

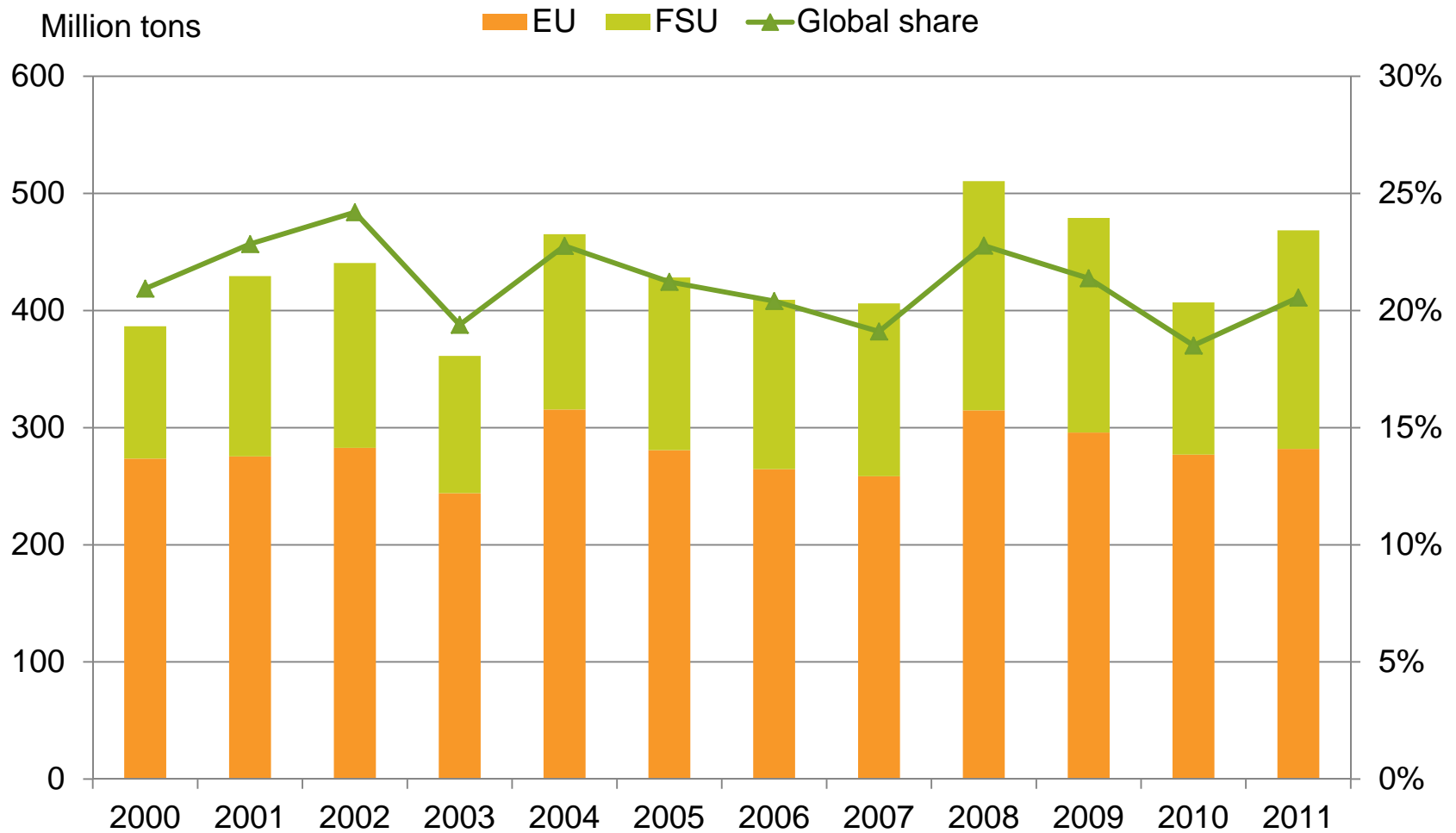


Knowledge grows

The European Fertilizer Market

St. Petersburg November 2011

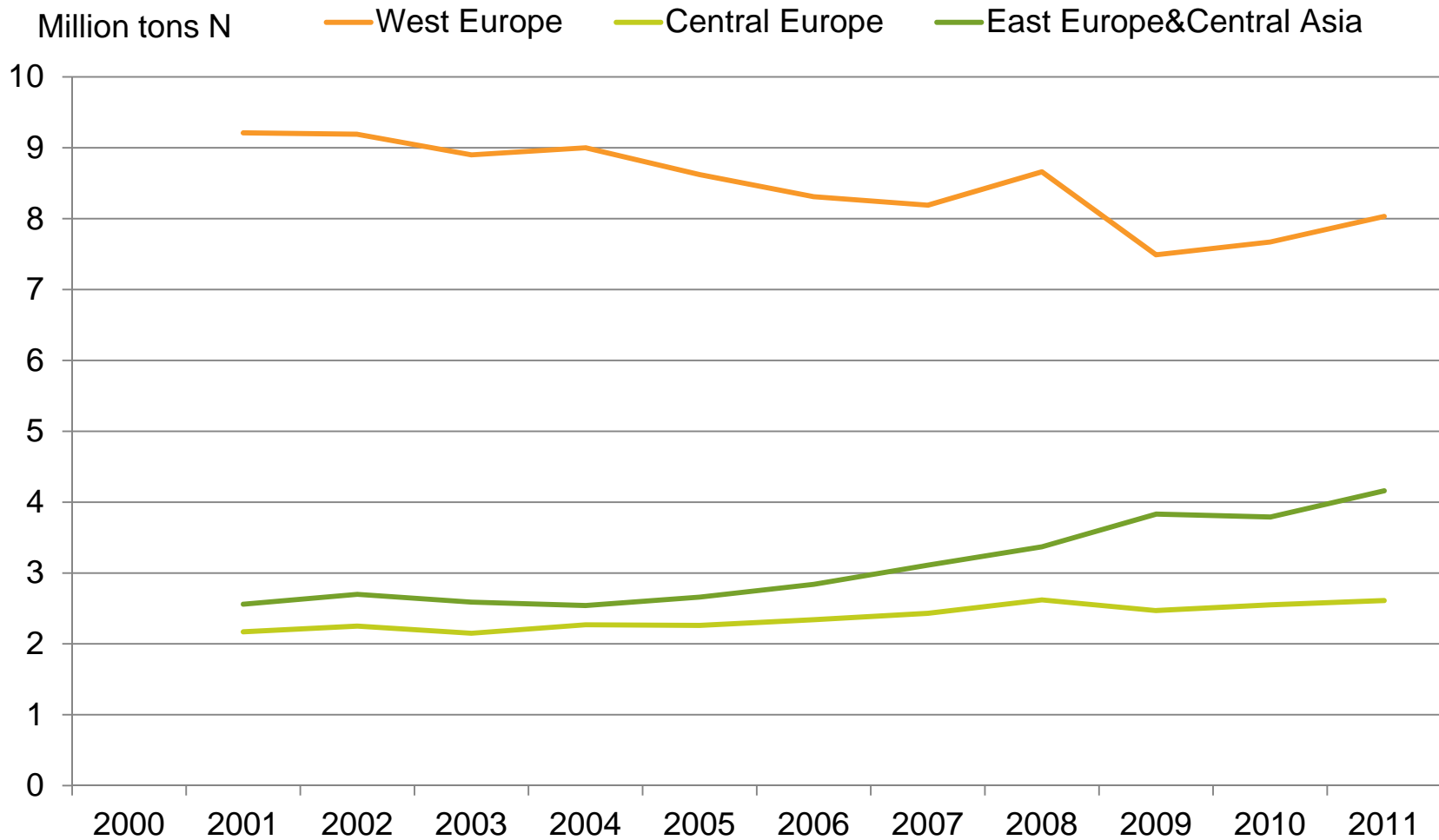
Roughly 20% of global grain production in Europe



