**Project ES/1034242/1 Farm Scale and Viability. Black Economic Empowerment in sugar production in Mpumalanga, South Africa.**

This file contains descriptions of the 106 variables in the archived SPSS file: ES-1034242 farm survey2013.sav

Where variables have a number of different possible values, these are listed under ‘variable values’ at the bottom of this table.

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| **Variable Information** |
| Variable | Position | Label | Measurement Level | Role | Column Width | Alignment | Print Format | Write Format |
| projname | 1 |  Name of sugarcane irrigation project in Nkomazi, South Africa | Nominal | Input | 26 | Left | A255 | A255 |
| groclass | 2 | grower productivity classification attributed by sugarcane purchasing company | Nominal | Input | 10 | Right | F8 | F8 |
| reggrowe | 3 | Is the respondent the registered grower? | Nominal | Input | 10 | Right | F8 | F8 |
| relgrowe | 4 | What is the respondent's relationship to the registered grower? | Nominal | Input | 10 | Right | F8 | F8 |
| respgend | 5 | respondant is male/female? | Nominal | Input | 10 | Right | F8 | F8 |
| age | 6 | respondent's age | Nominal | Input | 10 | Right | F8 | F8 |
| educ | 7 | What is the highest level of school or college education you have completed? | Nominal | Input | 10 | Right | F8 | F8 |
| addtrain | 8 | Have you had any additional training since school? | Nominal | Input | 10 | Right | F1 | F1 |
| agric | 9 | additional training was in agriculture | Nominal | Input | 10 | Right | F8 | F8 |
| business | 10 | additional training was in business/accountancy | Nominal | Input | 10 | Right | F8 | F8 |
| othertrn | 11 | additional training was in another subject or skill | Nominal | Input | 10 | Right | F8 | F8 |
| official | 12 | do you have a position of responsibility in the project or association? | Nominal | Input | 10 | Right | F8 | F8 |
| nonfminc | 13 | Do you have sources of income outside agriculture? | Nominal | Input | 10 | Right | F8 | F8 |
| pbsctinc | 14 | wage /salary from public sector employment? | Nominal | Input | 10 | Right | F8 | F8 |
| caswge | 15 | casual work? | Nominal | Input | 10 | Right | F8 | F8 |
| commerwg | 16 | wage/salary from a commercial company? | Nominal | Input | 10 | Right | F8 | F8 |
| ownbusin | 17 | your own business? | Nominal | Input | 10 | Right | F8 | F8 |
| remittan | 18 | remittances from other members of your family? | Nominal | Input | 10 | Right | F8 | F8 |
| socgrant | 19 | social grants (pensions etc) | Nominal | Input | 10 | Right | F8 | F8 |
| farmstar | 20 | In which year did you start cultivating this farm? | Scale | Input | 10 | Right | F4 | F4 |
| sugastar | 21 | In which year did you start cultivating sugar? | Scale | Input | 10 | Right | F8 | F8 |
| agricsta | 22 | In which year did you start working in agriculture? | Scale | Input | 10 | Right | F8 | F8 |
| origfarm | 23 | what was the original size of your farm (ha)? | Scale | Input | 10 | Right | F3.1 | F3.1 |
| farmacqn | 24 | How did you obtain this farm? | Nominal | Input | 10 | Right | F8 | F8 |
| landcost | 25 | purchase price (Rands)? | Scale | Input | 10 | Right | F8 | F8 |
| anrent | 26 | annual rent (Rands per year) | Scale | Input | 10 | Right | F8 | F8 |
| addarea | 27 | since you first started with your farm, have you added more areas? | Nominal | Input | 10 | Right | F8 | F8 |
