

The Potency of Livestock Subsector Development in Banyumas Regency Central Java

(Potensi Pengembangan Subsektor Peternakan di Kabupaten Banyumas Jawa Tengah)

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Abstract. Livestock subsector is one of source of economic growth on local or regional area. Therefore, government has to concern increasing the production intensity of livestock subsector. Banyumas Regency is one of region that has potency as center of livestock production in Central Java. The objectives of research were: (1) to know population target of livestock subsector superior commodity in Banyumas Regency for five years ahead; (2) to identify basis and no basis commodity; (3) to know the distribution of basis commodity; (4) to know area specialization of basis commodity; (5) to identify area growth in region; and (6) to know specialization of basis commodity in area. Result of research showed that: (1) the production increased on all livestock subsector for five years ahead and chicken had the biggest production level; (2) chicken was the biggest basis commodity in 17 subdistricts, then Sumpiuh and Kedungbanteng had the biggest amount of basis commodity, i.e. 6 basis commodities; (3) almost all basis commodity tend to spread randomly in several subdistrict especially chicken and goat; (4) every basis commodity in every subdistrict had positive coefficient specialization, thus, until now there were no subdistrict which specialized for certain commodity; (5) subdistricts that became basis commodity for chicken, sheep and goat were Lumbrir, Jatilawang, Rawalo, Kebasen, Kemranjen, Tambak, Patikraja, Karanglewas, Kedungbanteng, and South Purwokerto; and (6) subdistricts that became basis commodity specialization of chicken, sheep and Goat were Lumbrir, Jatilawang, Rawalo, Tambak, Patikraja and Kedungbanteng.

Key Words: Banyumas, livestock subsector, basis commodity, forecasting method

Background

The development of agriculture in the whole, i.e. program of intensification, intensification, rehabilitation, until diversification and one subsector of agriculture that had priority to be developed were livestock and fishery (Saragih, 2001). Livestock subsector, especially livestock in large scale was one source of economic growth locally or regionally (Syahrani, 2001). Therefore, government had to concern in increasing the production intensity of livestock subsector (King, 2007).

Superior sector was sector that has comparative and competitive advantages with similar sector from other region and also could give benefit to area (Tumenggung, 1996 in Syarifudin, 2003). Refers to Hendayana (2003), deciding the national and regional superior commodity was initial step in developing

agriculture efficiently to reach comparative and competitive advantages toward global trade. Efforts to have efficient agriculture development could be reached by developing commodity that has comparative advantages from supply and demand aspects (Nugroho, 1999).

According to Sudardjat (1999), vision of livestock development was to implement the healthy and productive society through the resistant livestock development based on local resources; and the missions were: (1) to provide feed that has good quality and enough quantity; (2) to empower human resource of livestock in creating high value product in domestic either overseas; (3) to create economical opportunities in increasing livestock revenue; (4) to create work field in livestock area; and (5) to preserve and use the

supporting nature for livestock. There were six program of developing livestock sector to reach vision and mission statement, and one of them was developing the area based on superior livestock. Program of developing area with superior livestock orientation was relevant with agriculture development paradigm which focusing on efficiency concept to reach comparative and competitive advantages in facing trade globalization. The questions were how to measure the superior commodity and the spreading of such superior commodity?

Livestock subsector is one of main priority subsector of the agriculture's growth. On 2003, livestock subsector was fully normal from crisis of 1998-1999 (Board of Research and Development of Agriculture Department, 2006). On 2000-2003, the increasing rate of chicken and chicken for egg were 23.4 and 10.27 percent per year, somehow, in crisis had decreasing production, i.e. 28.23 and 8.92 percent per year (Deptan, 2007).

Banyumas Regency is one of region that has potency as center of livestock production in Province of Central Java. It is from the strategic location between Province of West Java and East Java; therefore, supply access of livestock production to cities in those provinces is easier and cheaper. Besides that, the climate and texture in most of area in Banyumas Regency are suitable for large scale of livestock (Dispertan of Banyumas Regency, 2007).

