A critique on biofuel production is that it augments food prices. A solution is to produce biofuels (e.g. via flash pyrolysis) with biomass waste or biomass coming from phytoremediation, i.e. soil sanitation by plants (e.g. metal accumulating willow), so that no cropland for food is occupied. Flash pyrolysis of metal accumulating willow however yields bio-oil with a relatively high water content, which is a major drawback for its usage. Flash co-pyrolysis of willow and waste of biopolymers (PLA, PHB, corn starch, Biopearls, Eastar, potato starch and solanyl) might synergistically improve the characteristics of the pyrolysis process. The economic investment model described in this paper investigates the costs and benefits of those synergistic effects of flash copyrolysis

of 1:1 w/w ratio blends of willow and biopolymers. PHB is the preferred biopolymer from an economic viewpoint, as crotonic acid is formed during copyrolysis of willow and PHB. For the profitability of flash co-pyrolysis of the other blends, the presence of green current certificates is crucial. As pyrolysis of biomass is not yet implemented on a commercial scale, it is difficult to estimate the investment costs. The latter appears to be the most important cost item and the uncertainty related to the total investment explains for a large part the variability of the net present value of the cash flows. An advantage of biofuel production from phytoremediating biomass is that it might compensate the loss of income for farmers confronted with heavy metal soil pollution. Even though phytoremediation is less expensive than traditional excavation techniques, its economic viability depends on the revenues brought about by converting the metal accumulating willow.

We investigated the effects on the income of farmers cultivating roughage for dairy cattle in the Campine, a cross-border area in Belgium and the Netherlands, historically contaminated with

cadmium, lead, zinc and arsenic.