| adare1ha | 28 | additional area 1 (hectares) | Scale | Input | 10 | Right | F3.1 | F3.1 |
| adare1yr | 29 | year in which additional area 1 acquired | Nominal | Input | 10 | Right | F8 | F8 |
| adare1aq | 30 | ADDITIONAL AREA 1 : how did you acquire this area? | Nominal | Input | 10 | Right | F8 | F8 |
| randpha1 | 31 | additional area 1 purchase price per hectare | Scale | Input | 10 | Right | F8.2 | F8.2 |
| adare2ha | 32 | additional area 2 (hectares) | Scale | Input | 10 | Right | F3.1 | F3.1 |
| adare2yr | 33 | year in which additional area 2 acquired | Nominal | Input | 10 | Right | F8 | F8 |
| adare2aq | 34 | ADDITIONAL AREA 2 : how did you acquire this area? | Nominal | Input | 10 | Right | F8 | F8 |
| randpha2 | 35 | additional area 2 purchase price per hectare | Scale | Input | 10 | Right | F8.2 | F8.2 |
| farmredn | 36 | have you reduced the area you farm? | Nominal | Input | 10 | Right | F8 | F8 |
| redareha | 37 | size of area reduction (hectares) | Scale | Input | 10 | Right | F3.1 | F3.1 |
| redareyr | 38 | year of transaction of land reduction | Scale | Input | 10 | Right | F8 | F8 |
| redareds | 39 | AREA REDUCTION: what did you do with this area? | Nominal | Input | 10 | Right | F8 | F8 |
| totlarea | 40 | current total area (hectares) of irrigated fields held by individual grower. | Scale | Input | 10 | Right | F8.1 | F8.1 |
| rrv2012 | 41 | TSB data for RRV total (tons) supplemented by survey RV figures where TSB data is missing. | Scale | Input | 10 | Right | F8.2 | F8.2 |
| rrv2011 | 42 | TSB data for Recoverable value (RRV tons) in cane delivered to mill in 2011 | Scale | Input | 10 | Right | F8.2 | F8.2 |
| rrv2010 | 43 | TSB data for Recoverable value (RRV tons) in cane delivered to mill in 2010 | Scale | Input | 10 | Right | F8.2 | F8.2 |
| rrv2009 | 44 | TSB data for Recoverable value (RRV tons) in cane delivered to mill in 2009 | Scale | Input | 10 | Right | F8.2 | F8.2 |
| rrv2008 | 45 | TSB data for Recoverable value (RRV tons) in cane delivered to mill in 2008 | Scale | Input | 10 | Right | F8.2 | F8.2 |
| tpha2012 | 46 | TSB data for 2012 cane yield tons per ha | Scale | Input | 10 | Right | F8.2 | F8.2 |
| tpha2011 | 47 | TSB data for 2011 cane yield tons per ha | Scale | Input | 10 | Right | F8.2 | F8.2 |
| tpha2010 | 48 | TSB data for 2010 cane yield tons per ha | Scale | Input | 10 | Right | F8.2 | F8.2 |
| tpha2009 | 49 | TSB data for 2009 cane yield tons per ha | Scale | Input | 10 | Right | F8.2 | F8.2 |
| tpha2008 | 50 | TSB data for 2008 cane yield tons per ha | Scale | Input | 10 | Right | F8.2 | F8.2 |
| tpha0810 | 51 | average yield over three years 2008-2010 | Scale | Input | 10 | Right | F8.2 | F8.2 |
| tpha1012 | 52 | average cane yield over three years 2010-2012 | Scale | Input | 10 | Right | F8.2 | F8.2 |
| tphachng | 53 | percent change in average cane yield 2010-2012 compared to 2008-2010 | Scale | Input | 10 | Right | F8.2 | F8.2 |
| statdat | 54 | Cane delivery statement date | Nominal | Input | 26 | Left | A255 | A255 |
| stmtarea | 55 |  area (hectares) of sugar cane from which cane delivery statement is derived and for which costs per hectare were calculated | Scale | Input | 10 | Right | F3.1 | F3.1 |
| rvperc | 56 | RRV total in cane delivery statement | Scale | Input | 9 | Right | F7.2 | F7.2 |
| rvearn | 57 | Gross earnings from cane delivery statement estimated as RV price\*RVPERC | Scale | Input | 10 | Right | F8 | F8 |
