

How The Agricultural Excellency Center can be carried out?

¹Gökhan AVŞAR,

*¹Doktora Öğrencisi, Tarım Makinaları ve Teknolojileri Mühendisliği Anabilim Dalı, Ankara Üniversitesi, Turkey

Özet

7,78 milyar olan Dünya nüfusunun 2080'li yıllarda yaklaşık 11 milyara ulaşması beklenmektedir. Yaklaşık 85 milyon olan Türkiye nüfusunun ise 2080'li yıllarda 107 milyona ulaşması beklenmektedir. Nüfus artışının etkisiyle gıda ürünlerine olan talebin arttırması beklenmektedir. Bu durum üretim için farklı çalışmaların yapılmasının önemini göstermektedir. Bu çalışmalarda teknoloji, insan kaynağı, tohum, fide, fidan, anaç üretimi, verimlilik ve yüksek kalite gibi unsurlar öne çıkmaktadır. Bu nedenle ülkemizin bu alanda yapılacak yatırımlar ve projelerle rekabet gücünü artırması ve ülkemizin ihtiyacını karşılaması gerekmektedir. Bu çalışma, Tarımsal Mükemmeliyet Merkezlerinin gelişim sürecini Türkiye genelinde incelemek amacı ile yapılmıştır. Tarımda üretime yönelik olarak başlatılan mükemmeliyet girişimleri incelenmiş ve mevcut durumları analiz edilmiştir. Çalışmanın hazırlanmasında tarım il müdürlüğünün çalışmaları, TÜİK raporları, görsel ve basılı dokümanlar incelenmiştir.

Anahtar Kelimeler: Mükemmeliyet Merkezi, Tarımsal Üretim Mükemmeliyet Merkezi, Mükemmeliyet Ağları

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¹Gökhan AVŞAR,

¹Phd Student of Agricultural Machinery and Technologies Engineering Department, Faculty of Agriculture Ankara University, Turkey

Abstract

The world population of 7.78 billion is expected to reach approximately 11 billion in the 2080s. The population of Turkey, which is approximately 85 million, is expected to reach 107 million in the 2080s. With the effect of population growth, the demand for food products is expected to increase. This situation shows the importance of doing different studies for production. In these studies, factors such as technology, human resources, seeds, seedlings, saplings, rootstock production, productivity and high quality come to the fore. For this reason, it is necessary for our country to increase its competitiveness and meet the needs of our country with the investments and projects to be made in this field. This study was carried out with the aim of examining the development process of Agricultural Centers of Excellence throughout Turkey. Excellence initiatives initiated for production in agriculture were examined and their current status was analyzed. In the preparation of the study, the studies of the provincial directorate of agriculture, TÜİK reports, visual and printed documents were examined.

Keywords: Excellence Center, Production Excellence Center, Networks of Excellence (NoE)

1. Introduction

The pandemic affecting the entire world has once again revealed the importance of all kinds of investment in this area, such as access to healthy foods which are in the food value chain. With the effect of digital conversion, it is increasing to the interests of the excellence. The Center of Excellence (Mükemmeliyet Merkezi) is the name of the center or organization that provides leadership and best practice, research, development, support and / or educational activities. The area of interest in the center of Excellence (eg Java), a business concept (eg, business process management), a skill (eg negotiation), or a broad workspace (eg women's health) or a stopping initiative again can aim to revitalize [1].

The center of Excellence can be a separate organization from institutions, as a team, group, section or center in an existing organization. The term is also known as the competence or skill center, as the common center of cooperative organizations sharing the target of excellence in a particular area (eg, metal forming excellence center) [2].

Technology companies in the Excellence centers are often focused on business concepts, related to the software world such as new software vehicles, technical or technologies, or service-oriented architecture, business intelligence [3 and 4].

The center of Excellence in academic institutions represents a team focused on a specific research area. This team can consist of members that represent various universities, institutes and different disciplines in faculties and met (eg METU | Biomaten | Biomaterial and Tissue Engineering Center of Excellence) [5].

2. Excellence practices towards agricultural sector across Turkey

According to the private sector in this process, there are various obstacles in front of the central conversion in Turkey: strategy lack, cyber security, the height of investment costs and the uncertainties in the return of these investments [7 and 8].

In this context, the first mobility on the public side is the center of agricultural products in the production of production excellence. In this study, the activities of developing target-oriented R & D studies and the development of promoting and support mechanisms in critical and pioneering technologies were carried out. In the central center of the Greenhouse Excellence, R & D has been conducted on-site intervention, education and consultancy services on site with mobile service teams. Bales Machines are fully equipped service in excellency, fully automated research laboratories, eco-friendly energy and R & D and innovation office services were carried out. Hardware and Software and Testing Services are carried out in the center of the metal forming perfection [11, 12, 13, 14, 15 and 16].

3. Roadmap / Preparation Process

Companies and consumers in each sector are communicating with each other in accordance with their dynamics. Industry 4.0 shows that the enterprises in the digital conversion process to the converting enterprises to the center of excellence, equipped experts, public, financing resources and supports play an active role. To be established in the formation of excellence centers (such as the formation of feasibility study, problem determination, target mass determination, business plan, and operation team such as R & D and Consultancy Unit,

creation of sub-structure and activities for accreditation) and to be on promotion (awareness studies, such as promotion and marketing activities) were observed.

