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THE INTEGRATION OF FAITH AND VALUES
IN THE
TEACHING AND PRACTICE OF AGRICULTURE

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THESIS

Through agriculture people can be taught true Christian love and be drawn closer to God through Jesus Christ. Since agriculture is a human activity that affects a very large number of people in a given nation, the way it is taught, presented and practiced will have a wide influence on the people. Such influence can be negative and lead people to un-Godly behavior such as the production, handling and consumption of unhealthy and addictive products like tobacco, alcohol, caffeine and marijuana, or the production and consumption of unclean animal products such as pork. The influence can also be positive by producing clean foods and materials thereby enhancing the health of the population who can then worship God with clear minds, study the Word and discover His will for mankind. This calls for the proper and complete integration of faith and values in the teaching and hence the practice of agriculture. White (1948) notes that "If the land is cultivated, it will, with the blessing of God, supply our necessities. We should work the soil cheerfully, hopefully, gratefully, believing that the earth holds in her bosom rich stores for the faithful worker to garner stores richer than gold or silver." (6T, p. 178) It is by faith that a farmer plants the seed or inseminates a female animal, and hope the seed will germinate and grow to maturity and yield. This faith needs to be strengthened, developed, and properly directed. The integration of Christian faith with learning and agricultural practice will strengthen this faith and amplify, in man, the need to depend on God for livelihood and salvation.

INTRODUCTION

A number of definitions of agriculture have been developed and published. The word agriculture according to Morris (1971) encompasses two words AGRI and CULTURE. The words agri from ager (Latin) or agros (greek) means land while culture or cultura (Latin) means cultivation. Simply put, agriculture, therefore, means the cultivation of land. Morris (1971) defines agriculture as the science, art and business of cultivating the soil, producing crops and raising livestock useful to man. Agriculture, therefore, is a human activity carried out by people on land for their own benefit. Mosher (1966) defines agriculture functionally as a special kind of production based on the growth process of plants and animals. Farmers manage and stimulate plant and animal growth on farms, while the production activities on each farm are a business in which costs and returns are important.

As a human activity, agriculture is old and affects the lives of every individual either through involvement in aspects

of production, consumption of agricultural or food products, employment or just living on the land. Man has been involved in agriculture from the beginning of creation in the Garden of Eden (Genesis 1:8). Noah was the first tiller of the soil, he planted a vineyard (Genesis 9:20). Hence man will need to be creatively involved in agriculture for the future, if only, to feed its growing numbers, i.e. continue to develop agriculture.

Agricultural development is a social product resulting from the activities of every person including farmers and farm families, lawmakers, highway engineers, merchants, manufacturers, research workers, teachers, veterinarians, editors, and every citizen who participates in electing public officials and influencing the laws of his country (Mosher, 1966). From the foregoing discussion, we see that agricultural and human development are inseparable. Wrigley (1981) states that agriculture must not only provide food, but, in most tropical countries, the cash on which the economy is based.

The goal of this paper is to attempt to demonstrate how to produce, through our training, Christian agriculturalists who have the necessary knowledge and skills to make a positive contribution to the development of agriculture, and to suggest how the integration of faith and value in the teaching and practice of agriculture could be achieved in the Christian college. Such integration is essential for the achievement of the said goal. The specific objectives include:

1. To study the integration of faith and agriculture and understand more clearly God's intentions for men in developing agriculture while, at the same, time preserving the environment including the land. Adam was to work or tend and care for the Garden of Eden (Genesis 1:15).
2. To describe the role of agriculture in the curriculum of Christian colleges and other institutions of learning.
3. To collect and discuss available information on the integration of faith in the agricultural curriculum development and policy decision making in Christian colleges and other institutions of learning.

Questions have been asked like, should Christian institutions teach or include in their curriculum courses on the production of coffee, tea, tobacco, swine (pigs) or rabbits? What will be the consequences of omitting them to the graduates of these institutions especially when they seek employment outside the church and as they interact with farmers, some of whom grow these crops or produce these commodities? Should Adventist Christian farmers produce these commodities especially where these are the main cash earners? Another, even more fundamental question asked is whether agricultural training is not outdated and irrelevant at colleges especially in the industrialized (developed)

countries. This questions will be addressed in another paper. It is my challenge to begin to develop and provide ideas that could be used to answer these and other questions. The concepts developed in this paper have general application but may be of more consequence in the developing and tropical countries where a large percentage of the population are engaged in agricultural production and also live on the farms.

WHY AGRICULTURAL EDUCATION?

