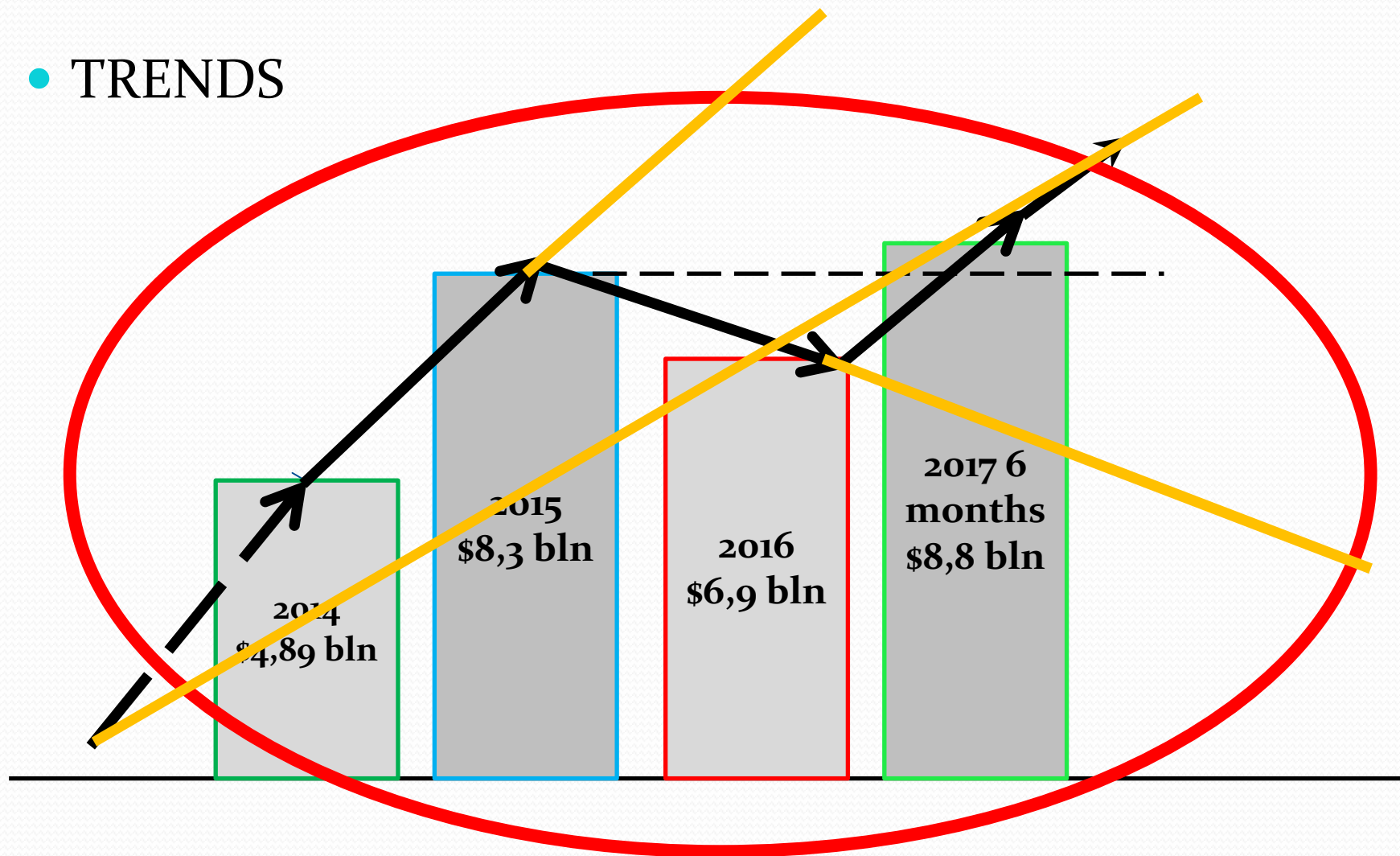# Trends in Demand for, and Investments in, AgTech Innovations
In the USA & EU

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content

- TRENDS

2014
$4,89 bln

2015
$8,3 bln

2016
$6,9 bln

2017 6 months
$8,8 bln

AgTech BUBBLE

- Overall farmers surveyed in different states of USA have expressed the solidarity stating that " cost reduction is probably the number one thing they all are looking for and that the overriding trend is that it's going to be difficult to turn a profit". It's going to affect farmers' buying habits and decisions in a significant way.