Source: USDA



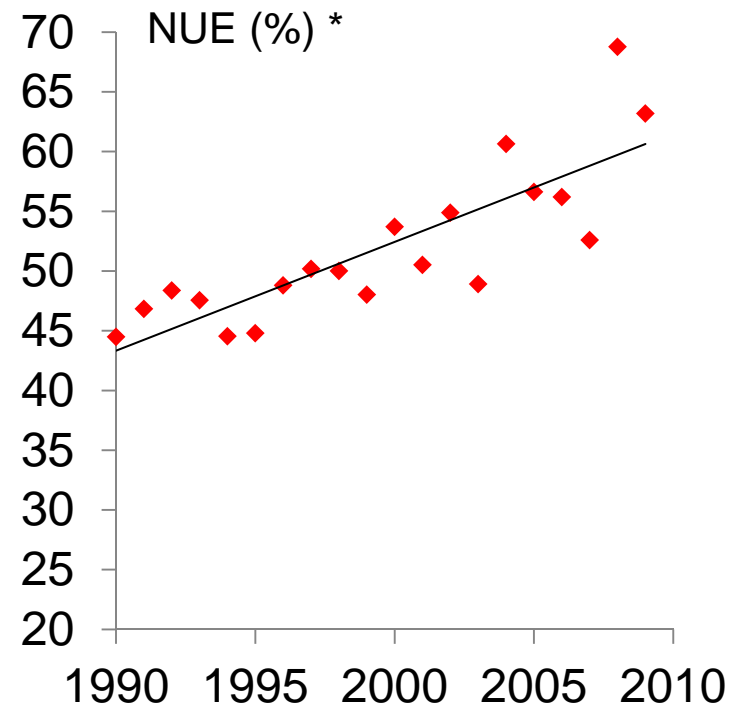
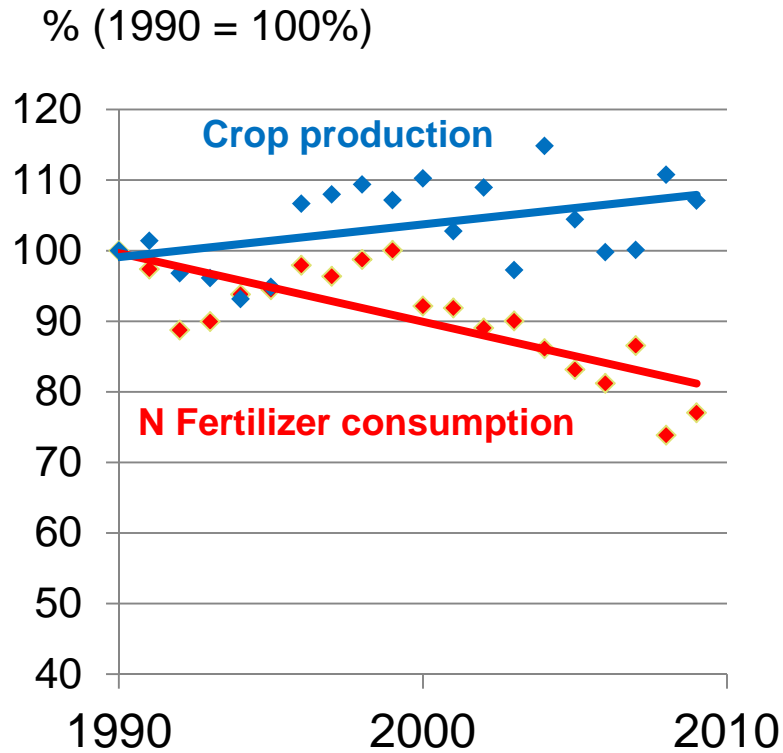
Nitrogen consumption – now increasing



Source: IFA, Fertilizers Europe. West Europe is EU15, Central Europe is EU12, the new member states