Agriculture is an essential enterprise in most countries where it can be practiced. National economic development is generally influenced by and in some cases dependent upon agricultural development. Emphasizing this fact, Thomas Jefferson felt deeply about the importance of agriculture as an occupation, economic force and as part of formal education. He is reported to have asserted that "No nation will long survive the decay of its agriculture." (Sutherland 1915). Youdeowei and Akinwumi (1986) stated that agriculture has always played a leading role in people's lives in tropical countries where at least seventy-five percent of the total labor force is engaged in agriculture. The economies of many tropical countries are based on agricultural crops such as coffee, tea, tobacco, and others. These authors also emphasize that the greatest challenge which faces developing countries today is to eliminate hunger and overcome poverty. This challenge is greatest in the rural areas where employment and supplies are not so readily available as in towns.

The many contributions of agriculture to a nation include the provision of food, employment to the people both directly on the land as in the case of farmers, their families, and the farm labor force, or indirectly in agriculturally-based industries, corporations and statutory boards, foreign exchange and government revenue through export earnings and taxes and raw materials for industries. Agricultural development is needed in almost every country of the world (Mosher, 1966). The objective of agricultural development according to Wrigley (1981) should be to provide a better life for the people, not just to ensure they do not die from starvation. Agricultural advances have allowed man to produce more food of better quality than ever before thought imaginable (Beck, 1991). As agricultural production increases, new job opportunities are created. Mosher (1966) points out another value or benefit of agricultural development when he says:

We are likely to think and talk of agricultural developments as being valuable only because it makes more farm products available for human use. In fact it has an additional and perhaps a more important product; it changes people who engage in it. (p.11)

White (1903) stated that thousands of helpless and starving beings, whose numbers are daily swelling the ranks of the

criminal classes, might achieve self support in a happy, healthy, independent life if they could be directed in skillful diligent labor in the tilling of the soil. (Ed. p. 220)

For agricultural development to occur, the knowledge and skill of farmers must keep increasing and changing. As farmers adopt more and more new methods, their ideas change. They develop a new and different attitude toward agriculture, toward the natural and, I dare say, the Spiritual world that surrounds them and toward themselves. A similar transformation occurs among research workers, extension agents, government officials, merchants, bankers, teachers, and many others. Agricultural development thus is an integral part of general social and economic development (Mosher, 1966). The continued development of agriculture, however, depends upon the continuity of research and the education of all those involved in it; hence the need to study agriculture at different levels. Agriculture should be advanced by scientific knowledge (White 1954). According to Wrigley (1981) the technical knowledge needed to keep agricultural production ahead of the population demand, at least until the end of this century, is probably available or can be easily adapted. The duty of the agriculture teacher is to gather and organize this knowledge into appropriate and suitable curriculum in the college or other institutions and pass it on to the students.

The other question we need to ask here is how agriculture, as an area of study, fits in the Christian college where it is taught, or does it fit at all? Holmes (1987) states that education is an open invitation to join the human race and be more fully human. Its general goals include the ability to read and write and thereby think independently on appreciation of lasting values coupled with the ability to make sound judgments and live by them a critical appreciation of the past and responsible creative participation in the future. Man has been involved in agriculture from the beginning of creation (Genesis 1:8) and man will need to be creatively involved in agriculture for the future if only to feed its growing numbers. Since Christianity is founded simply on faith in God and His inspired Word, the Christian college where agriculture is taught should integrate this faith into the teaching of agriculture so as to develop the whole person (agriculturalist) who understands and appreciates God's will for man through agriculture. According to White (1948), study in agricultural lines should be the A,B,and C of the education given in Seventh-day Adventist Schools. The following is one of her more comprehensive statements on this issue (White, 1923):

Every institution of learning should make provision for the study and practice of agriculture and the mechanic arts...While a part of each day is devoted to mental improvement, let a stated portion be given to physical labor and a suitable time to devotional exercises and the study of the scriptures (FE, p. 72).

Agriculture, therefore, belongs to and fits into the Christian college very well and should be taken more seriously than is now the case. Man will always need food to live. Agriculture is the sure way to produce this food.

As we have seen from the foregoing discussion, agriculture touches the lives of everybody, and its development transforms the persons involved in it. I suggest that it be required of all students that pass through these colleges as a general education requirement for non-majors. Damazo (1982) believes that insufficient emphasis is placed on agriculture in Adventist schools and colleges, and he makes the following statements:

Food is the number one concern of the world today. The world does not produce sufficient food to provide its existing population with an adequate diet, and a million new mouths to feed are added every four and a half days. Without food, teachers, preachers, physicians, nurses, dieticians, and others are of no value. The spirit of prophecy places more emphasis on a variety of agricultural industries on school campuses than it does on any other work endeavour. Agriculture should be the ABC of our education system. Today, our schools around the world have unprecedented opportunities for agricultural work in food production, raw materials, domestic sales and exports. More than 50,000 productive jobs could be added with a highly organized agriculture program at our Secondary Schools and colleges. (p.5)

Taken seriously, well-organized agricultural programs could transform most of our colleges into economically viable, income-generating enterprises over and above the education and spiritual transformation they will produce.