Based on data of livestock subsector in Banyumas Regency in 2008 (BPS of Banyumas Regency, 2007) could be known the biggest amounts for every sub district were: 1) cows for milk and cows for meat were in Baturraden sub district, i.e. 726 and 737; 2) oxes were in Ajibarang sub district, i.e. 297; 3) horses were in Ajibarang sub district, i.e. 13; 4) pigs were in Baturraden sub district, i.e. 2,365; 5) sheeps were in Wangon sub district, i.e. 1,313; 6) local chickens were in Cilongok sub district, i.e. 102,853; 7) chickens were in Cilongok sub district, i.e. 421,000; 8) chickens were in Ajibarang sub district, i.e. 4,360. These data could indicated that those sub districts had superior potency of livestock to be developed (Bappeda of Banyumas Regency, 2008).

The objectives of research were: 1) to know the population target of five years superior

commodity of livestock in Banyumas Regency; 2) to identify basis and no basis commodity; 3) to know the spread of basis commodity; 4) to know the area specialization of basis commodity; 5) to identify the area growth in area; and 6) to know the specialization of basis commodity in area.

Research Framework

Research method used was survey on case of Banyumas Regency in developing livestock commodity. Research was conducted in July until December 2008. Data used was secondary data from Department of Agriculture of Banyumas Regency, Board of Research and Development of Banyumas Regency, Board of Statistical Center of Banyumas Regency and others. Analysis methods used were:

Forecasting of livestock subsector production

Forecasting method used to predict the production target in future years (Miller *et al.*, 2001). This method would produce projection of livestock commodity for every sub district during five years ahead so the five years population target of superior livestock sub sector in Banyumas Regency could be reached.

$$P_n = P_0 (1 + r)^n \dots\dots\dots (1)$$

Whereas,

P_n = Observation in last year
 P_0 = Observation in first year
 r = Rate of growth
 n = Observation period

Location Quotient (LQ)

LQ used to identify the livestock basis and non basis commodity in one area (Miller *et al.*, 2001). This method was comparing the ability of one area in producing certain commodity with other area for similar commodity. This meaning could be formulated likewise (Ma'mun and Karyani, 2000):

$$LQ = \frac{(S_i / N_i)}{(S / N)} \text{ or } LQ = \frac{(S_i / S)}{(N_i / N)} \dots\dots (2)$$

Whereas,

LQ = Location Quotient of livestock

- commodity
- Si = The amount of livestock commodity production i in village level
- S = The total amount of livestock commodity production i in village level
- Ni = The amount of livestock commodity production i in sub district level
- N = The total amount of livestock commodity production i in village level

LQ indicates:

- LQ > 1, Commodity is a basis commodity
- LQ < 1, Commodity is a no basis commodity
- LQ = 1, Commodity only could fulfill need of owned area

Localization Coefficient (α)

This analysis used to know the spread of basis commodity in one area so the agglomeration level of that commodity could be known (Siregar, 2003). Localization coefficient reached by summing the positive α value of area (Ma'mun and Karyani, 2000).

$$\alpha = \left\{ \left(\frac{Si}{Ni} \right) - \left(\frac{S}{N} \right) \right\} \dots\dots\dots (3)$$

Whereas,

- α = Localization Coefficient
- Si = The amount of livestock commodity production i in village level
- S = The total amount of livestock commodity production i in village level
- Ni = The amount of livestock commodity production i in sub district level
- N = The total amount of livestock commodity production i in village level

α indicates:

- $\alpha = 1$, Localization of livestock commodity is spread in
- $\alpha < 1$, Localization of livestock commodity is spread out

Specialization Coefficient (β)

This analysis used to know the area specialization of basis commodity (Siregar, 2003). Specialization coefficient reached by

summing the positive β value of area (Ma'mun and Karyani, 2000).