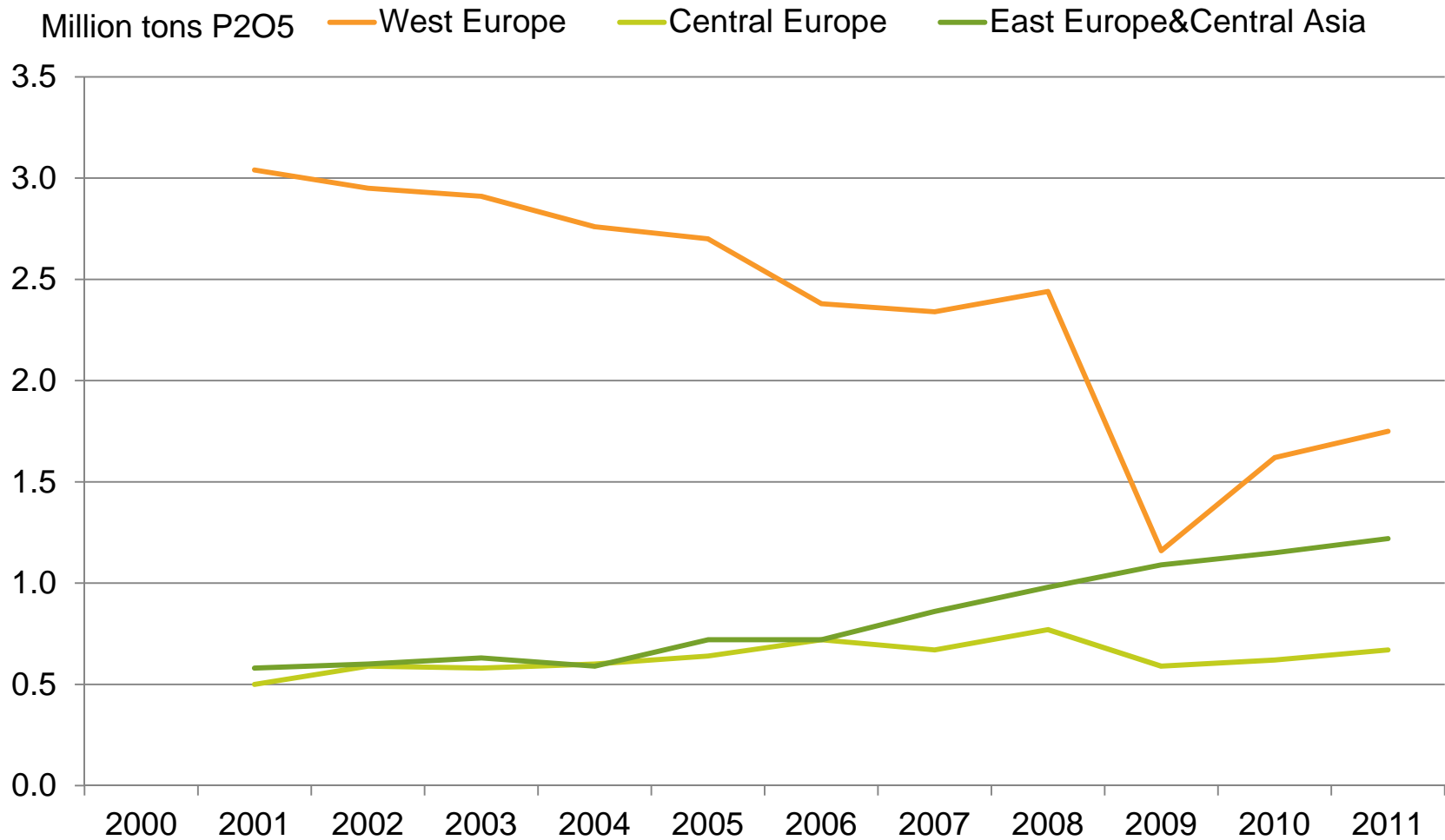
Today EU produce more crops with less nitrogen consumption



Today Europe has the highest Nitrogen Use Efficiency (NUE) of any region in the world.



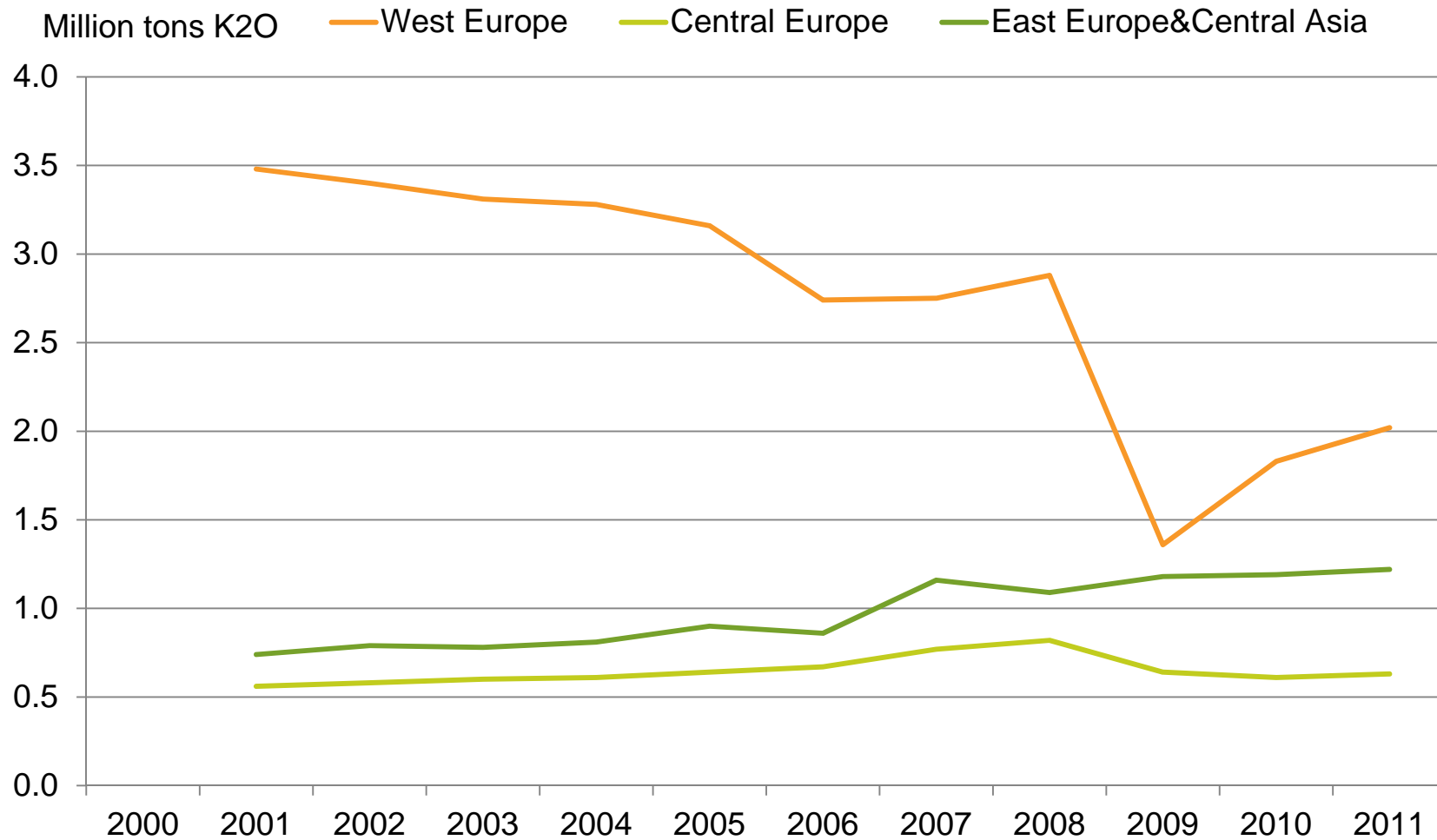
Phosphate consumption – rebound after the crisis



