To get a qualitatively high content of food it is necessary that quality measurements characterize the whole production steps along the food chain, starting from the phase of first production, to the processing one, to the following phase of distribution. The Agronomists' job has to tend toward actions which do not reduce natural resources, in order to meet today's needs without compromising the needs of future generations. In a world increasingly crowded, where resources should be managed with social conscience and fairness, the safeguarding of sustainability is an ethical and environmental duty of the professionals. At a time when millions of people still suffer from hunger, misuse of resources is intolerable, not only in an ethical point of view, but also on an environmental basis, as it represents a useless waste of natural resources.

Key words: agri-food chain, agronomist, sustainability, natural resources,

Introduction

Practicing the profession in the agricultural, food supply, rural, landscape and natural resources fields embraces a bio-ecological dimension at a planetary level, with no borders of thought, professionalism, technology. The professionalism, while offering advanced technical solutions, raises our ethical responsibility and obliges us to always address our work toward a social progress. Within the global challenges of XXI century the role of the agronomist has wide potentials, that is why very important to cooperate in the definition of a common strategy over food production and environmental sustainability.

To unified efforts between the Food and Agriculture Organization of the United Nations with its headquarters in Rome, Italy from one side and the World Association of Agronomists, with its headquarters in Rome, Italy, decided to sign Memorandum of Understanding (MoU) between them. In which recognizing that the Food and Agriculture Organization, (hereinafter referred to as the "FAO") is

a specialized agency of the United Nations system, with a vision for a world free from hunger and malnutrition, where food and agriculture contribute to improve the living standards of all, especially the poorest in an economically, socially and environmentally sustainable manner. It is a knowledge organization with three global goals: eradication of hunger, food insecurity and malnutrition, elimination of poverty through increased food production and rural development and sustainable management and utilization of natural resources for the benefit of all. Within the framework of five Strategic Objectives, FAO works closely with Member Nations and a range of partners at national, regional and global levels to achieve these goals. Acknowledging that the World Association Of Agronomists, (“WAA”), represented for the purpose of the present agreement by Andrea Sisti, in his quality as President of WAA, with registered office at Matr./ Reg. AACR/011./ Florianopolis, January 18, 2008., is an international professional organization which gathers more than 44 organizations that represents more than 380.000 professionals around the world, and its purposes are to unify, coordinate, and represent associations of agronomists throughout the world, promote the practice of such profession, its academic excellence and professional ethics, promote the social and economic development of the rural sector and represent agrarian rights in international forums and before governments.

Conscious- WAA was founded by representatives from thirty countries on September 8, 1994 in Santiago, Chile, as a result of the First World Congress of Professionals in Agronomy. The WAA is a non-governmental, non-political. non-religious, non-racial, and non-profit international organization, with perpetual existence and managed only by agronomists; Theme of the UN Participation in Expo Milano 2015 was: “The Zero Hunger Challenge. United for a Sustainable World”; Theme of the WAA Participation in Expo Milano 2015 was: “ THE GLOBAL FARM OF THE FUTURE - Projects for identity-creating, sustainable and long-lasting models of food production. The role of the agronomist profession in social responsibility for sustainable development and respect for the territorial diversity of local communities”.

This concept is summed up in the Zero Hunger Challenge launched by UN Secretary-General Ban Ki-moon in 2012. The UN System brings this vision to Expo Milano 2015, demonstrating to visitors how it is possible to end hunger in our lifetime, how this can only be achieved if we work together and how we can and need to be part of the solution; The Zero Hunger Challenge consists of five pillars:

- Zero stunted children less than 2 years;
- 100% access to adequate food all year round;
- All food systems are sustainable;
- 100% increase in smallholder productivity and income;
- Zero loss or waste of food; UN and WAA have developed a collaboration during the Expo2015 period for the dissemination and knowledge of the Millennium Development Goals and themes of the Zero Hunger Challenge

project; During Expo2015 it has been held the Sixth World Congress of Agronomists with the election of the new President of the WAA and the approval of the Universal Chart of the Agronomist and the new program that provides a strong synergy with the United Nations and in particular with FAO; The Universal Chart of the Agronomist has been inserted in the Milan Expo 2015 Chart; Noting that FAO and WAA have a history of close collaboration, particularly in the areas the dissemination of good practices of sustainable agriculture, vocational training, planning and design of resilient systems, innovation in agricultural, forestry and animal husbandry as well as the conversion of urban systems; Recognizing that FAO and WAA have a common global interest in promoting improved coherent action for achieving integrated approaches to sustainability, improvement of diet quality, and agricultural innovation in developing countries; Considering that cooperation between FAO and WAA would mean better access and exchange of information, knowledge and expertise in the field of food and agriculture sustainability that can benefit the services that FAO provides to its Members within the framework of the Strategic Objectives of the Organization.

The broad thematic areas where synergies will be established upon mutual agreement between the Parties are, among others:

- dissemination of good design practices;
- qualification of professionalism;
- improvement in the perception of FAO objectives;
- dissemination of culture and knowledge on sustainability and food biodiversity;
- integrated approaches to sustainability;
- agricultural innovation; • food and nutrition;
- processing and value addition of agri-food products.