$$\beta = \left\{ \left(\frac{Si}{S} \right) - \left(\frac{Ni}{N} \right) \right\} \dots\dots\dots (4)$$

Whereas,

- B = Specialization Coefficient
- Si = The amount of livestock commodity production i in village level
- S = The total amount of livestock commodity production i in village level
- Ni = The amount of livestock commodity production i in sub district level
- N = The total amount of livestock commodity production i in village level

β indicates:

- $\beta \geq 1$, There is livestock commodity which specialized in one area
- $\beta < 1$, There is no livestock commodity which specialized in one area

Shift and Share

This analysis used to identify the area growth or sector in one area. The analysis consists of four components (Anwar and Hadi, 1996), i.e.

a. Regional Growth (PR)

Regional Growth (PR) used to know the growth of livestock commodity aggregately in sub district level. The positive PR shows the commodity has significant progress and vice versa (Ma'mun and Karyani, 2000).

$$PR = \left(\frac{Nt}{Np} - 1 \right) \dots\dots\dots (5)$$

Whereas,

- Nt = The total amount of livestock commodity production in sub district level for year t (last)
- Np = The total amount of livestock commodity production in sub district level for year p (beginning)

b. Proportional Growth (PPij)

Proportional Growth used to measure the relative change, i.e. the increasing or decreasing of livestock commodity in village (area) compare to sub district (region). The PPij formula is:

$PPij = (\% \text{ of production in area} - \% \text{ of change in total production}) \times (\text{production in area at } t-1)$
..... (6)

PPij indicates:

- PPij > 0, The growth of livestock commodity in one area is faster than others
PPij < 0, The growth of livestock commodity in one area is slower than others

c. Growth of Potential Area (PPWij)

Growth of Potential Area used to measure competitiveness of livestock commodity in one area compare to i commodity in pointed area. The PPWij formula is:

$PPWij = (\% \text{ of change in total production from production in area} - \% \text{ of change in total production}) \times (\text{production in area at } t-1)$
..... (7)

PPWij indicates:

- PPWij > 0, Livestock commodity in area level has higher competitiveness than others in different area
PPWij < 0, Livestock commodity in area level has lower competitiveness than others in different area

d. Net Growth (PBij)

PBij is derived from PPij dan PPWij, i.e.

$PBij = PPij + PPWij$ (8)

Whereas,

- PBij = Net growth of i commodity in j area
PPij = Proportional growth of i commodity in j area
PPWij = Growth of potential area of i commodity in j area

PBij indicates:

- PBij > 0, The growth of livestock commodity in one area is fast
PBij < 0, The growth of livestock commodity in one area is slow

Super Impose

Super Impose used to know the specialization of basis commodity in area, so superior commodity which potential to be developed in one area could be known. Superiority of commodity consists of certain criteria which could be used to decide superior commodity in one area (Ma'mun and Karyani, 2000). Refers to Soedjito (1976), those criteria are:

- No superior, if cell/box is empty (no +)
- Less superior, if cell/box has +
- Adequate superior, if cell/box has ++
- Very superior, if cell/box has +++
- Most superior, if cell/box has ++++

Result and Discussion

Five Years Population Target of Superior Livestock Sub Sector in Banyumas Regency

Based on forecast of livestock commodity for every sub district during five years, we could know five years population target of superior livestock sub sector in Banyumas Regency (see Table 1). Table 1 showed that commodity that has biggest production level was chicken, i.e. 10,187,730 in 2009 and tended to increase for five years ahead to 19,828,684. The increasing of production also happened for all livestock commodity five years ahead so it was a chance to increase the local economic growth and people welfare.

Identification of Basis and No Basis

Based on Location Quotient (LQ) could be known that every developing area in Banyumas Regency has certain basis commodity of livestock subsector. The amount of basis intended was different (Hendayana, 2003). The biggest amount of basis were chicken in 17 sub district, sheep in 16 sub district and goat in 13 sub district. Sub districts that have biggest amount of basis commodity were Sumpiuh and Kedungbanteng, i.e. 6, while Sumbang was sub district that had less basis commodity, i.e. 1 (App. 2).