| rvearpha | 58 | gross earnings per hectare (RVEARN/STMTAREA) | Scale | Input | 10 | Right | F8 | F8 |
| levypha | 59 | levies (Mpumalanga cane growers, lowveld pest and disease, CTS, Mill Cane committee, Liguguletu and farmers association) paid per hectare | Scale | Input | 10 | Right | F8 | F8 |
| contrpha | 60 | contract (cutting, loading and transport of sugar cane) costs per hectare | Scale | Input | 10 | Right | F8 | F8 |
| iricopha | 61 | Irrigation costs (water, electricity and maintenance) per hectare | Scale | Input | 10 | Right | F8 | F8 |
| frtcopha | 62 | fertilizer cost per ha | Scale | Input | 10 | Right | F8 | F8 |
| pstcopha | 63 | pesticide cost per ha | Scale | Input | 10 | Right | F8 | F8 |
| labpha | 64 | labour cost per ha | Scale | Input | 10 | Right | F8 | F8 |
| euipha | 65 | equipment cost per ha | Scale | Input | 10 | Right | F8 | F8 |
| gm4pha | 66 | gross margin estimated from RVearnings per ha (RVEARPHA) less per hectare cost of levies, contracts, fertilizer, pesticides, irrigation, labour and equipment | Scale | Input | 10 | Right | F8 | F8 |
| loanpha | 67 | loan repayments per ha | Scale | Input | 10 | Right | F8 | F8 |
| gm4subln | 68 | Net earnings per hectare estimated as gross margin per hectare (GM4PHA) minus loan repayments per hectare (loanpha). | Scale | Input | 10 | Right | F8 | F8 |
| netrvern | 69 | net earnings as % of gross earnings (100\*GM4SUBLN/RVEARPHA) | Scale | Input | 10 | Right | F8.1 | F8.1 |
| dedtpc | 70 | total deductions by milling company from cane delivery earnings (contract costs, loan repayments, levies, and 'retention savings' to cover other production costs) | Scale | Input | 10 | Right | F8 | F8 |
| totinc12 | 71 | total gross income from all plots in 2012 for each grower (RRV2012\*3197.32) | Scale | Input | 10 | Right | F8 | F8 |
| rrvcost2 | 72 | total net income across all plots (TOTINC12\*netRVern/100) | Scale | Input | 10 | Right | F8.2 | F8.2 |
| rtoloa | 73 | RTO (land) loans per grower | Scale | Input | 10 | Right | F8 | F8 |
| loa0207 | 74 | loan and interest total 2002-2007 per grower | Scale | Input | 10 | Right | F8 | F8 |
| loa0813 | 75 | loan and interest total2008-13 per grower | Scale | Input | 10 | Right | F8 | F8 |
| ratloa | 76 | ratoon (short-term) loans and interest 2008-13 per grower | Scale | Input | 10 | Right | F8 | F8 |
| reploa | 77 | replanting (6-yr) loans 2008-13 per grower | Scale | Input | 10 | Right | F8 | F8 |
| debt13 | 78 | outstanding balances at Oct2013 per grower | Scale | Input | 10 | Right | F8 | F8 |
| fertpha | 79 | BAGS OF FERTILIZER PER HA | Scale | Input | 10 | Right | F8.2 | F8.2 |
| mnlabcos | 80 | MEAN ESTIMATED LABOUR COST for each grower | Scale | Input | 10 | Right | F8 | F8 |
| pctmplab | 81 | Percentage of labour cost for temporary labour | Scale | Input | 10 | Right | F8 | F8 |
| pcprmlab | 82 | Percentage of labour cost for permanent employees | Scale | Input | 10 | Right | F8 | F8 |
| pworkno | 83 | number of permanent workers | Nominal | Input | 9 | Right | F3 | F3 |
| pworkco | 84 | cost per month per permanent worker (rand) | Scale | Input | 10 | Right | F8 | F8 |
| hapwork | 85 | hectares per permanent worker | Scale | Input | 10 | Right | F8.2 | F8.2 |
| templu | 86 | temporary labour units per hectare (excl contract labour) | Scale | Input | 10 | Right | F8.2 | F8.2 |
| costtwrk | 87 | TOTAL COST OF TEMPORARY WORKERS | Scale | Input | 10 | Right | F8 | F8 |