THE CASE FOR INTEGRATION

Agriculture has been defined in the introduction. We now look at faith, value and integration before we put them together. According to Richardson (1969) "Faith" means obedient trust in God as He is revealed in His Word. It is a response to the divine grace revealed in that Word, as it was variously spoken to the fathers by the prophets (Hebrews 1:1), found incarnate expression in the Son (John 1:14), and is addressed to us now by the Holy Spirit through the Word and sacraments of the gospel. It is the personal reality of God in Christ; and faith is understood essentially in terms of personal relationship. Heie and Wolfe (1987) have defined the Christian faith as a response to the mercy and love of God in Christ Jesus.

Value has to do with ethics, the concepts held in high esteem by society and individuals in society. Lacey (1986)

describes ethics as the study of moral conduct, that is, the conduct of right and wrong or choices between good and bad. It is concerned with how people ought to act and includes concepts like obligation, duty, as well as right or wrong.

Integration has been defined by Gaebelin (1968) as the bringing together of parts of the whole, i.e., God's truth and every aspect of Education. Every aspect of Education is regarded as part of the truth and all truth is God's truth (Sire, 1990). Heie and Wolfe (1987) state that all integration is based on the notion of integral commonality, or the sharing of concepts and concerns by the areas to be placed within a single vision. They emphasize that genuine integration occurs when an assumption or concern can be shown to be internally shared by both the Judeo-Christian vision and an academic discipline. Rasi (1989), on the other hand, defined the integration of faith and learning more comprehensively as a deliberate and systematic process of approaching the entire educational enterprise from a biblical perspective and with Christian objectives, so as to ensure that students will leave school having freely internalized a Christ-centered, service-oriented, and Kingdom-directed view of knowledge, life, and destiny. This is the adopted definition for the purposes of this paper.

Durrant (1988) referred to the Tertullian question "What has Jerusalem to do with Athens?" and went on to ask "What does Faith have to do with research?" We might ask here "What has faith to do with Agriculture?" I see a lot of commonality or shared concepts between faith and agriculture to make genuine integration not only possible but essential. As Christians, we believe in the biblical account that "In the beginning God created the heavens and the earth" (Genesis 1:1) and "God said let the land produce living creatures according to their kinds" (Genesis 1:24). "The earth is the Lord's and everything in it, the world, and all who live in it" (Psalm 24:1). If everything belongs to God, knowledge also comes from God. In Proverbs 1:7, we learn that "the fear of the Lord is the beginning of knowledge." In the colleges, students come to gain knowledge in agriculture which comes from God. They must, therefore, learn of God and know His will for His children and integrate this understanding or faith with the agricultural knowledge that they gain. We need to understand God's intention for us in developing agriculture while at the same time preserving the land or the environment. God, as the First Agriculturalist, planted a garden in the east, in Eden, and there He put the man He had formed (Genesis 2:8); "the Lord God took the man and put him in the Garden of Eden to work it and take care of it" (Genesis 2:15). Adam was given strict orders to take care of God's beautiful creation (Beck, 1991).

One of the reasons for integrating faith and learning agriculture, is to develop oneself not just as a farmer, but as a human being using the God-given gifts or talents well in

glorifying God and serving man. In Ecclesiastes 12:13 (second part) we are reminded to "Fear God and keep his commandments for this is the whole duty of man." White (1903) stresses that true education is the harmonious development of the physical, the mental, and the spiritual powers. It prepares the student for the joy of service in this world and for the higher joy of wider service in the world to come. The same author further states that if we divorce God and His wisdom from the acquisition of knowledge, we have a lame, one-sided education, dead to all the saving qualities which give power to man so that he is incapable of acquiring the immortality through faith in Christ (White 1903). This is applicable to agricultural knowledge or education as well.

In an attempt to express the desire to integrate faith in the teaching of agriculture at the University of Eastern Africa - Baraton, the department of agriculture has the following philosophy or mission statement:

The Department of Agriculture is structured on the belief that human beings are custodians of their environment. Humans, therefore, have the responsibility to make a positive contribution to the development of agriculture, particularly in the areas of conservation, food production and processing. The department also believes that agriculture is a God-instituted profession and therefore trains its majors to realize the dignity of the call to cultivate land, raise livestock and be successful agriculturalists. (UEAB Bulletin, 1992-1994, p. 115)

In Scripture, people and land were closely intertwined. Who we are is inseparable from where we are (Walsh & Middleton, 1983).

