Biogeosciences Discuss., 11, C3507–C3508, 2014
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Biogeosciences Discussions
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Interactive comment on "Biomass yield development of early, medium and late Maize varieties under a future climate in Lower Saxony, Germany" *by* J. F. Degener and M. Kappas

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Received and published: 15 July 2014

This is a very interesting paper and well presented. I have just a few general comments: 1) The general "tone" of the paper could be more positive. It seems in much of the discussion, the potential "negatives" are discussed more than the "positives" that the models predict. For example, in the conclusion "new breeds and cropping techniques will also aid to counteract the negative effects of climate change" says negative but in fact your models show they will be positive. In the abstract you state "In addition summer temperatures will become less optimal for all maize crops. Only if the plants can supply themselves sufficiently with water...". Again you model shows this is pos-

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itive. 2) Temperature increases and moisture decreases seem a bit extreme but I am not a model expert. 3) Description of the varieties (hybrids) would be useful including days to maturity and relative yield potential. 4) It seems your models suggest greater yields, especially from the late varieties. It also is implied that farmers can shift from early and medium varieties to late varieties. I assume the late varieties are higher yieldings. Therefore, there can be an additive effect of 25% increase in late variety yields plus the extra yield from late versus early and medium varieties. This combined effect is large and should be discussed. 5) Variability is discussed and it is implied that biological variability will increase. That may be true but the authors should note that the variability maybe a function of the models themselves.

Interactive comment on Biogeosciences Discuss., 11, 9103, 2014.