Source: IFA, Fertilizers Europe



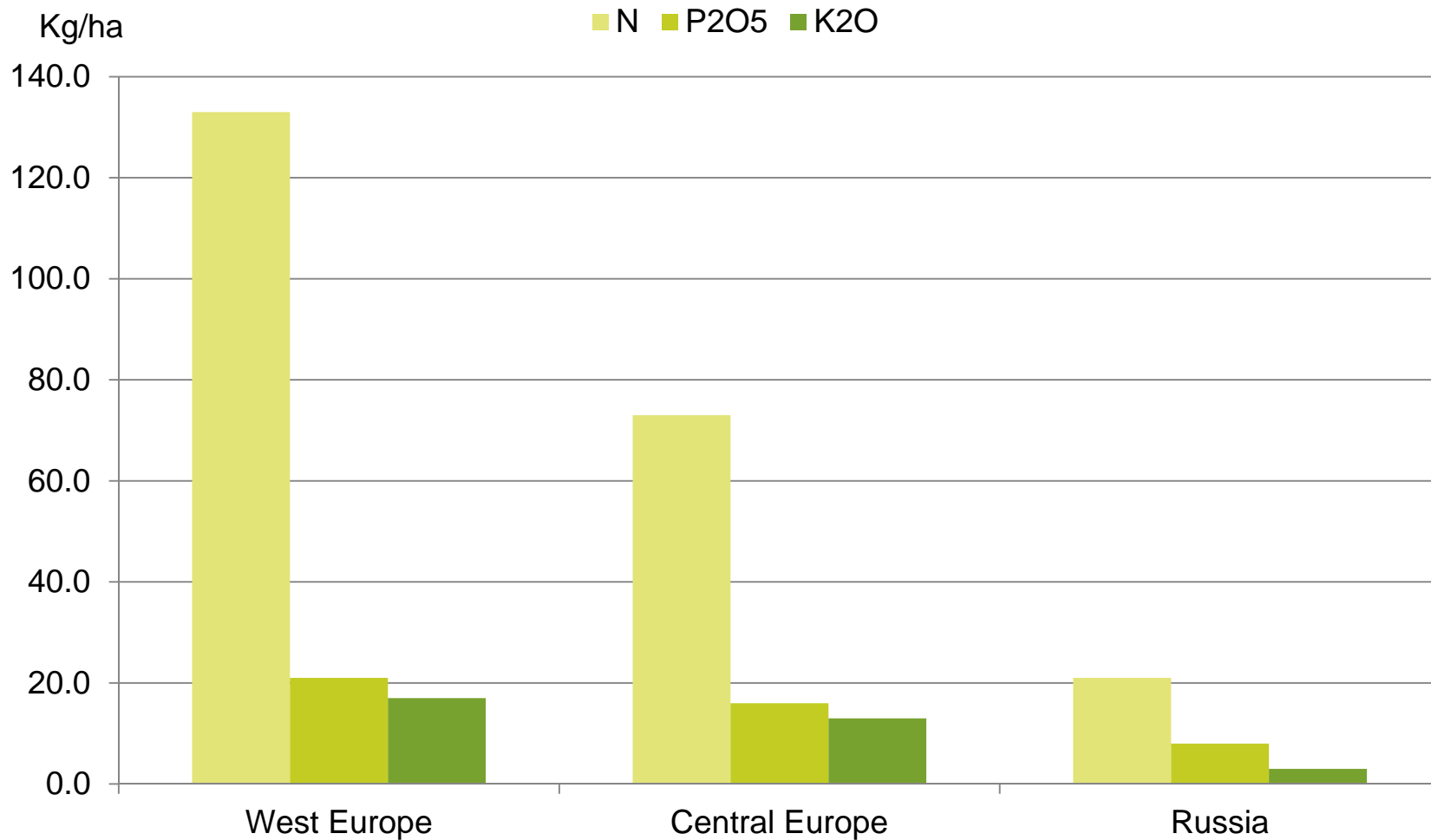
Potash consumption – rebound after the crisis