- There is a Technological Bubble in AgTech Investments

- Currently few investment companies specializing in Agtech in USA stopped investing in technologies. Moreover some of them stating that a real technological bubble in AgTech market is growing now in USA due to the total disconnection between the supply (Tech innovations) and demand (farmers). "It's going to burst if it keeps going the direction it is," says Aaron Magenheim, CEO of AgTech Insight, California investment firm.

- The same picture now can be watched in Canada, China and India – with latter two being among the world leaders in AgTech investments. In UK they also realized that the further one-sided encouragement of the innovations development cannot be extended any more. Why has it happened?

- Analyzing the reasons of this problem in many countries we have found that they all are similar to the underlying reasons expressed by the CEO of Canadian company Decisive Farming , who said that "too many entrepreneurs trying to penetrate the Agricultural landscape for digitalization know too little or nothing about the industry and farmers' needs.

AgTech value chain

TECHNOOGY INPUTS	CROP PRODUCTION	ANIMAL PRODUCTION	AGRI CULTURAL PROCESSING	MANUFACTURE+ DISTRIBUTION	CONSUMER CONSUMPTION	CHALLENGES
1.PRECISION FARMING:	1.EQUIPMENT	1.ANIMAL FARMING+AQUACULTURE	1.BIO-BASED PROCESSING	1.FOOD,FIBER ENERGY		GHGs
GPS/GIS	PLANTING	GENETICS	IDENTITY PRESERVATION	PRODUCTION, PACKAGING,		SOIL
SENSORS	CROP PROTECTION	PRECISION FEEDING	CARBOHYDRATE ,OIL,PROTEIN	TRANSPORTATION		LAND
DIAGNOSTICS	IRRIGATION	FEED+	FIBER	FOOD SAFETY	FOOD	WATER

AgTech value chain

| TECHNOOGY INPUTS	CROP PRODUCTION	ANIMAL PRODUCTION	AGRI CULTURAL PROCESSING	MANUFACTURE +DISTRIBUTION	CONSUMER CONSUMPTION	CHALLENGES
ANALYTICS	HARVESTING	NUTRITION+ HEALTH CARE DIAGNOSTICS	FOOD+FEED SAFETY	SUPPLY CHAIN MANAGEMENT	FIBER	ENERGY
SOFTWARE	STORAGE	MEDICATION	LOGISTICS+INT ERNATIONAL TRDE	PAKAGE GOODS	ENERGY	DIVERSITY
2. PHYSICAL INPUTS seeds, fertilizers, water	2.SUSTAINABLE FARMING conservation tillage,	DRUG DELIVERY	BIOENERGY, BIOMATERIALS	BIOENERGY,BI OMATERIALS		
	3.MARKETING	GROWTH MANAGEMENT		RETAIL		

TECHNOLOGIES REQUIRED

- **sustainably increasing food production, major innovations in AgTech are required that increase agricultural productivity and improve the efficiency and resiliency of the entire food system.**

- **New crops with more nutrients + less inputs required**

PROTEIN SOURCE	KGs of FEED REQUIRED FOR 1 KG Of MEAT
BEEF	8
LAMB	5
PORK	2,5
POULTRY	1,5
FISH	1,2

TECHNOLOGIES REQUIRED

- we lose an estimated 24 billion tons of fertile soil to erosion and 12 million hectares of land to desertification and drought.   BUT soil degradation can be addressed through sustainable soil management practices.

- Today the lion share of solution is on the side of   non-harmful, sustainable innovations, lion share of them can be delivered by agricultural machinery

Biofuel vs. regular crops
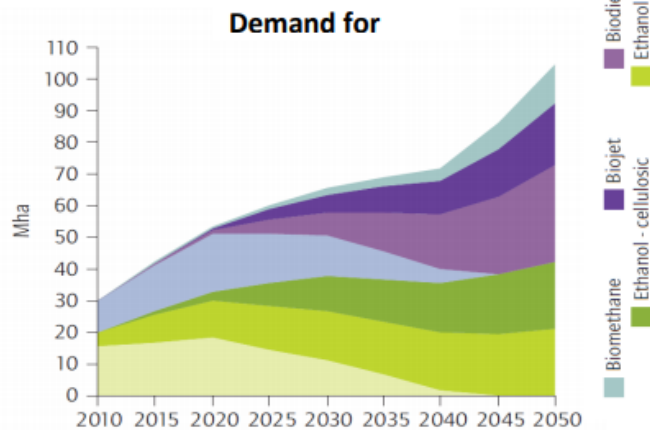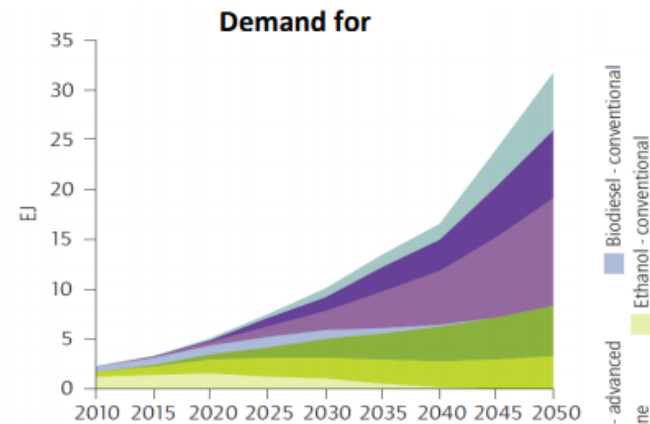
Source: International Energy Agency, "Technology Roadmap: Biofuels for Transport," 2011.