The main objective in the Christian college should be to train individuals to become Christian agriculturalists rather than agriculturalists who are Christians. All we do (Walsh & Middleton, 1983) is to be done from a heart filled with love for God. If our lives are not an expression of our love for Him, they will express rebellion against Him. Neibuhr (1975) says that there is agreement among all the central groups that man is obligated, in the nature of his being, to be obedient to God in Christ and Christ in God, and that this obedience must be rendered in the concrete, actual life of natural, cultural man. In all his life's activities, including the practice of agriculture, he is in the realm of God by divine ordering under divine orders. He is constantly being assisted by the gracious God, Who mediates His help through sunshine, rainfall, good soils, favorable environment and life in the seed. The scriptures also remind us that whatever we do whether in word or deed, do it all in the name of the Lord Jesus, giving thanks to God and the father by Him (Collossians 3:17). This includes agricultural learning and practice; hence we must integrate faith in these activities.

STRATEGIES FOR INTEGRATION

Different strategies are needed to integrate faith and values in agricultural teaching and practice by teachers, farmers, and other practitioners.

AGRICULTURAL TEACHING

The following are some suggested principles to be applied in integrating faith and values in the teaching of agriculture. More can be added to the list as appropriate depending on specific circumstances.

1. Students to be involved in practical agriculture apart from their theoretical training. They should be required to practically plant and grow different crops, raise and care for livestock as part of their training. White (1954) advises that in the study of agriculture, pupils/students should be given practice and not only theory. According to further counsel by White (1903) "There must be education in the sciences and education in plans and methods of working the soil. There is hope in the soil but brain and heart and strength must be brought into the work of tilling it." (FE 318) The practical project must be useful to the student, well planned, and organized and the student must be happy working on it.

2. The teachers should cooperate and work together with the students in practical projects. By demonstrating values in their personal interaction and model (Hill, 1990) teachers can teach values in many formal and informal ways. "Let the teachers in our schools take their students with them into the gardens and fields and teach them how to work the soils in the very best manner" (FE 325). Since teachers are important as models for students, such cooperation will develop in the student the right attitudes in agriculture and may create a love, ambition, and a long lasting appreciation of agriculture and the dignity of labor.

3. Student Evaluation System should include value tests like appreciation of beauty, mystery, and limits of science, usefulness of work, confidence, cooperation, and humility through the activities that were beyond the control or grasp of the student. The students should recognize and appreciate that much more is involved in the raising of crops and animals than humans can control or understand.

4. The results or fruits of the projects should be wholesome, healthy, and usable by man. This will create positive influence in the student as he enjoys with pleasure the fruits of his labor.

5. The work environment should be well managed and preserved. By carefully managing our resources, we learn to be good stewards of the environment God has given us (Hill, 1990).

Practical work encourages close observation and independent work. Rightly performed, it tends to develop that practical wisdom which we call "common sense" (White 1903).

IN THE PRACTICE OF AGRICULTURE

Those practicing agriculture may not have all attended Christian schools or colleges and learned to integrate their faith and values in their practice. To them, Christ through the written Word and His handiworks in nature must be the model. They should also be trained by graduates of Christian education working/employed as extension agents and research workers.

1. They must be Christ oriented and directed in their practice of agriculture through having the Christian world view. They will then realize that all the natural resources used in agricultural practice were created by God and are directed by Him. These should be used to glorify Him and serve man.

Those who view farming purely as a business opportunity and land as a commodity or a natural resource to be exploited at all costs and only for profits will tend to misuse the resources and destroy the environment. Discussing this problem, Walsh & Middleton (1983) call it the notion of exploitation; that nature exists to be exploited by humans and apart from that it has little value. They quote Thomas Berger who sees this notion as being in the center of the conflict between those who view land as a frontier (the Europeans) and those who view it as a homeland (the Dene and Inuit Indians) in North America and Canada.

For those holding the frontier view, livestock and crops instead of being viewed as God's creation, to be cared for and used in love for human good, are seen purely as business commodities to be exploited by man. They end up being mistreated and misused and in some cases destroyed and lost. The farms, the land, and the environment in such cases are generally degraded through poor management or lack of conservation and improvement, their productive capacity is lost or lowered with human starvation and misery as the inevitable consequence.

To practice agriculture as God would have us do, we need to train and have agriculturalists who are Christ centered and controlled, in their activities and practice, by their Christian faith.

2. The application or integration of faith and values should be expressed in practice and daily living. Christian farmers and agricultural practitioners who will uphold the true Christian faith in their practice "though the heavens fall" will have a powerful message and a positive influence on human health through healthful living and diet.