Table 1. The five years population target of superior livestock sub sector in Banyumas Regency

Commodity	Years				
	2009	2010	2011	2012	2013
Cow for meat	20.462,20	20.959,90	21.457,50	21.955,20	22.452,90
Cow for milk	1.875,43	1.884,14	1.932,86	1.961,57	1.990,29
Ox	3.250,75	3.319,43	3.488,11	3.556,79	3.625,46
Horse	296,82	298,14	301,00	303,60	306,00
Goat	339.896,00	360.253,00	380.611,00	400.968,00	420.980,46
Sheep	27.953,70	29.403,30	30.852,90	32.302,50	33.860,55
Pig	5.492,96	5.817,14	6.141,32	6.465,50	6.994,71
Local Chicken	952.443,72	960.394,88	965.364,00	971.979,09	975.099,92
Chicken	10.187.730,00	11.474.932,00	13.769.919,00	16.523.903,00	19.828.684,00
Duck	8.330,32	8.774,47	9.028,00	9.626,32	10.148,74
Rabbit	8.330,32	8.396,96	8.464,14	8.531,85	8.600,10

Source: Secondary data, processed (2009)

Spreading of Basis Commodity in every Sub District

Localization Coefficient (α) showed that most of all basis commodity of livestock subsector tended to spread randomly in few sub districts, especially chicken and goat, i.e. 0.168002861 and 0.184771489. This localization would had market oriented and production factors supported (Syarifudin, 2003). It would become advantage for that area to fulfill their owned cattle need.

Area Specialization of Basis Commodity

Specialization Coefficient (β) showed that every basis commodity in every sub district had positive specialization coefficient. The positive specialization level gave an argument that basis commodity had potency as specialization commodity for that area (Rachmat, 2005). Thus, there were no sub district specialized for certain commodity. It showed by $\beta < 1$ in all area. Therefore, it needed support from other sector in becoming basis commodity as one commodity specialization for that area (Tobari *et al.*, 2006). See App. 1.

Identification of Area Growth in Area

Refers to Simanjuntak (1992) also Ma'mun and Karyani (2000), there were some approaches in shift and share analysis, i.e. Proportional Growth (PPij) and Growth of Potential Area (PPWij). It was not a must for commodity which had positive growth as a basis commodity toward to that sub district (Ropingi, 2004). Sub districts that became basis commodity of chicken, sheep and goat were Lumbir, Jatilawang, Rawalo, Kebasen, Kemranjen, Tambak, Patikraja, Karanglewas,

Kedungbanteng, and South Purwokerto. Nevertheless, not all of sub districts had good growth and competitiveness.

Specialization of Basis Commodity in Area

The area development which based on commodity basis and superior commodity was a must (Anwar and Hadi, 1996; Rachmat, 2005; and Husaini, 2006). Rusastra *et al.* (2003); Saragih (1999) stated that the agropolitan development had been increasing the farmer income, thus, farmer income still low absolutely. It was happened because the resources limitation in gaining superior commodity. Super impose analysis could be used to know the developing superior commodity in an area. Areas that became the specialization of basis commodity for chicken, sheep, and goat were Lumbir, Jatilawang, Rawalo, Tambak, Patikraja dan Kedungbanteng sub districts. This result could be used to determine the superior commodity of livestock subsector in Banyumas Regency.

Conclusions

The increasing production of livestock subsector in Banyumas Regency was in all commodity during five years ahead and commodity which had largest amount production was chicken. The largest amount of basis commodity was chicken in 17 sub districts and Sumpiuh and Kedungbanteng Sub districts had largest amount of basis commodity. Most of basis commodities of livestock subsector tend to spread randomly in certain sub districts especially for chicken and goat.