Some of the concrete steps to be taken on the "Road Map" determined in components that will be used to convert the enterprises in the digital conversion center to the excellence center:

- In the name of technical and vocational education, programs to advanced technologies will be developed in universities, will be supported in digital technologies and the doctoral studies on digital technologies.

- Main technology areas (cloud computing, autonomous robots, etc.) will be detected and technology road maps will be prepared in this context.

In order to gain acceleration to

- Digitalization, the center of excellence will be established and new research centers will be established.

- In order to strengthen the protection infrastructure, legislation and standards will be developed to be strengthened.

- Financing mechanisms will be developed that the users can reach more comfortable to the loans for digital transformation.

- Consultancy support will be provided to companies in the field of regulation governance.

As a result, the development and implementation of effective policies and strategies is great importance in the digitalization process of the manufacturing industry with the largest share in production. Prioritizing the investments to be made to the digital technologies, Turkey, not only improving today's economy, but also will have invested in the long term [9 and 10].

4. Conclusion

“Agricultural Excellence Centers” established in our country that was established with the aim of carrying out research and feasibility studies for a multi-partner center that brings together relevant institutions and organizations in order to contribute to the regional economy in the province where it will be established and will provide the services needed by the sector.

The first step to be taken for Agricultural Centers of Excellence is the creation of road maps.

According to the purpose determined in this roadmap;

- Steps to be taken for R&D and applications

- Required resources

- Actors involved in the transformation process (for example, provincial/district chambers of agriculture, provincial/district agriculture provincial directorates, etc.)

- Coordination

- Subjects such as long, medium and short-term planning should be clearly explained.

In order to reach the goal defined in the Agricultural Centers of Excellence, the road map to be followed should be carefully prepared.

What needs to be done for this;

- Conducting a feasibility study for the establishment of a multi-stakeholder center of excellence with regional and sectoral activities,
- Investigating the economic effects of the center of excellence, which is aimed to be established, on the relevant sector of the region,
- Identification of regional, national and international actors that can be partners in the center of excellence to be established and provide synergy and cooperation,
- Determining the service range and presentation methodologies of the center of excellence to be established,
- The service range of the center to be established is determined by taking into account the current situations and needs of the stakeholders and the sector,
- Making product-specific supply/value chain analysis in agricultural sectors,
- Determining the needs for the agricultural sector in the region to catch up with world standards.
- Defining the added value, in-kind contributions and roles of the possible partners of the center to the center,
- Sustainability modeling of the center to be established,
- Defining the audience that the center of excellence aimed to be established will serve,
- The organizational structure of the center that is aimed to be established has been designed,
- Social, economic and financial analyzes of the agricultural sector and the center of excellence to be established,
- Determining the current situation and needs of the companies in the sector and determining the service/product program of the center accordingly,
- Increasing awareness of relevant stakeholders about the sectoral center of excellence,
- Determining the expectations of the relevant stakeholders regarding the center of excellence.

References

1. Mark O. George (2010). The lean six sigma guide to doing more with less. John Wiley and Sons. p. 261. ISBN 978-0-470-53957-6.
2. Tarek M. Khalil; L. A. Lefebvre; Robert McSpadden Mason (13 August 2001). Management of technology: the key to prosperity in the third millennium : selected papers from the ninth International Conference on Management of Technology. Emerald Group Publishing. pp. 164. ISBN 978-0-08-043997-6. Retrieved 13 February 2012.
3. Eric A. Marks (2008). Service-oriented architecture governance for the services driven enterprise. John Wiley & Sons. p. 271. ISBN 978-0-470-17125-7.
4. James A. Obrien. Management Information Systems (Special Indian Edition ed.). McGraw-Hill Education (India). p. 315. ISBN 978-0-07-062003-2.
5. National Research Council (U.S.). Committee on Materials Science and Engineering: Forging Stronger Links to Users (2000). Materials science and engineering: forging stronger links to users. National Academies Press. p. 139. ISBN 978-0-309-06826-0.
6. Farmer, Paul. 2001. The Major Infectious Diseases in the World — To Treat or Not to Treat? N Engl J Med 345 (3): 209
7. TÜSİAD (2016a). Türkiye'nin küresel rekabetçiliği için gereklilik olarak Sanayi 4.0: Gelişmekte olan ekonomi perspektifi. İstanbul: TÜSİAD
8. TÜSİAD (2016b). Türkiye'de dijital değişime CEO bakışı raporu. İstanbul: TÜSİAD
9. Industry 4.0, The Future of Productivity and Growth in Manufacturing Industries, Boston Consulting Group, Nisan 2015.
10. Dijital Dönüşüm Çalışmaları Sunumu, Sertaç Köksal Gölner, Eylül 2019.
11. <https://www.plantdergisi.com/turkiye-de-ilk-seracilik-mukemmeliyet-merkezi.html>
12. <http://www.adiyaman.gov.tr/tarim-mukemmeliyet-merkezi-ortaklik-protokolu-imzalandi>
13. <https://www.sbbseracilik.com.tr/alt-faaliyet-detay?id=10>
14. <https://www.sakaryadanhaber.com/haber/7023845/seracilik-mukemmeliyet-merkezi-turkiyede-bir-ilk-olacak>
15. <https://www.tarimkredi.org.tr/gundem/haberler/tarim-mukemmeliyet-merkezi-ortaklik-protokolu-%C4%B1mzalandi/>
16. <https://www.kobi-efor.com.tr/sakarya-tarimsal-urunler-uretim-mukemmeliyet-merkezi-makale,721.html>