Source: IFA, Fertilizers Europe



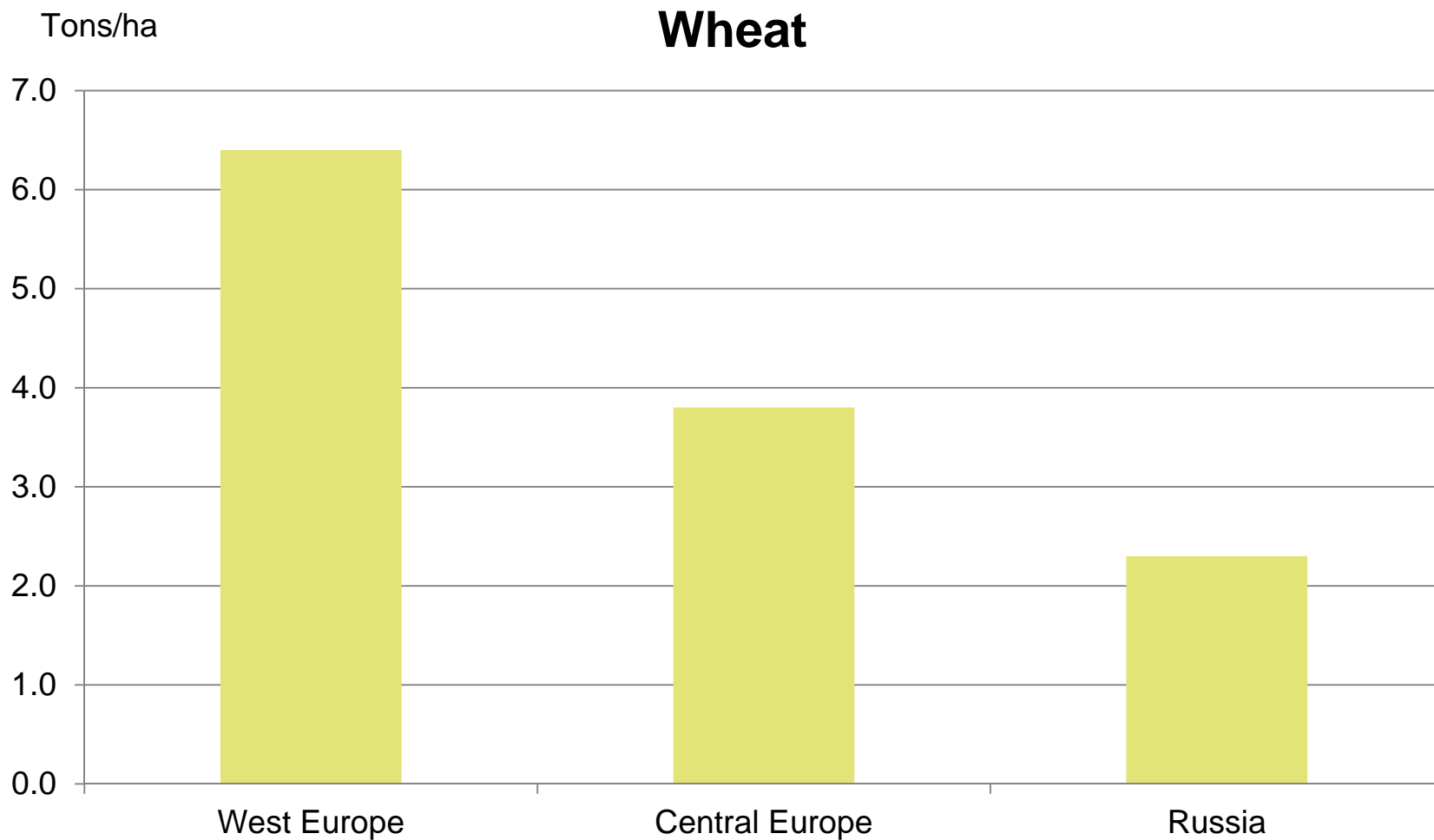
Application on wheat – huge variation



Source: IFA, Fertilizers Europe (2010/11 season), FAO (2007/08 season for Russia)



Yields reflect the nutrient application rates



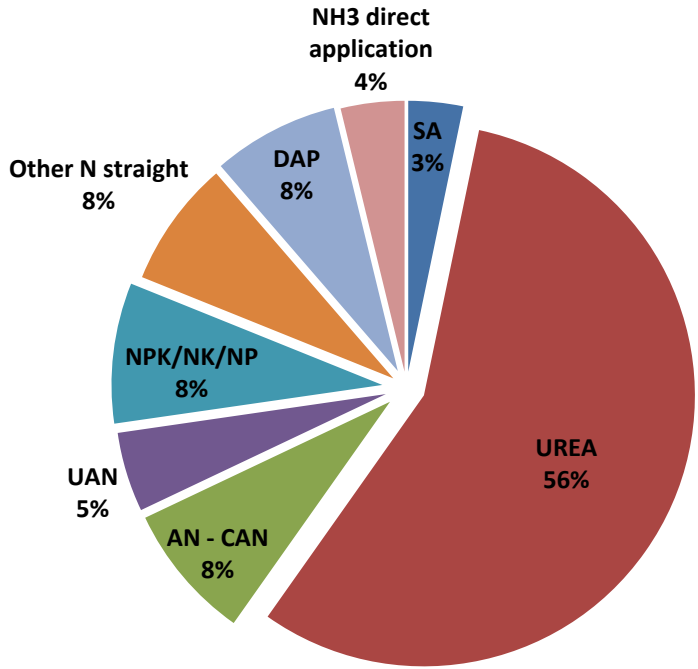
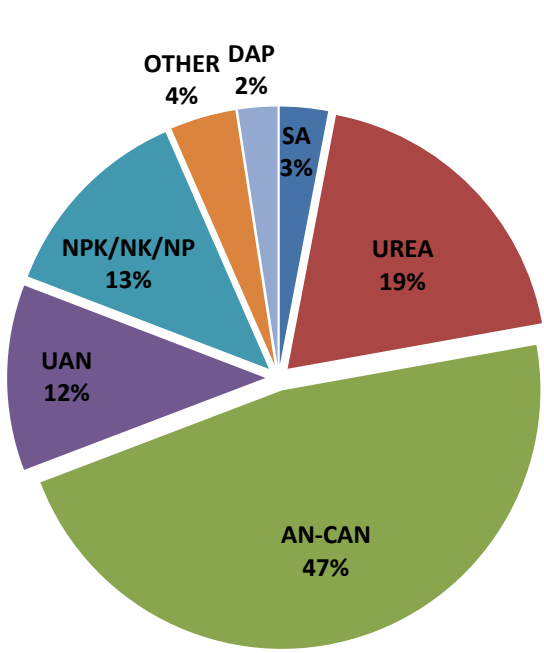
Source: Fertilizers Europe (2008/09 season), FAO (2009 for Russia)



