

## Supplementary file

**Table S1.** Treatment effect estimation of IPWRA model

Variables	OME1		OME0	
	Coef.	Robust SE.	Coef.	Robust SE
Gender of household head (M=1, F=0)	2.632	3.155	3.336	3.790
Age of household head (years)	-0.596	0.657	-0.040	0.434
Square of Age of household head	0.004	0.006	0.001	0.004
Years of education (years)	0.012	0.262	0.278	0.271
Caste (Brahmin/Chhatri=1)	1.262	2.765	-6.483**	3.048
Per capita per person landholding (ha)	-0.552	3.830	-1.425	10.723
Proportionate of maize area (%)	-0.018*	0.011	0.005	0.006
Major source of agriculture information (agriculture extension offices =1)	3.971	3.543	2.396	3.209
Major source of agriculture information (co-operative=1)	4.293*	2.233	7.746***	2.688
Major source of agriculture information (agrovet=1)	-0.309	3.199	1.121	2.210
Number of members migrated	2.767**	1.322	2.297*	1.379
Own she buffalo (yes=1)	-0.623	1.852	-2.445	2.113
Own sheep & goat (yes=1)	1.630	2.996	-5.523**	2.458
Household size	-0.142	0.226	0.586*	0.347
Soil level of maize plot	0.451	2.881	-5.041*	2.958
Winter season	11.996***	2.338	6.804***	2.493
Soil depth of maize plot (cm)	0.208*	0.130	-0.129	0.129
Log per capita per day income (NPR)	3.534	2.665	-0.394	2.830
Income allows to build income	-0.516	4.433	-1.427	5.330
Income=expenses	-2.669	4.053	-0.370	5.449
Sowing by tractor	4.226	3.274	0.521	2.712
Source of seed purchased (co-operative=1)	-0.721	1.940	-5.662**	2.434
Years of hybrid maize cultivation	1.016**	0.497	1.994***	0.370
District (Dang=1)	-1.031	2.855	-6.014*	3.269
Distance to input dealer (km)	-0.619**	0.284	0.276	0.298
Distance to extension offices (km)	0.688**	0.294	0.577**	0.265
Number of irrigations	0.859	0.597	1.352***	0.439
Constant	32.065	20.392	29.801**	14.548
TME1				
Major source of agriculture information (agriculture extension offices =1)	1.246***	0.402		
Major source of agriculture information (co-operative=1)	0.780**	0.361		
Major source of agriculture information (agrovet=1)	-0.303	0.313		
Source of seed purchased (co-operative=1)	2.531***	0.268		
Constant	-1.624***	0.256		

Note: a) ATE = Average Treatment Effect; OME 1 & OME 0 = Outcome models in different treatment levels; TME1 = Treatment model; b) \*\*\*, \*\* and\* refer significance at 1 per cent, 5 per cent and 10 per cent levels respectively.

**Table S2.** SWOT analysis of RH-10 hybrid

<b>Strength</b>	<b>Weakness</b>
<ul style="list-style-type: none"><li>➤ RH-10 is a single cross hybrid and heat-tolerant maize hybrid</li><li>➤ Seed produced and deployed by local seed companies</li><li>➤ Suitable for local cropping pattern</li><li>➤ Local seed production can enable the seed price advantage</li><li>➤ Yield advantage in stress conditions and at par in optimal condition</li><li>➤ Strong linkages between government agriculture extension activities/ PMAMP/co-operative societies for seed marketing</li><li>➤ Recommended for both (rainy and spring) seasons</li><li>➤ Capture considerable market share in spring season</li><li>➤ Stay green character gives green fodder</li></ul>	<ul style="list-style-type: none"><li>➤ Local seed companies need technical support for quality hybrid seed production</li><li>➤ Seed production is not as per the demand</li></ul>
<b>Opportunity</b>	<b>Threats</b>
<ul style="list-style-type: none"><li>➤ High opportunity to capture considerable share in maize seed market in Nepal</li><li>➤ Boost the local seed industry</li><li>➤ Employment generation to contract seed farmers and labors</li><li>➤ Better earning to seed producer farmers</li><li>➤ Scope to increase the area under RH-10</li><li>➤ Reduces the seed expenses of maize farmers</li><li>➤ Minimize the dependency on Indian hybrids</li><li>➤ Increase collaboration between seed companies-extension agencies - co-operatives-farmers</li></ul>	<ul style="list-style-type: none"><li>➤ Demand may affect if seed quality standards are not met as per market</li><li>➤ Introduction to a better alternative hybrid in the market</li></ul>