Regarding these matters, a collaboration between WAA and FAO would be desirable, in order to create a profitable synergy among Authorities with the common goal of creating a shared project on the Farms of the Future. The innovative concept that two parties want to develop together with your experts is the transition from the traditional farm - organized according to the principle of adding volumes spread throughout the territory, which often oversized compared to their production volume - to the **Global Farm** organized according to shared methodological principles, always connected to other Farms. **The keystone to this vision is the importance of the Network, which aims to be the resource of a truly sustainable development. Each Farm is a tile that, together with others, can compose a global model, for a complete and waste-free system.**

The context where must to respect the following principles:

1) For food and health

The agronomist, as a food designer, optimizes the production process within the agri-food chain, inspired by principles of providing a healthy and

nourishing food, meeting the needs at a global scale, reducing food waste, ensuring safety of production, health and wellbeing of final consumers.

The defence of nutrition involves a professional activity based on consciousness and rationality on several fronts. The skills of the agronomist involve the design of food, the active management and waste reduction, as well as training and information for consumers in order to make them more and more aware of the nutritional value of products.

To get a qualitatively high content of food it is necessary that quality measurements characterize the whole production steps along the food chain, starting from the phase of first production, to the processing one, to the following phase of distribution.

The role of the agronomist in the food chain processes is to ensure and certify that each actor applies all necessary measures in order to ensure the final consumer high levels of food quality and safety, considered sufficient for all inhabitants of the planet.

2) *For sustainability*

The Agronomists' job has to tend toward actions which do not reduce natural resources, in order to meet today's needs without compromising the needs of future generations.

In a world increasingly crowded, where resources should be managed with social conscience and fairness, the safeguarding of sustainability is an ethical and environmental duty of the professionalist. At a time when millions of people still suffer from hunger, misuse of resources is intolerable, not only in an ethical point of view, but also on an environmental basis, as it represents a useless waste of natural resources.

3) *For biodiversity*

The agronomist ensures the custody of biodiversity, commits himself for development and transmission of genetic diversity for food and agriculture and provides "diversity within all life beings, included those living underground, in the air, in water ecosystems and the ecosystems they are part of".

Protection of biodiversity implies the professional moral obligation towards future generations to guarantee the balance between biodiversity and genetic improvement in planning and designing. This is to be obtained by encouraging farm agricultural practices that contribute to forming balanced agricultural ecosystems, by safeguarding existing interactions between agriculture and biodiversity, and by improving the efficiency of production. The fulfillment of this principle is to be reached with the promotion of crop choices that increase the biodiversity of farms.

4) *For soil and water*

The Agronomist ensures soil and water protection and sustainable management, in order to preserve its functions, and economical, environmental, social and cultural services.

The protection and sustainable management of soil request to the Agronomist the adoption of professional practices that maintain unchanged the fertility of the soil and prevent degradation. Through finding water needs of a specific production environment , a rational and cautious use of water resources involves the agronomist in the adoption of professional practices that enhance the use of this resource and reduces its waste, also by developing the use of innovative production systems as well as non-conventional water resources.

Soil and water are an essential element for life; They are the fundamental component of terrestrial ecosystems and the environment, that provide a range of benefits to humans through a variety of functions and ecosystem services. Avoid their losses and enhance their role are key factors for the welfare of present and future generations.

5) *For landscape*

The Agronomist preserves the “territory and culture” value and promotes local identities promotion, trough rural land and its traditions conservation.

The professionalist, having deep knowledge of the productive vocation of the territory, has the task of promoting “ad hoc” development models, able to interconnect local features and places of production. The rational and prudent management of the "territorial capital" is aimed to develop strategies and convey the value that a territory can reveal.

The Agronomist, through proper spatial planning and designing, ensures rural development, namely the maintenance and growth of socio-economic values.

6) *Social use of genetics*

The Agronomist uses genetic improvement techniques in order to ensure better living conditions, on an environmental, social and cultural level, avoiding economic colonialism toward weak populations.

The rational use of genetics, free from economic purposes, involves professional rectitude anywhere in the world. Genetic pool of species is the heritage of all and therefore must serve the good of all mankind, in other words biotechnology applications should safeguard this principle without becoming arbitrary domain of interests, or being used for purposes of material economic interest.

7) *Social use of technology*

The Agronomist guarantees that the use of technologies and innovative practices does not determine asymmetric information, prevarication of weak ones, decrease of fundamental rights. Well directed techno-science can produce valuable ways to improve the quality of human life, preserve the balance of the ecosystems and safeguard environmental sustainability.

Any professional application is expected to stay within this framework, and with no doubt constant attention is needed in order to consider any ethical issues involved.

To this end, the professional ensures a scientific and social debate that is responsible and large, able to consider all available information and without interest, be they political, economic or ideological.

8) *Intellectual and professional freedom*

The Agronomist excludes any obstacle and bond to his freedom in the exercise of profession. He should always preserve his freedom in judgment, technical and intellectual role, any external influences.