Nitrate is the preferred product in Europe

EU 27
10 million
tons of N

World
100
million
tons of N

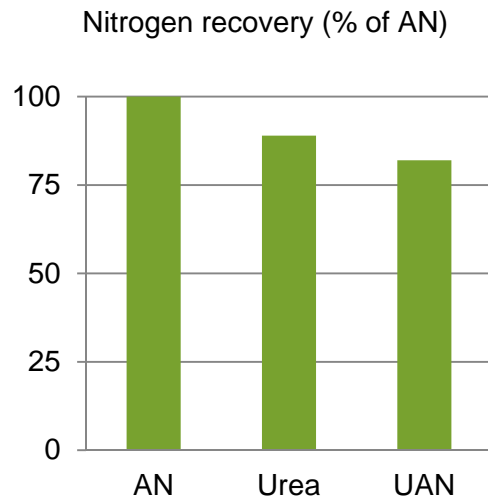


Source: Fertilizers Europe



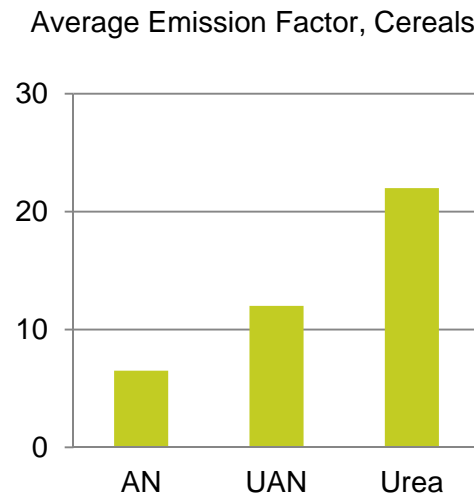
Nitrate-based fertilizers are superior to urea both ergonomically and environmentally

The agronomical efficiency of nitrates is superior to urea



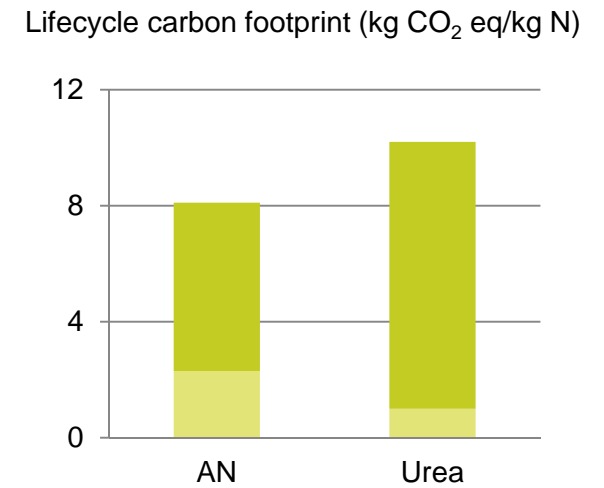
Urea requires up to 20% higher N application to achieve same cereal crop yield and quality as AN

Nitrates have lower ammonia volatilization losses



Urea and UAN with a 30% market share of EU nitrogen fertilizers cause 88% of its ammonia emissions

The carbon footprint is lower than for Urea

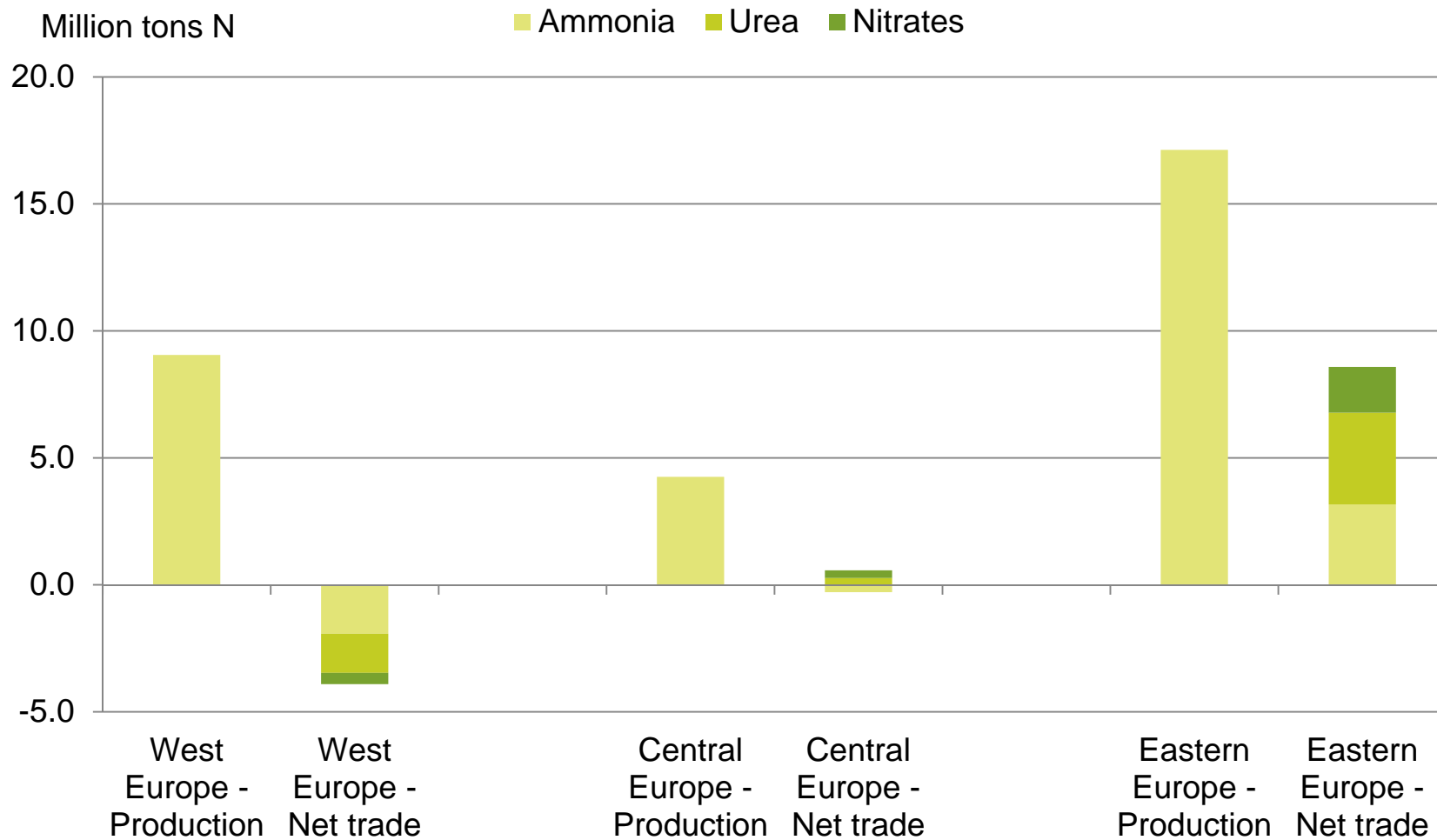


Although urea is more CO₂ efficient in production, CO₂ emissions and ammonia volatilization on application more than offset for this