The production, handling, and use of tobacco and its products, as an example, should be avoided. Animal production should not include the teaching and handling of swine (pigs) as

an enterprise. These should be taught as unclean or dangerous animals and plants created by God for purposes other than human consumption and abuse as practiced today. The integration of faith and action by Moslems is a good example to learn from. They will not even come close to swine (pigs), leave alone consuming its products or making artificial meat products to resemble pork or pork sausages or bacon for consumption. Moslems, according to their faith, will not consume any meats from animals slaughtered by people other than fellow Moslems. In Kenya, for example, all abattoirs and slaughter houses must employ Moslems to cut the throats of animals that are killed for meat production, if Moslems are to buy and consume the meat. They practice what they believe and are not ashamed to do so. By God's grace we should have faith that works through all our human experiences and actions. Krutzer (1969) notes that faith should be filled with dynamic life-changing applications of the message of Christ. We can and should do this through agriculture.

With regards to farmers growing dangerous crops and raising unclean livestock, for the purposes of earning a living, I believe that, God by the Holy Spirit will lead them to the right decision if they earnestly pray to Him for guidance.

STRATEGIES FOR TEACHING VALUES

Hill (1990) has discussed some tactics or strategies to teach a set of values to students using experience from industrial technology. I will suggest strategies that could be used to teach values important to Christian faith through projects in agriculture. These are not the only values that could be taught, but are representative of the more important ones.

TABLE 1: STRATEGIES FOR TEACHING VALUES IN AGRICULTURE

<u>VALUE</u>	<u>STRATEGIES</u>
RESPONSIBILITY	Explain to the students that with the privilege of planting crops or starting a livestock unit comes the responsibility of caring for them to maturity and harvesting and storing the produce. One must act responsibly in managing these enterprises.
FLEXIBILITY	We must accept that other people may have better ideas, views, or methods for solving a problem. Be willing to accept and use other people's ideas. Be willing to change mind with new evidence.
COOPERATION & SERVICE	The teacher to encourage group work and provide opportunities for group tasks and encourage students to work for others and in

groups. Unity is strength.

PLANNING (PREPAREDNESS)	Students to be shown and encouraged to plan well before implementing a project. Develop plan of work, calendar of work, and list of resources and materials. A good plan guides to success.
CONFIDENCE & SELF-WORTH	Provide clear instructions and personal help where necessary. Set tasks within the student's capabilities. Encourage sensitivity and keenness to correct mistakes and give praise for a job well done. Show individuals you value them and their positive contributions. Encourage and reward individual progress.
INDUSTRY & PRODUCTIVITY	Expect and encourage students to complete all projects. Select projects which are productive and within the student's abilities. Final evaluation be based on production.
HONESTY	The teacher must show honesty in all activities, including word, time, action, and use of materials. Expect and reward honesty from the students.
INITIATIVE	After giving the general outline, the students should be encouraged to devise their own specific programs to complete the tasks.
HUMILITY & FORGIVENESS	Demonstrate humility by recognizing and admitting own failures. Forgive freely when wronged and expect students to do the same.
BEAUTY & ORDERLINESS	Surround students with beauty, eg, trees, flowers, posters well designed and well kept plots or beds. Have space for everything and expect tools and supplies as well as other materials to be returned clean in their designated place. There is the spirit of fellowship and cooperation which results when students participate in helping beautify the school grounds. "In itself, the beauty of nature leads the soul away from sin and worldly attractions and toward purity, peace and God" (CT, 186,187).

Adapted from Hill (1990) p. 12-14

The values that students will learn depend upon the skill, intelligence, experience and attitude of the teacher as the model. Hill (1990) notes that the most effective way to teach

values in practical subjects is for teachers to model these values in lifestyle and interaction with students.

There is need for well trained and devoted Christian teachers who are grounded in the Word of God and willing to work. This way there is greater chance that Christian students will be graduated who are able, capable, and willing to integrate their faith and values in the practice of agriculture.

VALUES TO BE LEARNED FROM AGRICULTURE

We learn many lessons from agriculture which can help us grow spiritually and transform our lives to be on fire for God through Christ. Christ Himself, by His several parables recorded in the Bible, used examples from agriculture to teach spiritual lessons. All around us we read of cases where agricultural projects have been implemented by missionary workers, to reach people better with the gospel message by first providing their physical needs. The story of a 15 year old pastor, Seidu Samuel Salifu, is a good example. He started an agricultural project in Ghana to help reach and serve the people by providing their physical needs as well as their spiritual food. As a result of the project (Antonio, 1984), prejudice between Christians, Moslems, and pagans is being broken down, preparing the soil for the bountiful harvest of something other than vegetables - a harvest for Christ's Kingdom.