Every basis commodity in sub district had positive specialization coefficient, thus there were no sub district which specialized in certain commodity. Areas of basis commodity of chicken, sheep and goat were Lumbr, Jatilawang, Rawalo, Kebasen, Kemranjen, Tambak, Patikraja, Karanglewas, Kedungbanteng, and South Purwokerto Sub districts. Areas of basis commodity specialization of chicken, sheep and goat were Lumbr, Jatilawang, Rawalo, Tambak, Patikraja, and Kedungbanteng.

References

- Anwar A dan S Hadi. 1996. Perencanaan pembangunan wilayah dan pedesaan. *Jurnal Prisma* 25: 49-62.
- Board of Research and Development of Agriculture Department, 2006. Center of social economic analysis and agriculture faculty. *Jurnal Forum Penelitian Agro Ekonomi* 24(2): 67-89.
- [Bappeda] Board of Regional Development Planning of Banyumas Regency, 2008. *Laporan Akhir Studi Kawasan Agropolitan Kabupaten Banyumas*. Bappeda Banyumas Regency, Purwokerto. 124 p.
- [BPS] Board of Statistical Center of Banyumas Regency, 2007. Banyumas in Number. Board of Statistical Center of Banyumas Regency, Purwokerto.
- [Deptan] Department of Agriculture, 2007. Input Output Agriculture Products. Department of Agriculture, Jakarta.
- [Dispartan] Board of Agriculture of Banyumas Regency, 2007. Report of Food crop Commodity in 2002-2007. Board of Agriculture of Banyumas Regency, Purwokerto. Pp.143-199.
- Hendayana R. 2003. Aplikasi metode location quotient dalam penentuan komoditas unggulan nasional. *J Informatika Pertanian*.12(1):1-21.
- King G. 2007. Livestock in the future. *Animal Sciences* 6:109-130.
- Ma'mun D dan T Karyani. 2000. Pemahaman Potensi, Analisis dan Perencanaan Wilayah. In: Pelatihan Pemahaman Aspek Sosial Budaya Masyarakat dalam Perencanaan dan Penerapan Teknologi. Cooperation between Research and Development of Agriculture Department and Faculty of Agriculture of Padjadjaran University Bandung; Bandung, 24 March 2000. Pp.1-18.
- Miller MM, JL Gibson and GN Wright. 2001. Location Quotient Basic Tool for Economic Development Analysis. *Economic Dev Rev* 9(2): 65-75.
- Nugroho I. 1999. Pengembangan Ekonomi Pedesaan Menyongsong Otonomi Daerah. Pp.103-113.
- Rachmat H. 2005. Ternak unggulan di Jawa dan luar Jawa: Implikasinya bagi perdagangan ternak. *J Sosial Ekonomi Pertanian dan Agribisnis* 5(9): 1-11.
- Ropingi. 2004. Analisis keterkaitan sektor pertanian dalam pembangunan wilayah kabupaten Boyolali. *Jurnal Penduduk dan Pembangunan* 4(2): 36-51. Penerbit Pusat Penelitian Kependudukan LPPM UNS, Surakarta.
- Rusastra IWH, Khairina S Ade, K Sejati, dan D Hidayat. 2003. Kinerja dan perspektif pengembangan model agropolitan dalam mendukung pengembangan ekonomi wilayah berbasis agribisnis. *J Sosial Ekonomi Pertanian dan Agribisnis* 5(4): 1-21.
- Saragih B. 1999. Pembangunan Agribisnis Sebagai Penggerak Utama Ekonomi Daerah di Indonesia. In: Pengembangan Agropolitan dan Agribisnis serta Dukungan Prasarana dan Sarana. *Prosiding Seminar Nasional. Department of Agriculture*; Jakarta, 3 August 1999.
- _____. 2001. Tantangan dan Strategi Pengembangan Agribisnis Indonesia. *Jurnal Agribisnis* 1(2): 102-112.
- Siregar M. 2003. Analisis daya saing usahatani kedelai di DAS Brantas. *J Agro Ekonomi* 21(1):50-71.
- Soedjito B. 1976. Kedudukan Wilayah (Daerah) dalam Sistem Ekonomi yang Lebih Luas. Directorate General for Internal Affairs and Department of Planology ITB, Bandung.
- Sudardjat S. 1999. Wujudkan Peternakan Tangguh Berbasis Sumberdaya Lokal. *Poultry Indonesia* 233.
- Syahrani 2001. Penerapan Agropolitan dan Agribisnis dalam Pembangunan Daerah. *Jurnal Frontir* 33:1-11. <http://www.penataanruang.net/taru/makalah/presentasi.html>. [3 March 2009].
- Syarifudin I. 2003. Studi Pemilihan Subsektor Jasa Unggulan dalam Rangka Mendukung Kota Bandung sebagai Kota Jasa. *Jurnal INFOMATEK* 5(3): 23-130.
- Tobari, David dan Turino. 2006. Pengembangan Data Informasi dan Penyusunan Profil Komoditas Unggulan Pertanian dan Peternakan. Board of Agriculture and Livestock of Cilacap Regency, Cilacap. Pp.34-41.