Source: DEFRA (2006), NT26 project report; Fertilizer Europe; 2EMEP/EEA air pollutant emission inventory guidebook (2007); Yara



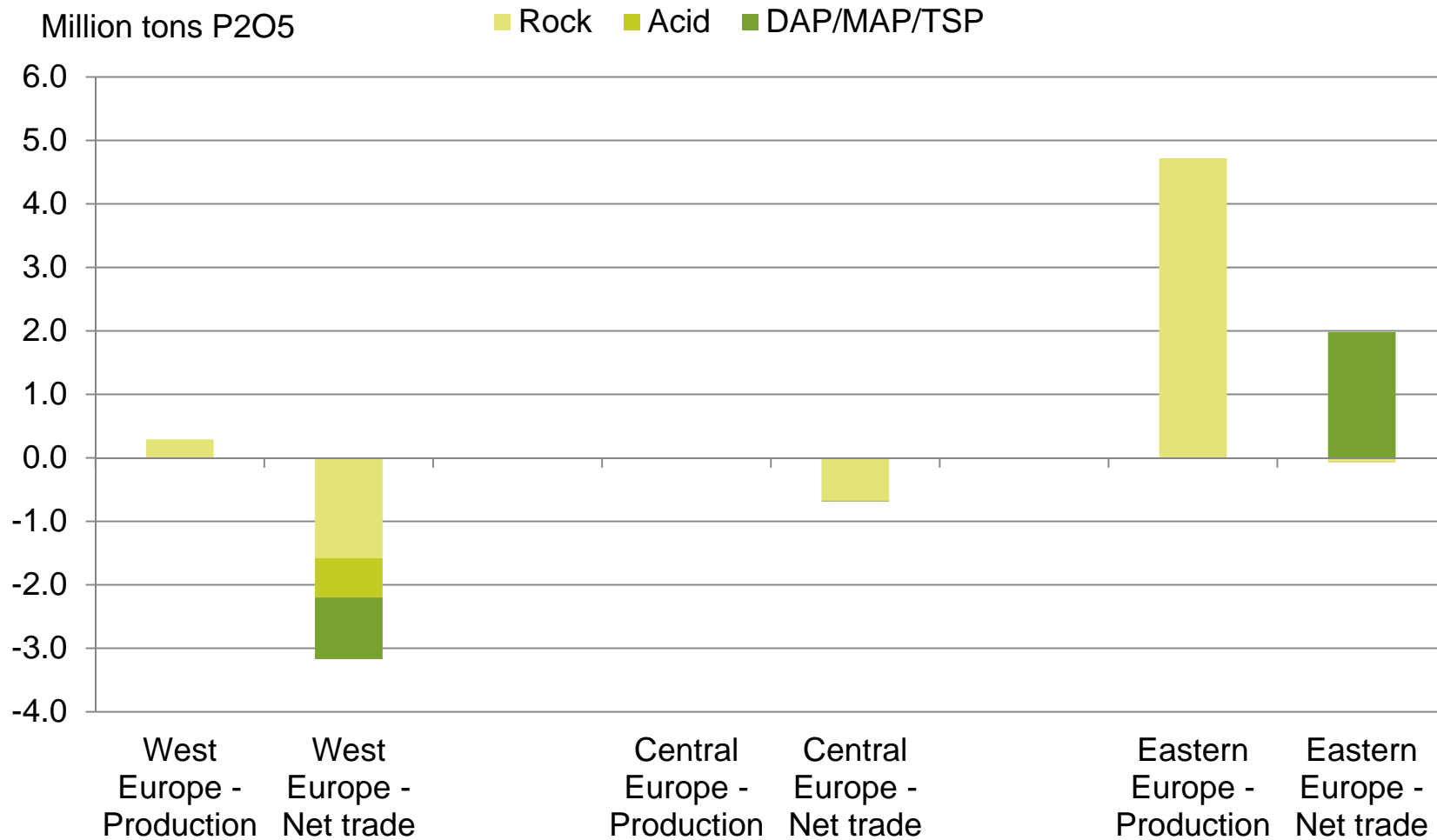
Supply balances – main nitrogen products



Source: IFA 2010, only ammonia, urea and solid nitrates. Regions follow IFA classifications



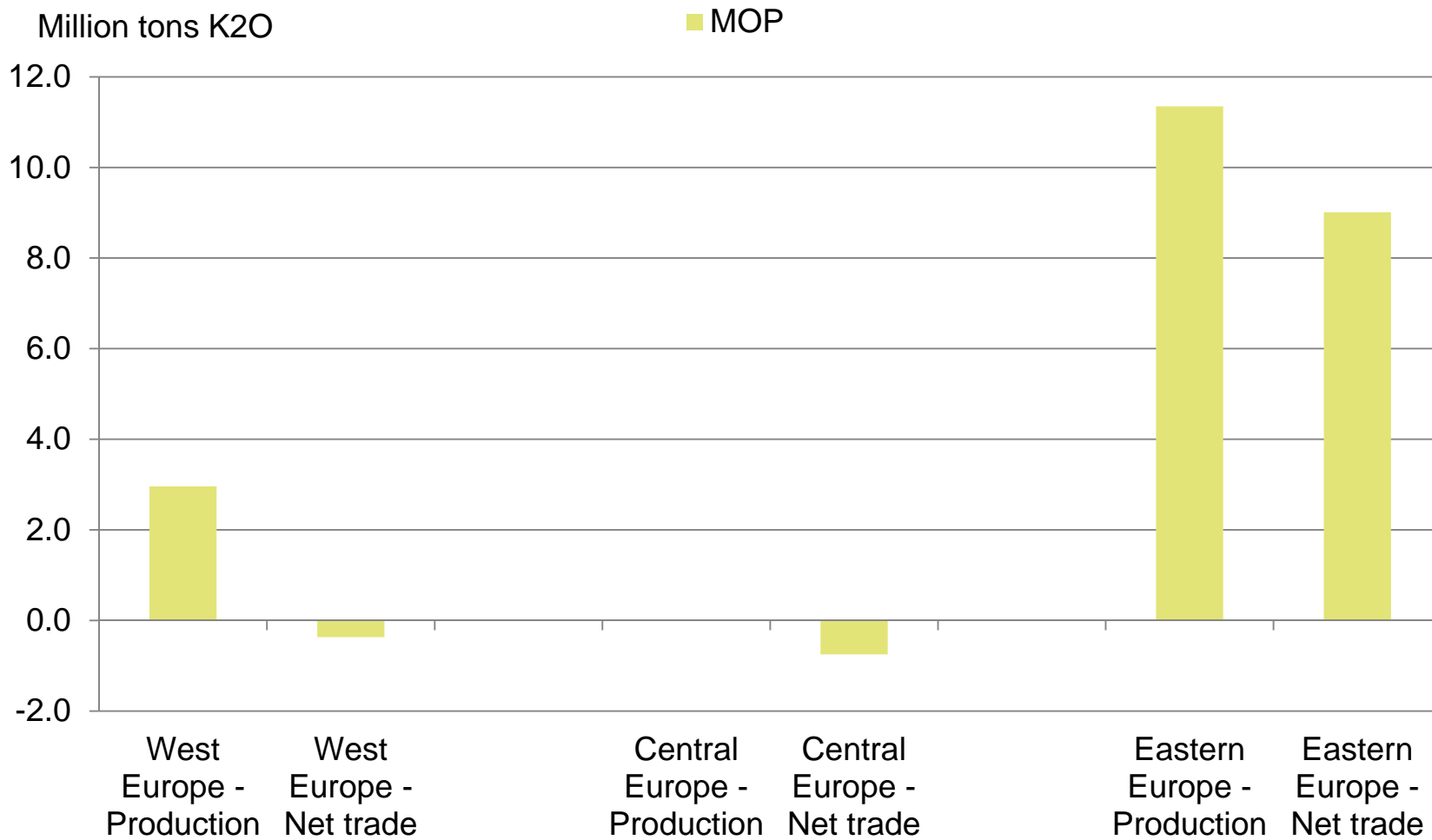
Supply balances – main phosphate products