BIGGEST VC COMPANIES USA VS. EUROPE
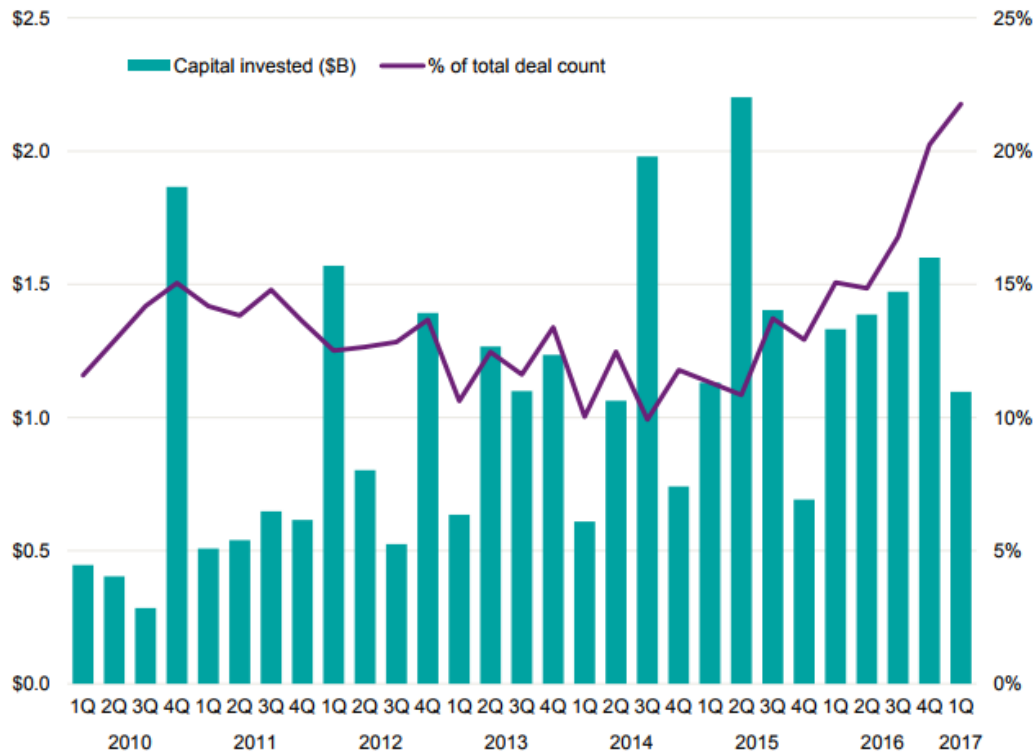
- USA VC for **Agtech Cultivian sandbox**

$ 200 mln assets, diversified portfoilo

One of the biggest VC for Agtech in USA (Descarts Labs in portfolio)

- **Anterra Capital (NL)** based also in USA, $140 mln, 10 investments – 3 in Europe (Voltea, Food Freshness techn, Lemna tech)

VC in Europe

Corporate VC participation in venture deals in Europe
2010 — Q1'17

Source: Venture Pulse, Q1'17, Global Analysis of Venture Funding, KPMG Enterprise. Data provided by PitchBook, April 11, 2017.

Best European startups in AgTech

- Avantium (NL, green fuel etc), Voltea (protable water treatment), Winnow solutions (UK, food waste management) Spectral Engines (Finland)

Big Data biggest startup USA

- Big data analysis platform Descartes Labs has raised an oversubscribed $30 million Series B round led by new investor March Capital, a Californian venture capital firm. Agriculture commodities giant Cargill also invested in the startup for the first time alongside existing investors Crosslink Capital and agtech specific VC Cultivian Sandbox. Cargill was already a customer of Descartes Labs before investing.

Picking Alpha
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Conference
Big Data as Agriculture's Currency:
Challenges & Solutions

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Thank you!

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