| contrlab | 88 | cost of contract labour (excludes cane cutting ) | Nominal | Input | 10 | Right | F8 | F8 |
| pwkirrig | 89 | irrigation: moving sprinklers etc performed by permanent workers? | Nominal | Input | 10 | Right | F8 | F8 |
| pwkweed | 90 | weeding with hoe performed by permanent workers? | Nominal | Input | 10 | Right | F8 | F8 |
| pwkpest | 91 | pesticide spraying performed by permanent workers? | Nominal | Input | 10 | Right | F8 | F8 |
| pwktrac | 92 | tractor driving performed by permanent workers? | Nominal | Input | 10 | Right | F8 | F8 |
| twkirrig | 93 | irrigation: moving sprinklers etc performed by temporary workers? | Nominal | Input | 10 | Right | F8 | F8 |
| twkweed | 94 | weeding with hoe performed by temporary workers? | Nominal | Input | 10 | Right | F8 | F8 |
| twkpest | 95 | pesticide spraying performed by temporary workers? | Nominal | Input | 10 | Right | F8 | F8 |
| twkharv | 96 | harvesting performed by temporary workers? | Nominal | Input | 10 | Right | F8 | F8 |
| pwkoth | 97 | other jobs done by permanent workers | Nominal | Input | 26 | Left | A255 | A255 |
| twkoth | 98 | other jobs done by temporary workers | Nominal | Input | 26 | Left | A255 | A255 |
| irigtype | 99 | type of irrigation used | Nominal | Input | 10 | Right | F8 | F8 |
| pumpbr | 100 | during last year for how many weeks was your irrigation interrupted by pump breakdown? | Nominal | Input | 8 | Right | F2 | F2 |
| irriprob | 101 | what other problems have prevented you from giving enough irrigation to your sugar fields? | Nominal | Input | 26 | Left | A255 | A255 |
| othagact | 102 | apart from sugar, did you undertake other farming activities in 2012? | Nominal | Input | 10 | Right | F8 | F8 |
| othag1 | 103 | other agricultural activity | Nominal | Input | 26 | Left | A180 | A180 |
| oth1earn | 104 | approx annual gross earnings form non-sugarcane agriculture | Scale | Input | 10 | Right | F8 | F8 |
| oth1tcos | 105 | approx total cost of non-sugarcane agriculture | Nominal | Input | 10 | Right | F8 | F8 |
| oth1area | 106 | area occupied (ha) by non-sugarcane agriculture | Scale | Input | 10 | Right | F3.1 | F3.1 |
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| **Variable Values** |
| Value | Label |
| groclass | 1 | high |
| 2 | middle |
| 3 | low |
| reggrowe | 1 | yes |
| 2 | no |
| relgrowe | 1 | son/daughter/grandchild? |
| 2 | wife/husband? |
| 3 | brother/sister? |
| 4 | other |
| respgend | 0 | female |
| 1 | male |
| age | 1 | less than 20 years |
| 2 | 20-30 years |
| 3 | 30-40 years |
| 4 | 40-50 years |
| 5 | more than 50 years |
| educ | 1 | primary |
| 2 | secondary |
| 3 | tertiary |
| addtrain | 1 | yes |
| 2 | no |
| official | 1 | no |
| 2 | member of committee |
| 3 | other project responsibility |
| nonfminc | 0 | no |
| 1 | yes |
| farmacqn | 1 | allocated (by chief) |
| 2 | inherited |
| 3 | purchased |
| 4 | purchased with loan |
| 5 | leased/rented |
| addarea | 1 | yes |
| 2 | no |
| adare1aq | 1 | allocated (by chief) |
| 2 | inherited |
| 3 | purchased |
| 4 | purchased with loan |
| 5 | leased/rented |
| adare2aq | 1 | allocated (by chief) |
| 2 | inherited |
| 3 | purchased |
| 4 | purchased with loan |
| 5 | leased/rented |
| farmredn | 1 | yes |
| 2 | no |
| redareds | 1 | gift to a family member |
| 2 | gift to non-family |
| 3 | sold it |
| 4 | rented it out |
| irigtype | 1 | sprinkler |
| 2 | drip |
| 3 | centre pivot |
| 4 | sprinkler and drip |
| othagact | 1 | yes |
| 2 | no |