Source: IFA 2010, only rock, acid and DAP/MAP/TSP. 33% P₂O₅ assumed in traded rock



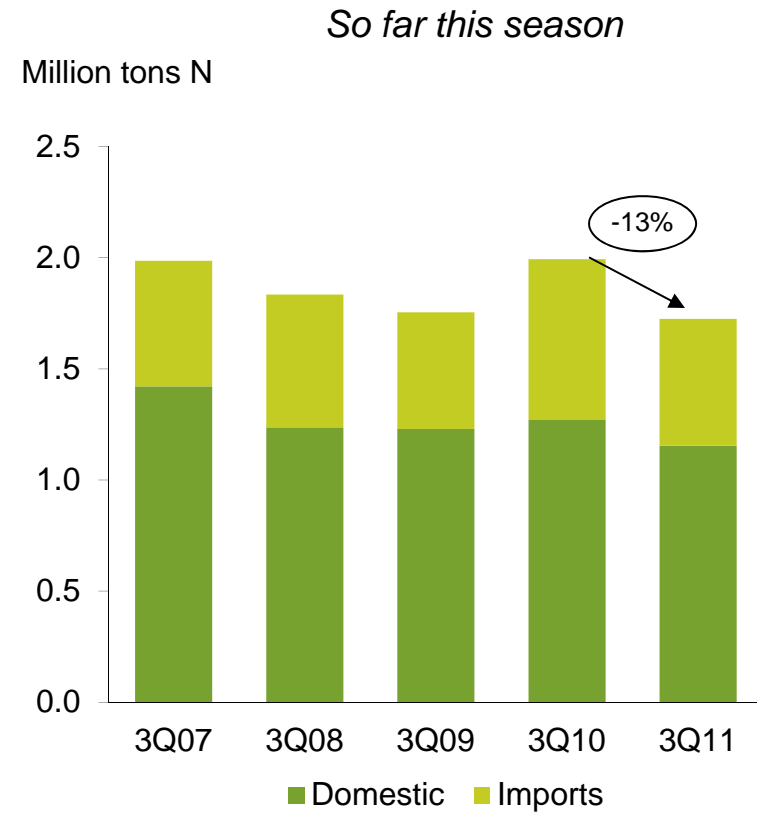
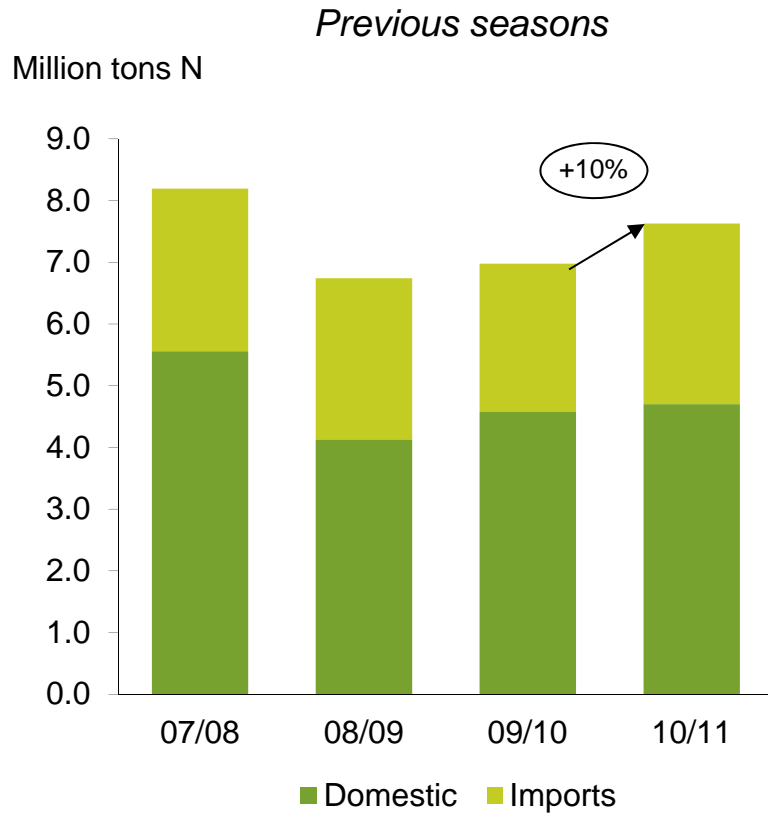
Supply balances – potash



Source: IFA 2010



Slow start to the season in West Europe



Source: Yara estimate for nitrogen fertilizer deliveries to selected West European countries.