Another example is an agricultural project to grow peanuts by Indians in Surinam. In this project, apart from the growing of peanuts, the philosophy of Adventist Education to use hands and minds for physical and spiritual development was taught. The people were also taught that such unclean animals as boars (swine), lizards, snakes, and iguanas should not be eaten, and the dangers of drinking Kasiri (an alcoholic beverage) were emphasized. When the people stopped these habits, the government declared the area a blessing (Luppens, 1983). I am sure there have been many such cases or other examples over the years.

I will now discuss seven values, concepts or themes that we learn from agriculture that point us heavenward. There are many others that could be included.

1. BEAUTY AND CARING

Think of a beautiful rose garden which is properly cared for, or a flock of young lambs in green pastures. The people of God have been described as gardens - what a delightful place a garden is, the veriest school of peace. However, it takes planning and diligent care to make and keep the garden beautiful. The church, however, has a wonderful Helper (Esteb, 1962) for Christ said "My Father is the Husbandman - he says I

the Lord watch over it, I water it continually, I guard it day and night...Israel will bud and blossom and fill all the world with fruit" (Isaiah 27:3-6). It takes time, attention, and caring to properly keep a garden beautiful and fruitful. God in Christ Jesus cares for us and attends to our needs.

2. PREPAREDNESS AND FRUITFULNESS

Agriculture teaches us the value and need for preparedness as when the farmer prepares a seedbed to receive the seed at planting time. We need to prepare our hearts so that God by the Holy Spirit can enter and make us grow spiritually and be fruitful. Jesus Christ illustrated this lesson by the parable of the sower (Luke 8:1-15). As the trees that do not bear fruit are cut down and burned by the farmer, so God expects us to live by His commandments; live what we preach and bear fruit. In the parable of the fig tree (Luke 13:6-8), Jesus demonstrated the consequences of fruitlessness - destruction.

3. PURITY AND CONSISTENCE

An orange tree in the orchard will always produce oranges and a lemon tree lemons. No good tree bears bad fruit, nor does a bad tree bear good fruit. Each tree is recognized by its own fruit. People do not pick figs from thorn bushes or grapes from briars (Luke 6:43-44). The hope of every farmer is to harvest what he sowed. Is this not what Jesus says will happen to us when His kingdom comes? The good man brings good things out of the good stored in his heart...For out of the overflow of his heart his mouth speaks (Luke 6:45). We need to be consistently pure in heart as a good orange tree is consistently pure.

4. HUMILITY AND DEPENDENCE

A farmer prepares a seedbed and assembles the necessary inputs for planting and maintaining a crop. After planting, however, the farmer will totally depend on God to cause the seed to germinate, grow and produce fruit. Paul in his letter to the Corinthians emphasized this fact by saying "I planted the seed, Apollos watered it, but God made it grow. So neither he who plants nor he who waters is anything but only God who makes things grow" (1 Corinthians 3:5-8). As the farmer cannot make the seed grow, so we cannot convert souls to Christ, the Holy Spirit does. Christ Jesus in the parable of the vine and branches (John 15:1-8) amplified the concept of dependence. On our own, away from the Lord, we can do nothing just as a branch away from its vine cannot survive. It withers and dries. We must humble ourselves and depend on God in all our lives' activities.

5. DIGNITY OF LABOR

According to Damazo (1982) the dignity of labor is not

given sufficient stature in our colleges. He states in part that "The second greatest challenge facing parents and schools is teaching the dignity of labor...Every youth should be taught manual labor. Failure in this area was a crime or sin according to the schools of the prophets. And our schools should be modeled after the schools of the prophets. Teaching the dignity of labor to our children ensures provision of their needs for a lifetime." No line of manual training is of more value than agriculture. A greater effort should be made to create and encourage an interest in agricultural pursuits (White, 1954). Practical agriculture involves manual labor as was ordained by God when as the Bible says "The Lord God took the man and put him in the Garden of Eden to work it and take care of it" (Genesis 2:15). "Noah tilled the land and planted a vineyard" (Genesis 9:20).

6. OBEDIENCE AND BALANCE

Agriculture teaches the principle of obedience that one must obey all the commandments of God. By disobeying one you have disobeyed all. Take an example of the growing young chicken. It needs several amino acids, minerals, and vitamins in its diet. These must all be supplied in a given balance. The lack of one nutrient, eg, vitamin E, normally required in very small quantities, will result in a deficiency condition. This condition is a disease known as Encephalomalacia (Crazy Chick Disease), a brain disorder resulting in lack of coordination and craziness. If not corrected, the chicken will die from the condition even though all the other nutrients are supplied in adequate quantities. Man, like the chicken, is God's creature and will be lost for disobeying only one of God's commandments even though he might have kept all the others. He must live a balanced life by developing mentally, spiritually, socially, and physically according to the will of God.