Appendix 1. Specialization coefficient of agriculture in Sub Districts of Banyumas Regency 2008

No.	Sub districts	Food crops		Vegetables		Fruits		Upland Farming		Livestock	
		Production	Income	Production	Income	Production	Income	Production	Income	Production	Income
1	Lumbir	0,434417	0,202209	0,566311	0,615702	0,384807	0,500015	0,490900	0,432146	0,137914	0,262295
2	Wangon	0,090463	0,047487	0,542158	0,666660	0,413393	0,437456	0,138909	0,070527	0,248493	0,280472
3	Jatilawang	0,032566	0,034982	0,383819	0,379480	0,448412	0,495126	0,070836	0,042485	0,164734	0,318049
4	Rawalo	0,192336	0,049174	0,572375	0,566448	0,367236	0,495968	0,040418	0,044601	0,158694	0,311222
5	Kebasen	0,058140	0,026227	0,326268	0,310113	0,235999	0,342690	0,088049	0,061631	0,197170	0,295537
6	Kemranjen	0,090673	0,040538	0,608109	0,585501	0,342912	0,379331	0,235820	0,147398	0,125759	0,210107
7	Sumpiuh	0,027140	0,027485	0,560296	0,659970	0,235768	0,258347	0,041539	0,083744	0,140653	0,259191
8	Tambak	0,193680	0,054826	0,431890	0,394887	0,319542	0,393397	0,144701	0,348670	0,135362	0,260690
9	Somagede	0,318485	0,197612	0,644208	0,756523	0,262227	0,363033	0,133441	0,323296	0,190350	0,343614
10	Kalibagor	0,026985	0,074433	0,746054	0,607670	0,696393	0,680818	0,562809	0,303353	0,143176	0,268311
11	Banyumas	0,061116	0,022929	0,076120	0,035206	0,330138	0,457310	0,079868	0,046860	0,159274	0,310750
12	Patikraja	0,184607	0,049448	0,764015	0,873907	0,398094	0,564499	0,092983	0,060265	0,113402	0,207936
13	Purwojati	0,291494	0,160139	0,624394	0,499521	0,148380	0,223031	0,064692	0,053545	0,178572	0,323320
14	Ajibarang	0,154873	0,044251	0,440179	0,554254	0,558393	0,562037	0,065363	0,034740	0,125857	0,176009
15	Gumelar	0,425073	0,190406	0,572320	0,536011	0,509675	0,532561	0,072175	0,042932	0,207303	0,355972
16	Pekuncen	0,221974	0,063788	0,574127	0,815537	0,664368	0,647953	0,092605	0,039896	0,156357	0,284590
17	Cilongok	0,080947	0,032880	0,500967	0,464257	0,328124	0,386982	0,102435	0,063254	0,173774	0,329634
18	Karanglewes	0,143784	0,044351	0,502132	0,549799	0,303874	0,341522	0,027959	0,033780	0,185903	0,294279
19	Kedungbanteng	0,243249	0,071412	0,814817	0,851088	0,218180	0,208462	0,562809	0,303353	0,148254	0,277584
20	Baturaden	0,238958	0,084128	0,702090	0,529683	0,261964	0,289916	0,539305	0,386866	0,161721	0,305838
21	Sumbang	0,164707	0,066269	0,384472	0,375356	0,348148	0,405217	0,539305	0,311530	0,227371	0,364402
22	Kembaran	0,233861	0,108750	0,505313	0,446918	0,584139	0,675201	0,818283	0,961620	0,148363	0,270465
23	Sokaraja	0,038869	0,016186	0,481719	0,414487	0,500197	0,534538	0,819396	0,962946	0,191555	0,249489
24	SouthPurwokerto	0,204394	0,059702	0,772142	0,821913	0,105118	0,575090	0,819396	0,962946	0,102598	0,166671
25	West Purwokerto	0,226136	0,066357	0,811420	0,817312	0,609745	0,654360	0,819396	0,962946	0,134231	0,162955
26	East Purwokerto	0,250401	0,063653	0,567120	0,637469	0,496999	0,504708	0,819396	0,962946	0,606081	0,510740
27	NorthPurwokerto	0,234153	0,064675	0,656894	0,704123	0,401040	0,487177	0,819396	0,962946	0,126343	0,195317

