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ÖNSÖZ

*Sanayi devrimi*nden sonra, esas olarak makinalaşmanın ortaya çıkmasından bu yana ve *yeşil devrim* sürecinde, insanlar ve makinalar, insanları beslemek için ürün yetiştirmek amacıyla verimli bir şekilde işbirliği yapmaktadır. Ancak, önümüzdeki yıllarda nüfus artışıyla yüzleşmek için, sadece üretkenliği artırarak insanları beslemek değil, aynı zamanda bunu mümkün olan en verimli ve saygılı şekilde yapmak, diğer bir deyişle sürdürülebilir olarak üretmek amacıyla da başarılı olmak için ekstra bir çaba gerekmektedir. Bu zorlukla yüzleşmek için, son on yılda, özellikle güvenilir tarımsal verilere erişim ve bunlardan en uygun anlamı çıkarmak için, gelişmiş bilgisayar teknikleri gibi teknolojide dikkate değer gelişmeler ortaya çıkmaktadır. Dijital teknoloji tarafından yönlendirilen bu yeni yaklaşım, yetiştiricilerin tekrarlayan, fiziksel olarak zorlu ve sıkıcı saha görevlerinden kaçınma girişiminde işçilerden ziyade ürünlerinin denetçisi olarak hareket etmeleri gerektiğini ima etmektedir. Bu modern tarımsal çerçevede, veri çok önemlidir ve bilgi tabanlı yönetim döngüsü, kavram ve görevleri birleştiren pratik bir yaklaşım sağlar.

Tarım 5.0'dan en iyi şekilde yararlanmak için, kullanıcılara, ideal olarak modern teknolojileri öğrenmeye ve tarıma uygulamaya istekli genç çiftçilere derin eğitim verilmesi ve gelecek nesillere bir yenilenme sağlanması gerekmektedir. 21. yüzyılda gıda üretiminin getirdiği zorluklarla yüzleşmek için, veriye dayalı yönetimin tüm gücünü gösterebilen modern ve sürdürülebilir bir tarıma doğru ilerlemek amacıyla doğru zaman gibi görünmektedir. Tarım 5.0'a geçiş, önümüzdeki on yıl için çoğu büyük tarım ekipmanı imalatçısının gündeminde yer almaktadır. Bu nedenle, tarım robotlarının bir sonraki - daha akıllı-nesil tarım makinaları olarak kabul edilmesi durumunda, ekipman imalatçıları bu hamlede kilit bir rol oynayacaktır.

Tarımsal üretimin yaygınlaşması, insanlığın çevre üzerindeki en büyük etkilerinden biri olmuştur. Birçok habitatlar tarımsal üretim için dönüştürülmüştür. Tarımsal üretim, biyoçeşitlilik için en büyük baskılardan birisidir. Tarımsal üretimin, iklim değişikliğini azaltacak şekilde enerji üretme ve kullanma konusunda önemli bir işlevi vardır. Tarımsal üretim işletmelerinde, fosil yakıtlar yerine düşük karbonlu yenilenebilir enerjiler kullanmak, çiftlik sahiplerinin enerji kaynakları üzerindeki kontrolünü artırabilir, maliyetleri azaltabilir ve iklim değişikliği ile mücadele edilebilir. Tarım temelli biyoyakıtların üretimi ve kullanımı konusunda, çevresel ve sosyal sorumluluğun dikkatle değerlendirilmesi ve biyolojik kökenli enerji üretiminden kaynaklanan emisyonların titiz ve kapsamlı bir şekilde değerlendirilmesi gereklidir.

Türkiye Cumhuriyeti'nin 100. kuruluş yılı anısına hazırlamış olduğum bu bilgi seti, başta kurucu lider ve bilge önder Mareşal Gazi *Mustafa Kemal ATATÜRK* olmak üzere, kurtuluş savaşı ve kuruluş mücadelesinde büyük bir özveri ile görev alan bütün insanlara ve ülkemizde *tarımsal mekanizasyon eğitim ve araştırmalarının öncüleri*ne ithaf olunur. Değerli eserleri ve önemli katkıları için en içten teşekkürlerimi ve sonsuz saygılarımı sunarım.

Prof.Dr. Hasan Hüseyin ÖZTÜRK
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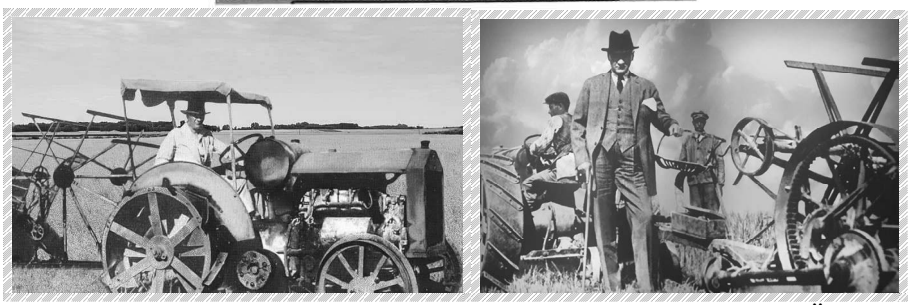

Kurucu lider ve bilge önder Mareşal Gazi Mustafa Kemal ATATÜRK

Ülkemizde tarımsal mekanizasyon eğitim ve araştırmalarının öncülerinden bazı bilim insanları

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