7. SPIRITUAL GROWTH AND DEVELOPMENT

Plants teach us that we must continue to grow or perish. The special needs of every variety of plant must be studied and met. Different varieties require different soil and cultivation method and compliance with the laws governing each is the condition of success (Ed, p. 111.1120). A Christian must continue to draw nourishment from the Word of God to grow spiritually and develop the mind just as the plant must continue to draw nourishment or nutrients from the soil to grow. If or when it stops growing it perishes. So is the Christian. The agricultural curriculum in Christian colleges and schools must be flexible and be continually improved. This way they are likely to achieve genuine integration of faith and values which will also be changing for the better with time in the teaching and practice of agriculture. He who earns his livelihood by agriculture escapes many temptations and enjoys unnumbered privileges and blessings denied to those who live in

the great cities.

CONCLUSION

Several writers have discussed the need for integrating faith in the different areas of learning and education and how to implement such integration. The bibliography developed by Rasi and Korniejczuk (1993) gives a record of these discussions. The most important thing is to have Christian teachers and administrators in the schools and colleges, who themselves, are committed to the idea of integration of faith and learning. They should also understand how to implement and achieve genuine integration of faith in the learning and practice of agriculture. De Jong (1990) notes that universities will never do much to encourage a genuine concern for ethical issues or to help their students to acquire a strong and carefully considered set of moral values unless presidents and deans take the lead.

Such integration of faith and values in the learning should be reflected in the mission statement of the school or college, incorporated into the curriculum development, implemented in the teaching and practice of agriculture and agricultural research in these institutions; and through the Christian graduates be taught to the farmers via the extension services. This will mean that the list of subjects (courses), and topics covered in the curriculum exclude those whose study and use contravenes the faith of the Christian as guided by biblical principles. Hill (1990) stresses that Adventist schools should emphasize the concepts of "stewardship" and "earthmanship" that is, man should carefully preserve and wisely manage his environmental resources, and that students should be taught to respect and maintain the quality of the natural environment and to promote the physical and spiritual welfare of the humans in that environment. Farmers, managers or agriculturalists exhibiting true Christian understanding and love in the practice of agriculture will reflect more the ideals of the Garden of Eden which are God's ideals for agriculture. These people will view agriculture as an activity given and ordained by God to glorify Him and serve their fellow men as they enjoy its fruits. The greatest testimony of our love for each other will be the fruits we bear as the "branches" of the savior (John 15:1-8). As noted by Krutza (1969), faith should be filled with dynamic life-changing applications of the message of Christ.

According to Slathery (1991) being connected to the land is a mystical relationship. Farmers deal, all the time, with elements that point toward the sacred, namely: the soil, plants, animals, rain, wind, sun, and snow. These serve as holy reminders of the truth, beauty, goodness and abiding presence of God the Creator. According to White (1905), Christian farmers can do real missionary work in helping the poor to find homes on the land, and in teaching them how to

till the soil and make it productive. They can also teach them how to use implements of agriculture, how to cultivate various crops, how to plant and care for orchards and raise livestock. This way the poor and homeless will not only have a home and an economic enterprise, but an abundance of food for healthful living. They will then have clear minds with which to worship God and serve their fellow men which is the high calling for man on earth.

REFERENCE LIST

- Antonio, Etta Flynn (1984) 16-year-old Pastor Prepares 30 for Baptism. Adventist Review, May 10, 1984, p. 21.
- Beck, W. David (1991) The Integration of Biblical Truth in the Curriculum of the University: Opening the American Mind, Baker Book House, Grand Rapids, Michigan, USA.
- Bible Texts quoted were taken from the New International and the King James Versions of the Holy Bible.
- Damazo, Paul S. (1982) Financing Adventist Education, Adventist Review, May 13, 1982, p.5.
- DeJong, Arthur J. (1990) New Direction for the Church Related College, Reclaiming a Mission, William B. Eerdmans Publishing Company, Grand Rapids, Michigan, USA.
- Durrant, Laurice (1988) Teaching a Research Course From A Christian Perspective - Integrating Faith with Learning, Christ in the Classroom, Vol.2, p. 48. Institute for Christian Teaching, General Conference of Seventh-day Adventist, Silver Spring, Maryland, USA.
- Estab, Adlai Albert (1988) Morning Manna, Daily Devotional Guide, Vol. 1, The Quiet Hour, Redlands, California, USA.
- Gaebelein, Frank E. (1968) The Integration of Faith and Learning, The Pattern of God's Truth; BMH Books, Winona Lake, Indiana, USA.
- Heie, Harold and David L. Wolfe (1987) The Reality of Christian Learning, Christian University Pres, William B. Eerdmans Publishing Company, USA.
- Hill, Barry (1990) Geography, Seventh-day Adventist Secondary Curriculum, Institute for Christian Teaching, General Conference of Seventh-day Adventists, Silver Spring, Maryland, USA.
- Hill, Barry (1990) Industrial Technology: Seventh-day Adventist Secondary Curriculum. Institute for Christian Teaching, General Conference of Seventh-day Adventists, Silver Springs, Maryland, USA.
- Holmes, Arthur F. (1991) The Idea of a Christian College, Revised Edition, Will B. Eerdmans Publishing Company, Grand Rapids, Michigan, USA.
- Krutza, Williams (1969) Facing the Issues, Baker Book House, Grand Rapids, Michigan, USA.
- Lacey, A.R. (1986) A Dictionary of Philosophy, Second Edition, Routledge, USA.
- Luppens, John A. (1983) Peanut Project Will Help Indians in Surinan. Adventist Review, March 3, 1983, p. 15.
- Morris, William (1971) The American Heritage Dictionary of the English Language, American Heritage Publishing Co., Inc. New York, USA.
- Mosher, Arthur T. (1966) Essentials for Development and Modernization; Getting Agriculture Moving, Frederick A. Praeger Publishers, New York, USA.
- Niebuhr, H. Richard (1975) Christ and Culture, Harper