Source: Secondary data, processed (2009)

Appendix 2. Basis and superior commodity of agriculture sector in Sub Districts of Banyumas Regency 2008

No.	Sub Districts	Commodity	
		Basis	Superior
1	Lumbir	Goat, sheep, local chicken, chicken	Goat, sheep, chicken
2	Wangon	Cow, ox	-
3	Jatilawang	Goat, sheep, local chicken, chicken, duck	Goat, sheep, local chicken, chicken, duck
4	Rawalo	Goat, sheep, local chicken, chicken	Goat, sheep, chicken
5	Kebasen	Goat, sheep, local chicken, duck	Goat, sheep
6	Kemranjen	Ox, goat, sheep, local chicken, duck	Ox, goat, sheep
7	Sumpiuh	Ox, goat, sheep, local chicken, chicken, duck	Ox, goat, local chicken, chicken, duck
8	Tambak	Goat, sheep, local chicken, chicken, duck	Goat, sheep, local chicken, chicken, duck
9	Somagede	Local chicken, chicken	-
10	Kalibagor	Goat, sheep, local chicken, chicken, duck	Goat, sheep, chicken, duck
11	Banyumas	Pig, goat, sheep, local chicken, chicken, duck	Sheep, local chicken, chicken, duck
12	Patikraja	Goat, sheep, local chicken, chicken	Ox, goat, sheep, local chicken, chicken
13	Purwojati	Goat, chicken	Goat, chicken
14	Ajibarang	Cow, ox	Cow
15	Gumelar	Goat, sheep, chicken	Sheep
16	Pekuncen	Ox, local chicken, chicken	Ox
17	Cilongok	Local chicken, chicken	-
18	Karanglewas	Goat, sheep, chicken, duck	Sheep, chicken, duck
19	Kedungbanteng	Ox, goat, sheep, local chicken, chicken, duck	Ox, goat, sheep, local chicken, chicken, duck
20	Baturaden	Goat, sheep, local chicken, chicken	Goat, sheep, chicken
21	Sumbang	Chicken	Chicken
22	Kembaran	Local chicken, chicken	-
23	Sokaraja	Cow, chicken, duck	Chicken, duck
24	South Purwokerto	Goat, sheep, chicken	Goat, sheep, chicken
25	West Purwokerto	Cow, goat, sheep, chicken	Cow, chicken
26	East Purwokerto	Cow, pig	Pig
27	North Purwokerto	Goat, sheep, chicken, duck	Goat, sheep, chicken, duck

Source: Secondary data, processed (2009)