In a social context dominated by the financial aspects, where money is no longer the instrument but becomes an end, intellectual autonomy is often subjected to economic constraints. The intellectual independence should always be pursued, and this implies for the professional the continue verification of the absence of external constraints on his work. Moreover it involves moving away from influences of any kind, moral, material, political, ideological, economic and also coming from the family, so that his activity is marked only to the full protection of global interests, in line with the general ethical and social principles.

9) *For knowledge*

The Agronomist believes in permanent training, in order to offer high quality advise in his work. This is matter of public and professional dignity matter.

Training and professional development, not only represent an opportunity for the professional to improve the quality of performance, but also an opportunity to enhance the peculiarity of profession. The lifelong learning implemented in some areas of the planet is a crucial point of the strategy, considering that the speed of technological change and scientific progress makes it essential to gain learning opportunities throughout life. The Agronomist recognizes that changes in the rules and the unstoppable progress of science and technology require constant updating, in order to ensure the highest quality of professional services; the Agronomist considers training and lifelong learning as a means to keep up with scientific progress, a necessary extent to maintain his job safe and effective.

10) *Membership obligations*

The Agronomist ensures solidarity and fellowship among colleagues all over the world, promoting cooperation and mutual aid, at a professional, social and familiar level.

The spirit of fellowship is born from belonging to the same community, sharing the feeling of mutual consideration and common sense. The spirit of fellowship has undoubtedly positive values as it leads to the collaboration between colleagues and to a mutual aid, provided that it does not end with becoming a more important value than the needs of the majority of citizens. An important aspect is the respect of others' professional opinions. The differences should never become occasions of friction on personal terms, but they provide opportunities for civil confrontation of opinions and to mutual enrichment.

Conclusion

Sustainability rests on the principle that must meet the needs of the present without compromising the ability of future generations to meet their own needs. Starving people in poor nations, obesity in rich nations, increasing food prices, on-going climate changes, increasing fuel and transportation costs, flaws of the global market, worldwide pesticide pollution, pest adaptation and resistance, loss of soil fertility and organic carbon, soil erosion, decreasing biodiversity, desertification, and so on.

Sustainable agriculture is an alternative for solving fundamental and applied issues related to food production in an ecological way. While conventional agriculture is driven almost solely by productivity and profit, sustainable agriculture integrates biological, chemical, physical, ecological, economic and social sciences in a comprehensive way to develop new farming practices that are safe and do not degrade our environment. Considered for a long time as a soft, side science, agronomy is rising fast as a central science because current issues are about food, and humans eat food.

The agronomist, as a food designer, optimizes the production process within the agri-food chain, inspired by principles of providing a healthy and nourishing food, meeting the needs at a global scale, reducing food waste, ensuring safety of production, health and wellbeing of final consumers. In a world increasingly crowded, where resources should be managed with social conscience and fairness, the safeguarding of sustainability is an ethical and environmental duty of the professionals. At a time when millions of people still suffer from hunger, misuse of resources is intolerable, not only in an ethical point of view, but also on an environmental basis, as it represents a useless waste of natural resources.

REFERENCES

- Alberola C., Lichtfouse E., Navarrete M., Debaeke P., Souchère V. (2008) Agronomy for Sustainable Development. *Ital. J. Agron.* 3, 77–78.
- Gafsi M., Legagneux B., Nguyen G., Robin P. (2006) Toward sustainable farming systems: effectiveness and deficiency of the French procedure of sustainable agriculture. *Agr. Sys.* 90, 226–242.
- Hansen (1996) Is agricultural sustainability a useful concept? *Agr. Syst.* 50, 117–143.
- Hillel, Daniel J. *Out of the Earth: Civilization and the Life of the Soil*. Berkeley, CA: [University of California Press](#), 1992
- Lamine C., Bellon S. (2008) Conversion to organic farming: a multidimensional research object at the crossroads of agricultural and social sciences. A review. *Agron. Sustain. Dev.*, DOI: 10.1051/agro:2008007.
- Lichtfouse E., Habib R., Meynard J.M., Papy F. (2004) Agronomy for sustainable development. *Agronomie* 24, 445.
- Lichtfouse E., Navarrete M., Debaeke P., Souchère V., Alberola C. (2009) (Eds.) *Sustainable Agriculture*, Vol. 1. Springer, EDP Sciences.

The Universal Chart of the Agronomist has been inserted in the Milan Expo 2015 Chart

<http://www.biologyreference.com/A-Ar/Agronomist.html#ixzz5gp4FCD9g>

https://study.com/articles/Agronomist_Job_Description_Duties_Salary_and_Outlook.html

<https://www.environmentalscience.org/career/agronomist>

<http://www.biologyreference.com/A-Ar/Agronomist.html>

<https://study.uwa.edu.au/careers/agronomist>

<https://www.agronomy.org/about-agronomy>

<http://canadianagronomist.ca/>

<http://www.agriinfo.in/default.aspx?page=topic&superid=1&topicid=306>

<http://www1.agric.gov.ab.ca/%24department/deptdocs.nsf/all/agdex13366>