- Torchbooks, Harper Publishers, New York, USA.
- Rasi, Humberto (1989) Integration of Faith and Learning: Design for Recovery. Christ in the Classroom, Vol.4. Institute of Christian Teaching, General Conference of Seventh-day Adventists, Silver Spring, Maryland, USA.
- Rasi, Humberto & M. Viscot Korniejczuk (1993) A Select Bibliography on the Integration of Faith and Learning: Christ in the Classroom. Institute for Christian Teaching, General Conference of Seventh-day Adventists, Silver Spring, Maryland, USA.
- Richardson, Alan (1969) A Dictionary of Christian Theology. The Westminster Press, Philadelphia, Pennsylvania, USA, p. 126.
- Sire, James W. (1990) Learning to Love God in the Ways We Think, Discipleship of the Mind; Inter Varsity Press, Illinois, USA.
- Slattery, Patrick (1991) Farmers Reflect on Their Faith and Work: Caretakers of Creation; Augsburg Minneapolis and ACTA Publications, Chicago, USA.
- Sutherland, E.A. (1915) Studies in Christian Education: Education Experiences Before the Midnight Cry Compared Compared with Education Experiences Before the Loud Cry. The Rural Press, Madison, Tn, USA. (cited from a paper: Agriculture, The ABC's of Seventh-day Adventist Education by D.C. Scarbrough (1933), Andrews University-unpublished.)
- University of Eastern Africa, Baraton (1992) Bulletin, Volume 6, 1992-1994, p. 115, Eldoret, Kenya.
- Walsh, Brian J. and J. Richard Middleton (1984) Shaping a Christian World View; The Transforming Vision, Inter Varsity Press, Illinois, USA.
- White, E.G. (1954) Teaching Useful Trades: Child Guidance (CG) Review and Herald Publishing Association, Washington, D.C. USA.
- White, E.G. (1913) Counsels to Parents, Teachers, and Students (CT) Pacific Press Publishing Association, 1943: Mountain View, California, USA.
- White, E.G. (1903) Education (Ed) Pacific Press Publishing Association (1952), Mountain View, California, USA.
- White, E.G. (1903) Balance in Education: Education (Ed) Pacific Press Publishing Association, 1952, Mountain View, California, USA.
- White, E.G. (1903) Lessons of Life: Education (Ed) Pacific Press Publishing Association, 1954. Mountain View, California, USA.
- White, E.G. (1903) Manual Training: Education (Ed) Pacific Press Publishing Association, Mountain View, California, USA.
- White, E.G. (1923) Diligent and Thorough Education: Fundamentals of Christian Education (FE) Southern Publishing Association, Nashville, Tenn. USA.
- White, E.G. (1923) The Importance of Physical Training: Fundamentals of Christian Education (FE) Southern Publishing Association, Nashville, Tenn. USA.
- White, E.G. (1905) Help for the Unemployed and the Homeless:

- The Ministry of Healing (MH) Pacific Press Publishing Association, Mountain View, California, USA.
- White, E.G. (1948) Testimonies for the Church (T)Vol.6. (1855-1909). Pacific Press Publishing Association, Mountain View, California, USA.
- Wrigley, Gordon (1981) The Development of Production, Tropical Agriculture, 4th Edition, Longman, London, England.
- Youdeowei, Anthony, and J.A.Akionwumi (1986) Introduction to Tropical Agriculture; Longman, London, England.